This publication is neither a contract nor an offer to make a contract. While every effort has been made to ensure the accuracy of the information in this publication, the University reserves the right to make changes at any time with respect to course offerings, degree requirements, services provided, or any other subject addressed in this publication. The information in this publication is provided solely for the convenience of the reader, and the University expressly disclaims any liability which may otherwise be incurred.
Undergraduate Catalog 2002-2004

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This page last modified Wednesday, 23-Jun-04 14:18:36
A Message from President Michael Schwartz

Cleveland State University welcomes you to the heart of the City of Cleveland. Our students are fond of claiming that the entire city is our campus as both classroom and laboratory for study, practical experience, and recreation. We mean it when we pledge to you an education in the real world for the real world among a diverse and engaged student body.

Our goal at Cleveland State University is to create a student-focused center of scholarly excellence. We expect to be known as a place of opportunity for those who wish to know the truth of things, who are willing to strive for it, and who seek a better life for themselves and their fellow citizens. Within this student-centered supportive environment, we are committed to developing the minds and talents of all who enroll in our courses.

Part of our commitment demands that we help students to meet the challenges of living and learning in a knowledge-based, ever-changing world. Added to this challenge are the obligations to learn about and know one another. The tragic events that took place in the first year of the new millennium have forced us out of our isolation as a people and made us painfully aware that we must educate one another to be responsible members of a democratic society and citizens of the world. Our curriculum is designed for these goals. Among our 75 undergraduate programs you will find opportunities to study international trade as well as medieval society, expert systems and the environment, including opportunities for study abroad.

The university insists on creating an atmosphere that promotes intellectual growth and the creation of new knowledge. Working beside you in these discoveries will be a first class faculty. Ninety-eight percent of our full time faculty hold the highest degrees in their fields. Four out of five hold the Ph.D., a figure unmatched by any other Ohio university. You will meet these professors, not graduate students, in our classrooms and laboratories. And all of our accepted students are admitted onto the main campus, not to a branch or a two-year program within the institution. You will find that, even as undergraduates, you will be welcomed into research teams by our faculty.

We believe that a first-class education benefits not only the graduate of Cleveland State but the rest of society as well. Public and private institutions, corporations, and businesses have joined as our partners in a dynamic learning experience. With their help, the university creates an environment where the individual, the curriculum, and the community interact to achieve the highest levels of learning. The knowledge you gain during your course of studies on our campus will be invaluably augmented by your experience in the community, whether as a participant in our outstanding cooperative education opportunities, through service learning, or as an intern or
member of a ground-breaking research team. We hope that you will, in turn, employ your knowledge to solve problems, stimulate economic activity, and increase opportunity in these same communities.

This, then, is the educational philosophy of Cleveland State University. If you have been intrigued by what you have read so far, I invite you to read through the pages of this catalog, investigate our academic programs, and come visit our campus to meet our faculty.

I look forward to meeting you.

Michael Schwartz
President

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College of Education

- The college is fully accredited by the National Council for the Accreditation of Teacher Education (NCATE).
- The School and Community Agency Counseling Programs are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).
- The college produces teachers who are “Responsive, Reflective, Professionals — Partners in Learning.”
- Ph.D. faculty in Urban Education collaborate with colleagues at the Kent State, Youngstown State and Akron universities to provide doctoral-level preparation for school administrators.

College of Arts & Sciences

- Faculty members have received such prestigious awards as Fulbright teaching and research appointments, a Guggenheim Fellowship, and the Rome Prize.
- Home of the Cleveland Chamber Symphony, which has received 10 national awards for excellence, and the Sundown Jazz Series, the longest-running jazz series in Cleveland.
- 90 percent of the faculty hold a Ph.D. degree.
- Faculty members have received nationally competitive awards from the National Science Foundation, the National Institutes of Health, the National Endowment for the Humanities, and the American Heart Association, among many others.
- Offers the Master of Science in Health Sciences on-line, the Master of Social Work via interactive video; the graduate certificate in bioethics via the Internet; and undergraduate degrees in psychology, liberal studies, and social work off-site at Lorain County Community College.
- Involves students in research, study, and practice activities with such institutions as the Cleveland Clinic's Lerner Research Institute; local radio and television stations; the Cuyahoga Valley National Recreation Area; various international settings from Belize to India; and an array of local service, education, and health agencies.
- Supports the Poetry Center, a nationally recognized poetry press and performance center, which recently received the W.E.B. DuBois Award for Outstanding Service to the Community from the Ohio Board of Regents.
- A new fast-track program between CSU’s College of Arts and Sciences (Department of Nursing) and the Cleveland Clinic Health System allows students to take nursing courses in a year-round, specially designed sequence so they can earn their Bachelor of Science in Nursing degree in four semesters rather than the traditional three years. The program the first of its kind in Northeast Ohio targets adults who already hold a bachelor’s degree in another field and who want to change careers.
- Cleveland State University and the University of Toledo College of Pharmacy have a
collaborative agreement that allows Cleveland-area students access through CSUAS to the Doctor of Pharmacy (Pharm.D.), a professional degree leading to licensure, and to the Bachelor of Science in Pharmaceutical Science (BSPS) degrees offered by the UTCP. Undergraduate students in the Greater Cleveland area are able, through this program, to be dually admitted to both institutions, and they attend their first two years at Cleveland State, thus allowing them to remain in their community.

Cleveland-Marshall College of Law

- Founded 1897
- The first law school in Ohio to admit women
- One of the first law schools in Ohio to admit minorities
- Two student-edited journals: The Cleveland State Law Review and The Journal of Law and Health
- Five clinics: Community Advocacy Clinic, Employment Law Clinic, Environmental Law Clinic, Fair Housing Clinic, Law & Public Policy Clinic
- Degree programs leading to J.D. and LL.M. degrees, joint degree programs leading to J.D./M.B.A., J.D./M.P.A., J.D./M.A.E.S., and J.D./M.U.P.D.D.

Fenn College of Engineering

- In the 2000-2001 academic year, the Fenn College of Engineering received $6.8 million in research grants and industrial contracts.
- Through the Access to Careers in Engineering (ACE) Program, over 500 high school students from Northeast Ohio participated in half-day hands-on sessions with engineering faculty and staff in academic year 2000-2001. The program, which had doubled in size from the previous year, is intended to introduce area students to the field of engineering by actively engaging them in engineering experiments.
- The Parker Hannifin Corporation has donated $100,000 to the college to establish a Motion and Control Laboratory. This enables students to develop and validate models of control systems for hydraulic components using modern computer-aided engineering tools.
- Three new companies and associations have established scholarships in the Fenn College of Engineering: Avery Dennison, Parker Hannifin, and the National Electrical Contractors Association.
- Dr. Fuqin Xiong, Associate Professor of Electrical and Computer Engineering, saw his book “Digital Modulation Techniques” published by Artech House in February 2000. Since then, the book has been acquired by more than 110 libraries around the world, and has become the publisher’s best-seller. The 654-page-long graduate level book includes the most recent research results of prominent scholars in the field of communications and also the results of the research work that Dr. Xiong and his students have conducted at CSU.

Maxine Goodman Levin College of Urban Affairs

- Ranked among the Top 10 urban schools in the United States
- Outstanding faculty and research staff with national reputation for scholarship and practitioner-based experience
- Student service-oriented college offering assistance with scheduling, internship placement, postgraduate internship placement, and career planning
● Offers Cleveland State’s only credit-for-life experience program in its Bachelor of Arts degree
● Administers the Training Opportunities for Program Staff (TOPS) program for human services employees attending Cleveland State University

James J. Nance College of Business Administration

● Out of approximately 2,500 business programs in the country, the college is one of only 382 that are accredited by AACSB International, the Association to Advance Collegiate Schools of Business.
● With more than 3,200 students, Cleveland State University’s College of Business Administration is one of the largest business schools in Ohio.
● The college is housed in Monte Ahuja Hall, a beautiful 6-story building, completed in 1998. Ahuja Hall includes offices, classrooms, seminar rooms, and five computer laboratories with 175 computers that are continuously upgraded. State-of-the-art software includes Rational Rose for networking, SAP, and SAS/SPSS Clementine for data-mining applications.
● Our business students are award-winners: Accounting students took first and fourth places in the Ohio CPSA examination in 2000, and recently won the Deloitte-Touche Accounting Challenge; marketing students in the CSU Chapter of the American Marketing Association have won numerous awards in recent national competitions.
● Bachelor’s degree programs in business and computer and information sciences are offered for day, evening, and weekend students. You can specialize with majors in Accounting, Finance, Information Systems, Management and Labor Relations, Marketing, and Operations Management and Statistics.
● The college has one of the largest MBA programs in Ohio, with courses offered on-campus, weekdays, evenings, and weekends, and at various corporate sites in Greater Cleveland.
● Comprehensive graduate degree programs include the Doctor of Business Administration, the Master of Accountancy, Master of Labor Relations and Human Resources, Master of Computer and Information Science, the MBA in Health Care Administration, and the Master of Public Health.
● Alumni of the Executive MBA program include more than 65 CEOs/presidents, more than 50 vice presidents, and more than 200 senior level executives, directors, controllers, CFOs, business owners, and partners.

Career Services/Cooperative Education

● 15,000 students in 900 seminars and workshops a year
● Custom-designed on-site corporate training
● Specialized training in business, computers, engineering, horticulture, nursing, hazmat, and communication
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The requested item does not exist on this server. The link is either outdated or inaccurate.

Return to the Cleveland State University home page.
Enrollment classifications, determined individually for each student, are:

- **First Year Student.** A graduate of an accredited secondary school or alternative school option without college or university experience
- **Transfer Student.** A student previously enrolled at another college or university
- **Non-Degree Student.** A student eligible to take courses for credit but not admitted to a degree program
- **Dual Admission Student.** A student admitted to a two-year college with deferred admission to a four-year college
- **Visiting Student.** A student from another college or university

Cleveland State University's first-year admissions policy provides university access to all graduates of accredited Ohio high schools or G.E.D. recipients. Admission is on a first-come, first-served basis up to the limit of available facilities.

Depending on academic qualifications, an Ohio resident* will be offered admission to one of Cleveland State University's degree-granting colleges (Arts and Sciences, Business Administration, Education, Engineering, First College, Urban Affairs) or to the Division of University Studies. Admission to the Engineering Technology program is open to junior-year transfer students only.

Your application for admission will be considered individually using the academic credentials you submit. Consideration will be given to the courses you have taken in high school, the grades you have earned, your test scores, and any other relevant information you provide.

Freshman applicants from Ohio who do not meet our minimum requirements for admission into one of the colleges of Cleveland State may be offered admission into Cleveland State University's Collegiate Studies program. This is a program of individualized supportive services — tutorial help, academic and personal counseling, and skill development — which supplements the usual freshman-year classes.

*"A resident of Ohio..." shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.
Transfers

Transfer applicants are those who have attended another post-secondary institution, regardless of the number of credits earned. All previous academic records will be considered relevant to the admissions process. Transfer applicants must have official copies of transcripts for all courses completed at other colleges and universities sent directly from the registrar's offices at those institutions to the Office of Undergraduate Admissions at Cleveland State University.

Application Procedures

1. Return a completed application form to the Admissions Office, enclosing a $30 check or money order to cover the nonrefundable application fee.

2. Forward your official student transcripts. (Freshmen, send your official high school transcripts. Transfer applicants, have your former college(s) send official transcripts directly to the Cleveland State University Office of Undergraduate Admissions.)

3. Submit appropriate test scores. (Freshmen or transfer students with less than 24 semester hours should submit SAT or ACT scores. International students should refer to appropriate section for special requirements.) Freshman applicants who graduated from high school five or more years prior to enrolling at CSU are not required to submit ACT or SAT scores. Transfer students with 25 semester credits of transferable credits are not required to submit ACT or SAT results.

   Note: All documents submitted to the Office of Undergraduate Admissions become the property of CSU and will not be returned. Records submitted by applicants are not available for inspection until the student is admitted and registers for the first time.

4. When to apply. The university operates on a "rolling admissions" basis. When all the space in a program is taken, the Office of Undergraduate Admissions stops considering applications for that program. Because many programs can admit only limited numbers of new students, we urge you to apply early. In any case, you should apply by the following priority dates:

   Fall Semester Admission: July 15.
   Spring Semester Admission: November 1.

   Your application form, application fee and all required credentials must reach the university by the appropriate priority date. Applications received after the priority date cannot be guaranteed to be processed in time for that semester.

   The Office of Undergraduate Admissions is located in Rhodes Tower West 204, 1860 E. 22nd Street. Call (216) 687-2100 or toll-free 1-888-CSUOHIO if you have questions.

Foreign Language Requirement

CSU requires all students who graduated from high school in 1987 or later to have completed two years of a foreign language in high school. Students who did not complete the courses in high school must finish a first-year foreign language sequence, or take two semesters of American Sign Language and one approved foreign culture course. The deficiency must be corrected prior to the completion of 60 credits at CSU.

Students majoring in the College of Arts and Sciences should refer to this bulletin for additional information on the Arts and Sciences foreign language requirement.

The Foreign Language Requirement applies to all undergraduate students, including those who are not native speakers of English and students for whom English is a second language (unless specifically exempted in the policy on Foreign
Language Requirement: for example, post-baccalaureate students). Such students, if deficient in foreign language studies credits upon admission to Cleveland State University, may remove the deficiency by completion of appropriate courses at CSU or by verification of appropriate knowledge of language and culture through the Department of Modern Languages at CSU.

Advanced Placement Program

The Advanced Placement Program (APP) is offered under the auspices of the College Board to high-school students who have completed an official advanced-placement course. Arrangements for testing are made through the high school in which the student is enrolled. CSU grants freshman-year credit for each examination score of 3, 4, or 5. Credit is available in art history, biology, chemistry, computer science, economics, English, French, German, history, mathematics, music theory, physics, political science, and Spanish. The granting of credit for this program is administered by the Undergraduate Admissions Office.

A transfer student who received AP credit at another institution should have the official score report forwarded to the CSU Admissions Office.

Admission to Collegiate Studies

Collegiate Studies provides individualized support services, such as tutorial help, academic and personal counseling, and skill development. In Collegiate Studies, students enroll in courses that are tailored to fit their needs. The objective is to lay a proper foundation for future course work. By the end of the first year, students in the program should make a successful transfer to a CSU college. They may, however, continue to use the program's services.

A special talent category provides for the admission of out-of-state students with special athletic or artistic talent who do not qualify for direct admission to a degree-granting college. This category is limited to 30 students per year, of which no more than 15 may be athletes.
Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, developed a statewide policy to facilitate students’ ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements.

Transfer Module

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a subset or entire set of a college or university’s general education program. Transfer Module consists of 54 to 60 quarter hours (or 36 to 40 semester hours) of courses in the following areas: English, Mathematics, Arts and Humanities, Social and Behavioral Sciences, Natural and Physical Sciences, and Interdisciplinary Study.

A Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Transfer Module portion of Institution R’s general education program. Institution R, however, may require
additional general education courses beyond the Transfer Module.

Since many degree programs require specific courses that may be taken as part of the general education or Transfer Module program at an institution, students are encouraged to meet with an academic advisor at the institution to which they plan to transfer early in their academic career. For example, students who will be majoring in any of the majors in the College of Business and Administration at the receiving institution should take Economics 201, 202, and 203 (or equivalent course at another institution) rather than the Economics 200 course listed as a part of the Transfer Module. Because of specific major requirements such as these, early identification of a student's intended major is encouraged. Advisors at the institution to which a student wishes to transfer should be consulted regarding Transfer Module and general education courses and any specific program requirements that can be completed before transfer.

Conditions for Transfer Admission

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Associate of Arts or Associate of Science degree with a cumulative grade point of 2.0 or better for all previous college level courses.
2. The policy encourages receiving institutions to give preferential treatment to students who have not earned an Associate of Arts or Associate of Science degree but have earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses.
3. The policy further encourages that students who have not earned an Associate of Arts or Associate of Science degree or who have not earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses are eligible for admission as transfer students on a competitive basis.

Acceptance of Transfer Credit

1. Students who have completed the Associate of Arts or Associate of Science degree with a cumulative grade point of 2.0 or better will receive transfer credit for all college level courses in which a grade of D or better has been earned.
2. Students who have not earned an Associate of Arts or Associate of Science degree will receive transfer credit for all college level courses in which a grade of C- or better has been earned.

Admission to a given institution, however, does not
guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at the institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution’s major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

Appeals Process

A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and of the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolutions of individual cases of appeal from transfer students who have exhausted all local appeal mechanism concerning applicability of transfer credits at receiving institutions.
Cleveland State has articulation and dual admissions agreements with Lakeland, Lorain County, Cuyahoga and Owens community colleges.

Blanket Transfer Credit

A transfer student from a regionally accredited community college or a junior college who has achieved an associate of arts degree will qualify for blanket transfer credit of 60 to 64 semester credits provided that all credits used for that degree have been earned at a regionally accredited institution and the degree curriculum contains the following distribution of credits:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>10</td>
</tr>
<tr>
<td>Natural Science and/or Mathematics</td>
<td>10</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>10</td>
</tr>
<tr>
<td>General Education and program prerequisites</td>
<td>14-18</td>
</tr>
<tr>
<td>Other, including technical course work</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60-64</td>
</tr>
</tbody>
</table>

Non-Technical Programs

Community college or junior college students who wish to transfer before achieving an associate degree should present an above-average record in an appropriate curriculum for the CSU college they want to enter.

Transfer Guides.
The Office of Undergraduate Admissions publishes transfer guides for the three area community colleges, outlining specific courses and curricula for the student who wants to pursue a program parallel to one of the freshman and sophomore programs at CSU.

The guides are available at the Office of Undergraduate Admissions of CSU and in the counseling offices of Cuyahoga,
Lakeland, and Lorain County community colleges.

A student who follows a transfer guide is assured of transfer credit for all non-remedial courses in which a grade of C- or better has been earned.

Transfer Student Requirements: Baccalaureate Nursing Program

A transfer student with an associate degree or diploma and Ohio licensure as a registered nurse is eligible for admission to the Baccalaureate Completion nursing program after admission to the College of Arts and Sciences. A transfer student who is not a registered nurse is eligible for admission to the basic nursing program.

Prospective transfer students are encouraged to consult the Department of Nursing when planning their program of study.

Engineering Program

A community-college student applying for admission to programs in the College of Engineering, other than the bachelor of science in technology, must have achieved an above-average record in university-parallel courses in mathematics and science. Performance in these courses is closely related to success in engineering.

Prospective transfer students are encouraged to consult the College of Engineering when planning their program of study. Courses in technology taken for the associate of applied science degree are applicable for transfer into the bachelor of science in technology program but not into the other degree programs in the College of Engineering.

Technology Programs

A transfer student from a regionally accredited community college or technical institute with the degree of associate of applied science in an electrical/electronic or mechanical technology field or with an associate of engineering technology degree is eligible for admission into a corresponding upper-division bachelor of science in technology program.

Catalog Rights

Under certain circumstances a student who transfers to Cleveland State University from Cuyahoga Community College, Lakeland Community College, or Lorain County Community College has catalog rights.

If a student has earned an associate of arts degree from one of the three area colleges, and if at least 75 percent of the completed course work was chosen from CSU transfer guides in effect at the time of entering the community college, the student may meet the curricular requirements as stated in the CSU Undergraduate Catalog either for the academic year in which admission was granted to CSU or for the academic year in which the student was admitted to the community college. This is only if the CSU Catalog was issued no earlier than two years prior to the student's admission to the university.

Correspondence Courses

A maximum of 10 semester credits may be granted for correspondence courses completed through a recognized college or university or the Defense Activity for Nontraditional Education Support (DANTES).
Catalog Statement
(Under the Ohio Articulation and Transfer Policy)

Institutional Transfer

The Ohio Board of Regents, following the directive of the Ohio General Assembly, developed a statewide policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements.

Transfer Module

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a subset or entire set of a college or university's general education program. Transfer Module consists of 54 to 60 quarter hours (or 36 to 40 semester hours) of courses in the following areas: English, Mathematics, Arts and Humanities, Social and Behavioral Sciences, Natural and Physical Sciences, and Interdisciplinary Study.

A Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Transfer Module portion of Institution R's general education program. Institution R, however, may require additional general education courses beyond the Transfer Module.

Since many degree programs require specific courses that may be taken as a part of the general education or Transfer Module program at an institution, students are encouraged to meet with an academic advisor at the institution to which they plan to transfer early in their academic career. For example, students who will be majoring in any of the majors in the College of Business and Administration at the receiving institution should take Economics 201, 202, and 203 (or equivalent course at another institution) rather than the Economics 200 course listed as a part of the Transfer Module. Because of specific major requirements such as these, early identification of a student's intended major is encouraged. Advisors at the institution to which a student wishes to transfer should be consulted regarding Transfer Module and general education courses and any specific program requirements that can be completed before transfer.

Acceptance of Transfer Credit

1. Students who have completed the Associate of Arts or Associate of Science degree with a cumulative grade point of 2.0 or better will receive transfer credit for all college level courses in which a grade of D or better has been earned.

Conditions for Transfer Admission

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Associate of Arts or Associate of Science degree with a cumulative grade point of 2.0 or better for all previous college level courses.

2. The policy encourages receiving institutions to give preferential treatment to students who have not earned an Associate of Arts or Associate of Science degree but have earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses.

3. The policy further encourages that students who have not earned an Associate of Arts or Associate of Science degree or who have not earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses are eligible for admission as transfer students on a competitive basis.
2. Students who have not earned an Associate of Arts or Associate of Science degree will receive transfer credit for all college level courses in which a grade of C or better has been earned.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at the institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer student shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

Appeals Process

A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and of the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolutions of individual cases of appeal from transfer students who have exhausted all local appeal mechanism concerning applicability of transfer credits at receiving institutions.
List of Transfer Module (TM) Courses  
(Based on GenEd)  
Cleveland State University  
(Updated/Effective: Fall, 2003)

<table>
<thead>
<tr>
<th>ENGLISH</th>
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<tbody>
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<td>ENGLISH</td>
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<tr>
<td>ENG 101 English I</td>
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<tr>
<td>ENG 102 English II</td>
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<td>FIRST COLLEGE</td>
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<tr>
<td>FST 101 ENG - English I</td>
</tr>
<tr>
<td>FST 102 ENG - English II</td>
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<tr>
<td>MECHANICAL ENGINEERING</td>
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<tr>
<td>MCE 102 Technical Writing &amp; Professional Communication</td>
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<tr>
<td>MUSIC</td>
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<tr>
<td>MUS 113 Writing about Music</td>
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<tr>
<td>URBAN AFFAIRS</td>
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<tr>
<td>UST 102 Professional Writing</td>
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<th>MATHEMATICS AND LOGIC</th>
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<tr>
<td>MATHEMATICS</td>
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<tr>
<td>MTH 128 Mathematics for Elementary Teachers II</td>
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<tr>
<td>MTH 152 Mathematical Concepts 1b</td>
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<tr>
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<tr>
<td>MTH 154 Mathematical Concepts 2a</td>
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<tr>
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<td>ENG 240</td>
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<tr>
<td>ENG 241</td>
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<tr>
<td>ENG 271</td>
</tr>
</tbody>
</table>
FIRST COLLEGE

FST 109  HUM - Foundations of Modern Society I
FST 121  ENG - Great Books Workshop
FST 223  ENG - World Literature

HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

DAN 201  Introduction to Dance
DAN 211  Dance History

HISTORY

HIS 101  Western Civilization I
HIS 102  Western Civilization II
HIS 110  U.S. History Survey
HIS 111  United States History to 1877
HIS 112  United States History Since 1877
HIS 165  Introduction to Latin American History
HIS 175  Introduction to African History
HIS 215  History of African-Americans to 1877
HIS 216  History of African-Americans Since 1877
HIS 284  History of Women

MODERN LANGUAGES

MLA 204  Nonwestern Literature (cross-listed with ENG 204)

MUSIC

MUS 111  Enjoyment of Music
MUS 151  Jazz Survey
MUS 161  Roots of Rock and Soul

PHILOSOPHY

PHL 171  Introduction to Philosophy
PHL 181  Historical Introduction to Philosophy
PHL 211  Morals and Rights
PHL 240  Health Care Ethics
PHL 245  Science and Philosophy
PHL 261  Ancient Philosophy
PHL 262  Medieval Philosophy
PHL 263  Early Modern Philosophy
PHL 283  Introduction to Ethics
# RELIGIOUS STUDIES

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>REL 101</td>
<td>Understanding Religion</td>
</tr>
<tr>
<td>REL 217</td>
<td>Religion of Black America</td>
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<tr>
<td>REL 227</td>
<td>Science and Belief</td>
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<tr>
<td>REL 231</td>
<td>Introduction to the Old Testament</td>
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<tr>
<td>REL 232</td>
<td>Jesus and the Gospels</td>
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<tr>
<td>REL 233</td>
<td>Paul and the Development of Christianity</td>
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<tr>
<td>REL 234</td>
<td>The Later New Testament</td>
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<tr>
<td>REL 236</td>
<td>Jesus and the Gospels (Writing)</td>
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<tr>
<td>REL 237</td>
<td>Paul and the Development of Christianity (Writing)</td>
</tr>
<tr>
<td>REL 238</td>
<td>The Later New Testament (Writing)</td>
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<tr>
<td>REL 239</td>
<td>Introduction to the Old Testament (Writing)</td>
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<tr>
<td>REL 245</td>
<td>Religion in America</td>
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<tr>
<td>REL 249</td>
<td>Current Moral Issues</td>
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<tr>
<td>REL 250</td>
<td>Stages of Life</td>
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<tr>
<td>REL 251</td>
<td>Perspectives on Death and Dying</td>
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<tr>
<td>REL 260</td>
<td>Women and Religion</td>
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<td>REL 261</td>
<td>Religion and the Mystery of Evil</td>
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<tr>
<td>REL 265</td>
<td>Religion and Culture</td>
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<td>REL 276</td>
<td>Eastern Religions</td>
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<tr>
<td>REL 280</td>
<td>Introduction to Mythology</td>
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<td>REL 285</td>
<td>Myths of Fate and Destiny</td>
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# URBAN STUDIES

<table>
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<tr>
<th>Course</th>
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<tr>
<td>UST 250</td>
<td>The City in Film</td>
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# SOCIAL SCIENCE

## ANTHROPOLOGY

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<td>ANT 100</td>
<td>Introduction to Anthropology</td>
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<td>ANT 101</td>
<td>Human Biocultural Evolution</td>
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<td>ANT 102</td>
<td>Study of Culture</td>
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<td>ANT 103</td>
<td>Ancient Civilizations</td>
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<td>ANT 171</td>
<td>Native Civilizations of the Americas</td>
</tr>
<tr>
<td>ANT 221</td>
<td>Culture and Human Sexuality (cross-listed with HSC 201)</td>
</tr>
<tr>
<td>ANT 260</td>
<td>Language, Society, and Culture (cross-listed with ENG/LIN/MLA 260)</td>
</tr>
</tbody>
</table>
COMMUNICATION

COM 101 Principles of Communication
COM 211 Communicating in Personal Relationships
COM 226 Mass Media and Society
COM 231 Evolution of Mass Media

ECONOMICS

ECN 201 Principles of Macroeconomics
ECN 202 Principles of Microeconomics

ENGINEERING SCIENCE

ESC 282 Engineering Economy

ENGLISH

ENG 260 Language, Society, and Culture (cross-listed with ANT/LIN/MLA 260)

FIRST COLLEGE

FST 164 PSY - Perspectives in Psychology
FST 242 PSC - Political Science Workshop
FST 247 SWK - Race, Poverty, and Welfare
FST 254 SOC - Sociology Workshop
FST 257 SWK - Social Work Workshop
FST 264 PSY - Psychology Workshop
FST 271 SSC - African Area Studies

LINGUISTICS

LIN 260 Language, Society, and Culture (cross-listed with ANT/ENG/MLA 260)

MODERN LANGUAGES

MLA 260 Language, Society, and Culture (cross-listed with ANT/ENG/LIN 260)

POLITICAL SCIENCE

PSC 111 American Government
PSC 217 Urban Politics and the African-American Experience
PSC 221 Comparative Politics
PSC 227 Power, Authority, and Society in Nonwestern Communities
PSC 231 International Politics
PSC 241 Freedom and Authority

PSYCHOLOGY
## PSY 101 Introduction to Psychology
## PSY 220 Child Development
## PSY 221 Adolescent Psychology
## PSY 223 Life Span Development
## PSY 255 Psychology of Women

**SOCIAL WORK**

## SWK 201 Contemporary Social Welfare

**SOCIOLOGY**

## SOC 101 Introduction to Sociology
## SOC 201 Race, Class, and Gender
## SOC 203 Sociology of Poverty
## SOC 210 Introduction to Sociology of the Third World
## SOC 211 American Culture and Society
## SOC 215 Black/White Interaction
## SOC 260 Deviance in the U.S.

**URBAN STUDIES**

## UST 200 Introduction to Urban Studies
## UST 290 Urban Geography

## NATURAL SCIENCE

**BIOLOGY**

## BIO 100 The Living World
## BIO 102 Human Genetics, Reproduction, and Development
## BIO 106 Human Biology in Health and Disease
## BIO 107 Human Biology Laboratory
## BIO 108 Environmental Ecology
## BIO 109 Biological Diversity Laboratory
## BIO 200/201 Introductory Biology I & Lab
## BIO 202/203 Introductory Biology II & Lab
## BIO 264/265 Introductory Microbiology & Lab
## BIO 266/267 Human Anatomy and Physiology I & Lab
## BIO 268/269 Human Anatomy and Physiology II & Lab

**CHEMISTRY**
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<td>CHM 156</td>
<td>Chemistry Around Us Lab</td>
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<td>CHM 251</td>
<td>College Chemistry I</td>
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<td>CHM 252</td>
<td>College Chemistry II</td>
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<td>CHM 256</td>
<td>College Chemistry Lab I</td>
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<td>CHM 257</td>
<td>College Chemistry Lab II</td>
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<td>CHM 261</td>
<td>General Chemistry I</td>
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<tr>
<td>CHM 262</td>
<td>General Chemistry II</td>
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<td>Honors General Chemistry</td>
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<td>Honors General Chemistry Lab</td>
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<td>EVS 206</td>
<td>Introduction to Environmental Science</td>
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<td>GEO 100/101</td>
<td>Introductory Geology &amp; Lab</td>
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<tr>
<td>GEO 106</td>
<td>Introduction to Meteorology</td>
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<tr>
<td>GEO 140</td>
<td>Development of Continents and Oceans</td>
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<td>GEO 150</td>
<td>Geological History of the Earth</td>
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<td>GEO 170</td>
<td>Origins and History of Life</td>
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<td>GEO 202/203</td>
<td>Principles of Paleontology and Lab</td>
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<td>GEO 210</td>
<td>Earth and Human Affairs</td>
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<td>GEO 230</td>
<td>Natural Resources</td>
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<td>PHY 101</td>
<td>The Flying Circus of Physics: Motion and Heat</td>
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<td>PHY 102</td>
<td>The Flying Circus of Physics: Sound and Light</td>
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<td>PHY 103</td>
<td>The Flying Circus of Physics Lab</td>
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<td>PHY 201</td>
<td>Astronomy: Stars and Galaxies</td>
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<td>PHY 202</td>
<td>Astronomy: Planets, Asteroids and Comets</td>
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<td>PHY 221</td>
<td>College Physics I</td>
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<td>University Physics II</td>
</tr>
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<td>PHY 243</td>
<td>University Physics I (writing course)</td>
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<tr>
<td>PHY 244</td>
<td>University Physics II (writing course)</td>
</tr>
<tr>
<td>UST 289</td>
<td>Physical Geography</td>
</tr>
</tbody>
</table>
Undergraduate Admission for College Graduates

Introduction

Baccalaureate students who are graduates of accredited four-year colleges and universities may apply for enrollment in undergraduate programs at CSU as a post-baccalaureate student. An official college transcript showing graduation is the only credential required with the application of admission.

If such students pursue a second undergraduate degree at CSU, the specific college and the department will determine the collegiate and departmental residency requirements and course work needed.

The students seeking a second undergraduate degree at CSU must meet the university residency requirement: completion of the last 30 credits of work, including a minimum of 24 credits from upper-division courses. [Such students will be required to take one African-American Experience course unless evidence of taking two such courses at another school is presented. Note: this last provision has been abolished as of Summer, 2003.]

Students interested in any graduate-level work must consult with the graduate program director of the department and the College of Graduate Studies.

College Graduates Seeking Teacher Licensure

Cleveland State University has programs to help graduates of accredited, four-year, liberal arts colleges meet the requirements for Ohio teacher licensure at the early childhood, middle-, and secondary-school levels. However, the university offers programs leading to secondary school licensure only to those who have majors in the teaching fields taught at CSU. These fields are described in the College of Education section.

Admission procedures for college graduates seeking to enter CSU licensure programs are the same as those for undergraduate admission of college graduates.

International Student Admissions

International Students are individuals who are planning to enter the U.S. for the sole purpose of pursuing a full-time academic program. Either an I-20 (F-1) or IAP-66 (J-1) will be issued once a student has been formally admitted and shows proof of financial verification.

International students must submit the following items:
1. Completed application Form
2. Non-refundable $50.00 application fee (check or money order)
3. Official English translations and official original language transcripts of all secondary and postsecondary (college and university) course work
4. For freshman applicants only: Scores from either American College Test (ACT) or Scholastic Aptitude Test (SAT)
5. Language Test Results: TOEFL: 525, Michigan: 85, or completion of ELS Level 109 at an ELS Language Center
6. A financial statement ensuring adequate funds are available to cover your expenses in U.S. for your first year of study

Application deadlines:

- **Fall Semester** - June 1
- **Spring Semester** - November 1
- **Summer Semester** - April 1

The university has “rolling admissions.” This means your file will automatically be carried over to the next semester if an application is not completed by the deadline.

Inquiries regarding application procedures should be directed to:

**Center for International Services and Programs (CISP)**
2121 Euclid Avenue
University Center, Room 302
Cleveland, Ohio 44115
U.S.A.

Phone: 216-687-3910
FAX: 216-687-3965

Website: [www.csuohio.edu/internat/](http://www.csuohio.edu/internat/)

**Non-Degree Students**

- Go to Non-Degree Admissions Web Site

The university provides the opportunity to enroll for credit courses on a space available basis without formally being admitted to a degree program. Non-Degree Student Status is intended for those persons who want to take undergraduate courses for professional reasons or cultural enrichment. Financial aid is not available for non-degree students. The application form is the only document required. Registration as a non-degree student does not imply acceptance to the university as a degree-seeking student.

Qualifications for Non-Degree Student Status are:

1. Prospective students must have graduated from high school at least one year prior to their enrollment
2. International students on an F-1 visa are not eligible to be non-degree students

Registration limitations for the Non-Degree Student Status are:

1. Department approval must be obtained to enroll in 300- or 400-level (junior or senior year) courses
2. Non-Degree Students will be subject to Add/Drop policies and academic probation and/or dismissal under the same regulations that apply to degree students. No fees are charged for placement examinations.
Placement Examinations

Placement examinations are administered in English, English as a Second Language, and mathematics to provide for the proper placement of students.

English:
Students who are required to take Freshman English at CSU must take the English Placement Examination in the semester before they intend to sign up for a Freshman English course. Students whose first language is not English must take the ESL Placement Examination instead. A schedule of testing dates is included in each semester course schedule. For more information, refer to Freshman English Placement.

English as a Second Language:
Students whose first language is not English and who are required to take Freshman English at CSU will be evaluated for placement by the ESL Placement Examination rather than the English Placement Examination. Exceptions are made by the ESL coordinator for students who clearly demonstrate excellent fluency to the ESL coordinator. Testing schedules are obtained from the ESL Program Office. For more information, refer to Freshman English Placement or call (216) 687-3574.

Mathematics:
All students must take the Mathematics Placement Exam before they will be permitted to register for mathematics courses numbered 115, 118, 119, 127, 147, 151, 167, 168, and 181. Mandatory placement for these courses is in effect. Students are not permitted to register for a higher-level course than indicated by their placement exam score unless they have passed the appropriate prerequisite course. No fees are charged for placement examinations.
WELCOME!

We are pleased Cleveland State is among your academic choices. We invite you to visit our developing metropolitan campus to experience all that Cleveland State has to offer. To guide you in your discovery, choose the category below which best describes your academic status.

**Incoming Freshmen**
Current high school students or high school graduates who have not attended college.

**Transfer Students**
Students who are transferring from another university or college to Cleveland State.

**Graduate Students**
Students considering a graduate program at Cleveland State and who have completed or are nearing completion of an undergraduate degree.

**Guest Students**
Students who are not currently seeking a degree, are from another university or college, want to take courses for professional development or personal enjoyment, have cross-registered at a participating university or college, or are Ohio residents age 60 or older.

**International Students**
International students interested in studying in the United States at Cleveland State.

**Returning Students**
Students who previously attended Cleveland State or students who have a bachelor's degree and want to take undergraduate courses.

**Law Students**
Students interested in pursuing a law degree at Cleveland State's Cleveland-Marshall College of Law.

**Pre-College Programs**
Students who interested in taking college courses while they are still in high school. This includes Post-Secondary Enrollment Options Program, Viking Bridge to College and other summer programs.
Introduction

Established as a state-assisted university in 1964, CSU assumed a tradition for excellence when it adopted the buildings, faculty, staff, and programs of Fenn College, a private institution of 2,500 students. In 1969 the university merged with the Cleveland-Marshall College of Law.

Through Fenn College, Cleveland State traces its historical roots to 1870, when the Cleveland YMCA began to offer free classes. The YMCA program was formalized in 1881, reorganized in 1906 as the Association Institute, and became the Cleveland School of Technology, later renamed Fenn College. The Cleveland-Marshall College of Law traces its origins to the founding of Cleveland Law School in 1897 as the first evening law school in the state and one of the first to admit women and minorities. In 1946, Cleveland Law School merged with the John Marshall School of Law, founded in 1916, to become Cleveland-Marshall College of Law. Cleveland-Marshall became part of Cleveland State University in 1969.

Throughout its long history, Cleveland State University and its predecessors pioneered work in developing student internships with business and industry, expanding an extensive co-op program, and attracting students who did not otherwise have access to higher education. Today, Cleveland State continues to grow by supporting the flexibility of its course offerings, programs, and affordable price with an excellent faculty and state-of-the-art facilities.

Seven Colleges

Courses of instruction leading to degrees are offered through CSU's seven colleges. Undergraduate students enroll in one of the five undergraduate colleges:

College of Arts and Sciences

- Go to college web site
- Go to college catalog section

James J. Nance College of Business Administration

- Go to college web site
- Go to college catalog section

Fenn College of Engineering

- Go to college web site
- Go to college catalog section
Many degrees are available from these colleges in the evening.

Undergraduate students may be admitted to Collegiate Studies, which provides comprehensive academic support services to students.

Other programs available to undergraduates include: First College, an independent liberal arts program leading to a baccalaureate degree in conjunction with the College of Arts and Sciences; Black Studies, a selection of courses, available in various departments, which explore the Black experience in America; and the Women's Comprehensive Program, which offers special programming and counseling as well as course work.

Graduate work is offered through the College of Graduate Studies and the Cleveland-Marshall College of Law.

Division of University Studies

The Division of University Studies is the entry point for all newly admitted undergraduate students. University Studies enhances students' success by providing comprehensive academic support services that assist students in achieving their academic and career goals.

The mission of the Division of University Studies is to provide every first-year undergraduate student with the academic and ongoing career support needed to form the foundation for success and build momentum for graduation. This is accomplished by:

- A common and comprehensive entry experience for all new students
- Advising services and course instruction
- A central resource for academic and career information
- A transition into the university and into the college of their choice
- Ongoing support for students throughout their academic experience
- An experience that culminates in graduation

Central to the mission of University Studies is the First-Year Experience. Included in this experience are orientation programs, academic advising, services for students with disabilities, mentoring, instruction, English as a Second Language, tutoring, and an introduction to career development and planning.

A Dynamic Campus Environment

The CSU campus currently consists of 85 acres, with 40 buildings used for teaching, research, housing, and recreation. Nineteen-story Rhodes Tower, containing the University Library, classrooms, and many faculty offices, is a striking feature on the Cleveland skyline.

CSU features a blend of old and new architectural styles, with Mather Mansion (the former home of Samuel R. Mather) sharing the stage with such modern facilities as the Science and Research Center and the Health Sciences Center. The 17-18th Street Block Project, a multi-phase redevelopment effort linking Cleveland State University to the Playhouse Square District and downtown Cleveland, has been completed. Three components — a state-of-the-art Law Library; a 600-car parking garage; and Monte Ahuja Hall, the College of Business Administration Building, with an Executive Education Wing and a distance learning center — have been completed first. The final component, a
College of Urban Affairs Building for the 21st century, has been dedicated recently.
Undergraduate Degrees

College of Arts and Sciences
- Anthropology
- Art
- Classical and Medieval Studies
- Communication (available in the evening)
- Dramatic Arts
- Economics (available in the evening)
- English (available in the evening)
- French
- Geological Sciences
- History (available in the evening)
- International Relations
- Liberal Studies
- Linguistic Studies

Bachelor of Music

Bachelor of Science in Nursing

Bachelor of Science, including major programs in the following fields:
- Biology (available in the evening)
- Biology - Medical Technology
- Chemistry (available in the evening)
- Environmental Science
- Geological Sciences
- Mathematics
- Physics

Fenn College of Engineering
- Maxine Goodman Levin College of Urban Affairs
First College information

First College degrees are awarded in conjunction with the College of Arts and Sciences upon satisfactory completion of one of the major programs listed for Arts and Sciences, Urban Affairs, or a personally designed major.

- Bachelor of Arts
- Bachelor of Science

James J. Nance College of Business Administration

Bachelor of Business Administration, including major programs in the following fields:

- Accounting (available in the evening)
- Business Administration (available in the evening)
- Business Economics (available in the evening)
- Finance (available in the evening)
- Information Systems (available in the evening)
- Management and Labor Relations (available in the evening)
- Marketing (available in the evening)
- Operations Management and Business Statistics (available in the evening)

Bachelor of Science in Computer and Information Science (available in the evening)

- CIS Major
- CSC Major

College of Education

Bachelor of Science in Education, including major programs in the following fields:

- Early Childhood Education
- Middle Childhood Education
- Physical Education and Sport
  - Multi-Age Teaching License
  - Allied Sport Professions
- Special Education: Intervention Specialists in
  - Mild/Moderate
  - Moderate/Intensive Disabilities
- Secondary Licensure:
  - Earth Science
  - Life Sciences
  - Chemistry
  - Physics
  - Dual Field Chemistry and Physics
  - Integrated Science
  - Integrated Mathematics
  - Integrated Language Arts
  - Integrated Social Studies
- Multi-Age License:
  - Foreign Languages
  - Music
  - Visual Art
Fenn College of Engineering

- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Computer Engineering
- Bachelor of Electrical Engineering (available in the evening)
- Bachelor of Industrial Engineering
- Bachelor of Mechanical Engineering (available in the evening)
- Bachelor of Science in Electronic Engineering Technology (available in the evening)
- Bachelor of Science in Mechanical Engineering Technology (available in the evening)

Maxine Goodman Levin College of Urban Affairs

Bachelor of Arts including major programs in the following fields:

- Environmental Studies (available in the evening)
- Public Safety Management (available in the evening)
- Urban Services Administration (available in the evening)
- Urban Studies (available in the evening)

Graduate Degrees

The programs of the College of Graduate Studies and Research and the Cleveland-Marshall College of Law are described in detail in separate catalogs which may be obtained from the offices of the respective deans.

- Click here to go to the Graduate Catalog
- Click here to go to the Cleveland-Marshall College of Law website

College of Graduate Studies

Most CSU graduate programs are offered during afternoon and evening hours

- Go to College of Graduate Studies and Research Web Site

The master's degree is awarded upon satisfactory completion of the requirements of the following programs:

- For more information, click here to go to the Graduate Catalog

- Master of Accountancy
- Master of Applied Communication Theory and Methodology
- Master of Arts in Economics
- Master of Arts in English
- Master of Arts in Environmental Studies
- Master of Arts in History
- Master of Arts in Mathematics
- Master of Arts in Philosophy
- Master of Arts in Psychology
- Master of Arts in Sociology
- Master of Arts in Spanish
- Master of Arts in Speech Pathology and Audiology
- Master of Business Administration
- Master of Computer and Information Science
- Master of Public Administration
- Master of Public Health
- Master of Social Work
- Master of Science in Biology
- Master of Science in Chemical Engineering
- Master of Science in Chemistry
- Master of Science in Civil Engineering
- Master of Science in Electrical Engineering
- Master of Science in Engineering Mechanics
- Master of Science in Environmental Engineering
- Master of Science in Environmental Science
- Master of Science in Health Sciences
- Master of Science in Industrial Engineering
- Master of Science in Mathematics
• Master of Education
• Master of Labor Relations and Human Resources
• Master of Music
• Master of Occupational Therapy
• Master of Physical Therapy
• Master of Science in Mechanical Engineering
• Master of Science in Nursing
• Master of Science in Physics
• Master of Science in Urban Studies
• Master of Urban Planning, Design and Development

Specialists degrees are awarded upon satisfactory completion of a program in educational administration, a program in counseling and pupil personnel administration, or a program in school psychology.

The doctoral degree is awarded upon satisfactory completion of the requirements of the following programs:

• Doctor of Business Administration
• Doctor of Engineering
• Doctor of Philosophy in Biology
• Doctor of Philosophy in Chemistry
• Doctor of Philosophy in Urban Education
• Doctor of Philosophy in Urban Studies and Public Affairs

Dual degrees are awarded upon satisfactory completion of the requirements of the following programs with combined curriculum:

• Juris Doctor/Master of Arts in Environmental Studies
• Juris Doctor/Master of Public Administration
• Juris Doctor/Master of Urban Planning, Design, and Development

Cleveland-Marshall College of Law

The College of Law confers the following degrees:

• Juris Doctor
• Master of Laws

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Anthropology (B.A.) At-a-Glance

Admission to the major:
No requirement other than good academic standing in the College of Arts and Sciences or First College

Minimum hours required for major: 36

Minimum hours required for minor: 16

Subfields: Archaeology, biological/physical anthropology, cultural anthropology, and linguistic anthropology

Advising: Students are encouraged to select a faculty advisor when they declare a major or minor in anthropology. The Handbook for Anthropology Majors and Minors, available from the Anthropology Department, Chester Building 119, contains comprehensive information regarding program requirements.

Awards:
In recognition of academic excellence, the Anthropology High Academic Achievement Award is presented to seniors who have achieved a grade point average in their major courses at the highest honor level, 3.8 or above.

Student organization: CSU Anthropology Association

Anthropology is the study of the cultural and biological diversity of humanity. American anthropology has four broad subfields: archaeology, biological or physical anthropology, cultural anthropology, and linguistic anthropology. Archaeology examines the physical records of past cultures. Physical anthropology is concerned with human evolution and modern human biological variation. Cultural anthropology focuses on the customs, traditions, and rituals of contemporary human societies. Linguistic anthropology explores the relationship between language and culture in past and present human societies.

Anthropologists usually specialize in one or more geographic areas of the world, such as Mesoamerica, Oceania, or Africa. They may also focus on particular populations and locales and do field research in those areas. CSU anthropologists have conducted research on the ancient Maya civilization in Belize, the Nambicuara Indians of Brazil, the Amhara of Ethiopia, griots and language in Mali, the indigenous trade languages of Papua New Guinea, and the white minority of the English-speaking Caribbean.

The Anthropology Department offers undergraduate training in all four subfields of anthropology. Faculty research projects in archaeology, human paleontology, forensics, visual anthropology, ethnography, and sociolinguistics provide students with opportunities to gain first-hand experience in scholarly research. Students may also enroll in a variety of special topics and independent study courses.

Majors are encouraged to explore other academic disciplines in conjunction with their anthropology focus. Many students enhance their anthropology major by completing a minor or second major in another undergraduate discipline, such as biology, geology, education, linguistics, psychology, or urban studies. Conversely, a minor in anthropology is an excellent complement to majors in other disciplines.

Majors who anticipate pursuing graduate study in anthropology are encouraged to gain substantial foreign language training as undergraduates. All majors are encouraged to acquire training in computer and information sciences and to develop writing skills that exceed present minimum university requirements.
The study of anthropology fosters an understanding of human societies and problems. The bachelor's degree provides a basic introduction to the field and is especially useful in professions requiring a strong social-science background, such as law enforcement, social work, and health care. It also provides a strong foundation for graduate study in anthropology and other disciplines, including education, law, library science, linguistics, and urban studies.

CSU anthropology graduates are employed in a variety of fields including community and public relations, education, health and social services, law and law enforcement, and marketing and sales. Other graduates have traveled to other countries to teach English or serve in the Peace Corps.

**Requirements for Transfer Students**

Transfer students who wish to major in anthropology must complete a minimum of 16 semester hours of anthropology courses at CSU. Transfer students who wish to minor in anthropology must complete a minimum of 8 semester hours of anthropology courses at CSU. Transfer credits for the major and minor are determined by the Anthropology Department Curriculum Committee.

**Major Field Requirements**

A minimum of 36 semester hours are required for the anthropology major. A grade of C or better must be earned in courses used to fulfill requirements for the major.

**Required Courses:**

*Foundations in Anthropology (12 credit hours)*

Any 3 of 4 courses in this category:

- ANT 100 Introduction to Anthropology
- ANT 101 Human Biocultural Evolution (formerly ANT 201)
- ANT 102 Study of Culture (formerly ANT 202)
- ANT 103 Ancient Civilizations

*Anthropology Core Courses (12 semester hours)*

Any 3 of 5 courses in this category:

- ANT 301 Biological Anthropology
- ANT 302 Archaeology
- ANT 303 Cultural Anthropology
- ANT 304 Linguistic Anthropology
- ANT 305 Quantitative Anthropology

*Area Studies in Anthropology (4 credit hours)*

Any course in this category:

- ANT 351 Native North Americans
- ANT 352 Native South Americans
- ANT 353 Cultures of Africa
- ANT 354 Cultures of Oceania
- ANT 355 Cultures of Southeast Asia
- ANT 356 Ethiopia
- ANT 358 Caribbean Societies
ANT 393 Area Studies in Archaeology  
ANT 394 Area Studies in Anthropology  
ANT 494 Advanced Area Studies  

**Anthropology Electives (8 credit hours)**  
Any anthropology courses at or above ANT 101 (only 4 credit hours to be chosen from anthropology courses 101-300).  

No more than 8 credit hours of **ANT 496 Independent Study** may be used to fulfill requirements for the anthropology major.

**Anthropology Minor**  
A minor in anthropology complements majors in disciplines such as biology, geology, linguistics, psychology, and urban studies. A minimum of 16 semester hours are required for the anthropology minor. A grade of C or better must be earned in courses used to fulfill requirements for the minor.

**Required Courses:**  

**Foundations in Anthropology (4 credit hours)**  
Any 1 of 4 courses in this category:  
- **ANT 100 Introduction to Anthropology**  
- **ANT 101 Human Biocultural Evolution** *(formerly ANT 201)*  
- **ANT 102 Study of Culture** *(formerly ANT 202)*  
- **ANT 103 Ancient Civilizations**  

**Anthropology Electives (12 credit hours)**  
- Any anthropology courses at or above ANT 101 (only 4 credit hours to be chosen from anthropology courses 101-300).

No more than 4 semester hours of **ANT 496 Independent Study** may be used to fulfill requirements for the anthropology minor.
Art (B.A.)

At-a-Glance

Minimum hours required for major: 48

Minimum hours required for minor: 24

Special tracks: Art history, studio art, art education

Advising: Major professor in each track area. Department office phone: (216) 687-2040

Student organizations: Student Organization for Fine Arts (SOFA)

Additional information: Honors program. Scholarships based on merits awarded each year up to full tuition.

The creation of art and the study of its history are complementary activities that deepen a student's understanding of the aspirations of humankind. To develop both artistic skills and critical appreciation of art, the Art Department offers a broad range of courses in studio art, art history, and art education for both nonmajors and majors. The Art Department also offers a minor. Art Department courses can be taken for personal enrichment, to fulfill university and college graduation requirements, and to prepare for advanced graduate-level study.

The course offerings are wide-ranging. For example, in studio art a student can select foundation courses in basic design and drawing, then more specialized studies of drawing, painting, sculpture, printmaking, photography, ceramics, and computer graphics. In art history, there is an introductory course in art appreciation and surveys of world art, including Western, Asian, and African art. More specialized studies include courses in ancient, Medieval, renaissance, and modern art; Indian, American and African-American art; Western architecture, cities and planning; and Cleveland's urban environment. Art education offers a course that examines assessment models, and another course that studies art instruction and philosophy in different socio-vocational contexts. By selecting from these offerings, students can pursue an individualized program of study for their general knowledge, professional career, or graduate work.

With the counsel of a faculty advisor in the Art Department, students wishing to major in art may elect a program from one of three curricular options: studio art, art history, and art education. For the bachelor of arts degree, all art majors are required to take a core curriculum of subjects for general preparation and additional hours of upper-level courses for diversification.

Transfer and non-degree students must submit a portfolio to the Art Department in order for a placement level to be determined. Students are encouraged to do this during the semester before their anticipated enrollment.

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Major Field Requirements

- Studio Art
- Art History
- Art Education

Art majors in Studio Art and Art History are required to take 24 credit hours of core curriculum courses. The core consists of
12 credit hours in Studio Art and 12 credit hours in Art History. In addition, they must elect a curricular option.

**Art Major (Studio Art)**

**Core Curriculum:**

- ART 102 Introduction to 2-D Art and Design (4 credits)
- ART 103 Introduction to 3-D Art and Design (4 credits)
- ART 211 Drawing I (4 credits)
- ART 252 or ART 253 (Western Art) (4 credits)
- ART 281 or ART 286 (Non-Western Art) (4 credits)
- ART 495 Art Seminar (4 credits)

**Curricular Options:**

The option in Studio Art requires satisfactory completion of 24 credit hours beyond the core curriculum. Students take a sequence of 200-, 300-, and 400-level courses in one of the following areas: ceramics, drawing, painting, photography, printmaking, sculpture, or graphic design. Additional studio electives are required in all studio sequences except graphic design. The cumulative total of the core and studio sequence must be 48 credit hours minimum.

**Art Major (Art History):**

**Core Curriculum:**

- ART 102 Introduction to 2-D Art and Design (4 credits)
- ART 103 Introduction to 3-D Art and Design (4 credits)
- ART 211 Drawing I or ART 226 Sculpture I (4 credits)
- ART 252 Introduction to Early Western Art (4 credits)
- ART 253 Introduction to Western Art Since 1400 (4 credits)
- ART 281 Introduction to Far Eastern Art or ART 286 Introduction to African Art (4 credits)

**Curricular Options:**

The option in Art History requires satisfactory completion of 24 credit hours beyond the core curriculum. These should consist of 16 credit hours in Art History at the 300 or 400 level, 4 of which must be non-Western, and 8 credit hours in Art Seminars (ART 495). The cumulative total of the core and Art History sequence must be 48 credit hours minimum. Art majors in Art History must also complete 4 semesters in German, French, an approved alternate language or two-year equivalency.

**Art Major (Art Education: Multi-Age Licensure)**

The option in art education requires satisfactory completion of 36 hours in art studio courses, including a three-course sequence (200, 300, 400 levels) in one studio area and ART 226 OR ART 246, ART 221, ART 231, and ART 242 OR ART 244, 16 hours in Art History courses (including ART 252 and ART 253, and ART 281 OR ART 286) and 8 hours in Art Education courses (ART 341 and ART 441). The cumulative total must be 60 hours. Also required for licensure are 39 credit hours in professional education and art education courses taught in the College of Education.

**Art Minor**

In addition to the major program, the Art Department offers a minor in both Studio Art and Art History for those interested in art as a secondary field. All minors are required to take a curriculum of 24 credit hours to be determined in consultation with a faculty advisor in the Department of Art. Art majors cannot also minor in Art.
Studio Art

This option requires satisfactory completion of the following requirements: ART 102, ART 103, either ART 252 OR 253, for a total of 12 credit hours; and one studio sequence including one 200-level, one 300-level, and one 400-level course for a minimum total of 24 credit hours.

Art History

This option requires satisfactory completion of the following requirements: ART 102, ART 103, ART 252 for a total of 12 credit hours; ART 253 plus one 300-level and one 400-level Art History course, (one of which must be non-Western), for a minimum total of 24 credit hours.

Honors Program

- Studio Art
- Art History
- Art Education

Studio Art

Students of junior or senior standing who have a critical understanding of their discipline(s); and have a 3.0 cumulative grade point average and a 3.5 average in Studio Art, may be invited by a committee of three faculty members, including the chairperson, to take this option.

Acceptance demands 12 credit hours in Studio Art beyond the curriculum requirements, 4 credit hours of which would include a portfolio review by a studio committee consisting of three studio faculty. Successful completion of the program qualifies the candidate for graduation with honors in Studio Art.

Art History

Students of junior or senior standing who have shown independent critical understanding while fulfilling all core requirements; have a 3.00 cumulative grade point average with a 3.80 average in art history; and have met the language requirement, may be invited by a committee of four faculty members, including the chairperson, to take this option.

Acceptance demands at least 12 upper-level credit hours in Art History beyond curricular requirements, including the required thesis credit hours, and at least one non-Western field. Successful completion of an oral comprehensive examination in the defense of the thesis qualifies the candidate for graduation with honors in art history.

Art Education

Students of junior or senior standing who have shown independent critical understanding of their discipline, and have a 3.00 cumulative grade point average with a 3.80 average in art education and educational core requirements, may be invited by the art education faculty to take this option.

Acceptance demands 12 upper-level credit hours in art education beyond the curriculum requirements, including the thesis credit hours and supplemental independent study, and art education courses in research and/or curriculum development. Successful completion of the program qualifies the candidate for graduation with honors in art education.
**Teacher Licensure**

The Art Department, in cooperation with the College of Education, offers a program leading to a Provisional Multi-age Licensure requiring completion of courses as prescribed by the Department of Art, with professional education studies as prescribed by the College of Education.

For information concerning professional art and art education courses, students should confer with an advisor in the Art Department. For information concerning general education and professional education requirements for licensure, see the [College of Education chapter](#) of this Catalog.

**Certificate Program: Graphic Design**

This program prepares students, with or without a baccalaureate degree in art, for the conception and production of two-dimensional graphic designs, with emphasis on the utilization of software for the Macintosh computer. The certificate program is an alternative to a traditional four-year art degree, for creative and self-motivated students who specifically want to develop their technical proficiency, aesthetic sensibility, and design expertise.

The certificate program is 16 credit hours in the Department of Art. ART 102 (Introduction to 2-D Art and Design), and ART 211 (Drawing I) are prerequisites for all other courses. The required courses include ART 244 (Introduction to Macintosh), ART 344 (Advanced Raster-Image Development), ART 345 (Advanced Vector-Image Development), and ART 444 (Advanced Typography and Design) OR ART 445 (Introduction to Digital Media).

The Art Department also participates in interdisciplinary certificate programs in Arts Management and Multimedia Advertising. [See Certificate Programs](#) in this chapter of the Bulletin for additional information.

**Evening Program**

The Art Department offers a limited selection of courses in the evening each academic year, but at this time students cannot expect to complete a major or minor in Art with evening courses alone.
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Classical & Medieval Studies ("CLAM")

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- Major Field Requirements
- Classical and Medieval Studies Minor
- Approved Course Listing
- Teacher Licensure
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Classical and Medieval Studies (B.A.) At-a-Glance

Admission to major: Sophomore rank in good standing

Minimum hours required for major: 46

Minimum hours required for minor: 23

Special tracks: Student-determined concentration

Advising: Assigned faculty advisor; phone (216) 687-4645

Student organization: Voces Antiquae et Medievales

Additional information:
The CLM Program cosponsors summer excursions to theater festivals in Canada with the English Department. The CLM Program encourages its students to take advantage of foreign study opportunities.

The major in Classical and Medieval Studies (CLM) is an interdisciplinary program and draws upon the faculty of eight academic areas within the college: Art, English, History, Modern Languages, Music, Philosophy, Religious Studies, and Theater Arts.

CLM majors study the classical civilizations of ancient Greece and Rome and the transmission and development of that heritage in medieval Europe. During the course of their work, students acquire competence in an ancient language — usually Latin — and learn the particular methodologies and approaches of a variety of academic disciplines, such as history, philosophy, philology, literature and art. Completion of the CLM major provides students with an understanding of the foundations of Western civilization and a solid background in the liberal arts.

The CLM major, aside from satisfying personal interests, prepares students for a variety of academic and professional pursuits. CLM students pursue careers in teaching, law, archeology, religious ministry and education, and museum and archive work to name a few. In order to accommodate individual student interests, provision is made within the program for a student-determined concentration. The concentration is developed in consultation with the student's advisor.

Many of the courses taken to satisfy the CLM major requirements will also meet college or university general education requirements; in many instances, a CLM student will be able to complete a double major by taking only a few additional courses in one of the participating departments. Students interested in study abroad will be encouraged to take advantage of one of the many foreign study programs which exist both within and outside of the university.

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Major Field Requirements

Students pursuing a CLM major must meet the requirements in the following four areas. Core courses may not be counted toward the requirements for a special concentration.

The Core - 24 credit hours

(1) Language. Two courses or 8 credit hours in Latin at the 200-level or above. Classical Greek at the 350-level or above may be substituted with permission.
(2) History. Two courses or eight credit hours selected from the following: HIS 330, HIS 331, HIS 340, HIS 341, HIS 342. One course must be from the 33 series and one from the 34 series.

(3) General readings. Two courses or eight credit hours selected from the following: ART 252, ENG 280/320, PHL 261, and REL 235 or one course in classical mythology for a minimum of eight credit hours.

(4) The Concentration — 18 credit hours

The Concentration - 18 credit hours

Students must design, in consultation with their advisor, a coherent program with some special emphasis or focus consisting of at least six courses or at least 18 credit hours. Four of the six, or at least 12 credit hours, must be at the 300 and/or 400 level. The courses in a concentration must be CLM-designated courses selected from language courses (Latin, Greek, modern languages) above the 100-level, literature (English, modern languages), history, the arts (art history, theater arts, music), religious studies, philosophy, and classical and medieval studies.

The Senior Thesis - 4 credit hours

During the last year of CLM course work, the CLM major will propose a topic to the CLM Advisory Group for approval. When the topic has been approved, the student will be assigned to an appropriate thesis director and will register for CLM 498 in one semester and CLM 499 in the subsequent semester. In most cases, the thesis will be closely related to the student’s area of concentration.

Classical and Medieval Studies Minor

Students may earn a minor in Classical and Medieval Studies by completing the following courses: One course in Latin at the 102-level or higher or one course in classical Greek at the 302-level or higher (4 credit hours); one course selected from the CLM major core (4 credit hours); five additional CLM designated courses, (at least 15 credit hours).

Other courses which apply toward the CLM major and minor are listed below. In addition to these, certain special-topics courses may apply if approved by the CLM director. See individual departmental listing for course descriptions and prerequisites.

Courses

Art

- ART 252 Introduction to Early Western Art
- ART 356 Gothic Art

Dramatic Arts

- DRA 211 History of the Theater I

English

- ENG 280/320 Classical Literature in Translation
- ENG 318 Analysis of Language (with an approved topic such as Sanskrit or Hittite)
- ENG 330 Studies in Ancient Literature
- ENG 331 Studies in Medieval Literature
- ENG 361 Classical Rhetoric
- ENG 370 Chaucer

Greek

- GRK 301-302 Accelerated Classical Greek Language and Culture I, II
- GRK 350-351 Accelerated Classical Greek Language and Culture IV, V
• GRK 396/496 Independent Study in Greek

History
• HIS 330 History of Greece
• HIS 331 History of Rome
• HIS 340 Fall of the Roman Empire
• HIS 341 Early Middle Ages
• HIS 342 Later Middle Ages
• HIS 343 Social History of the Black Plague
• HIS 377 History of Islamic Civilization

Latin
• LAT 101-102 Latin I, II
• LAT 111-114 Latin Flex IA-B, IIA-B
• LAT 193/293/393/493 Special Topics
• LAT 199/299/399/499 Independent Study in Latin
• LAT 200 Latin Bridge
• LAT 201 Culture and Civilization
• LAT 202 Vergil

Modern Languages
• MLA 201 Words: An Introduction to Etymology
• MLA 230 Introduction to Mythology
• MLA 273/373 King Arthur in History, Legend, and Literature

Music
• MUS 411 Music History I

Philosophy
• PHL 261 Ancient Philosophy
• PHL 262 Medieval Philosophy

Religious Studies
• REL 231/239 Introduction to the Old Testament
• REL 232/236 Jesus and the Gospels
• REL 233/237 Paul and the Development of Christianity
• REL 234/238 The Later New Testament
• REL 280 Introduction to Mythology
• REL 285 Myths of Fate and Destiny
• REL 336 Hellenistic and Roman Religions
• REL 341 The Origin of Judaism
• REL 343 Ancient and Medieval Christianity
• REL 376 Women in Early Christianity
• REL 380 Ancient Greek Mythology: the Gods
• REL 463 Myths, Legends and Folktales
• REL 466 Images of Jesus in Early Christianity
• REL 468 Advanced Topics in Paul

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Teacher Licensure
Students preparing to teach will fulfill the requirements for the B.A. in Classical and Medieval Studies and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12).

The PreK-12 Licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency. Modern Language Methods courses should be taken the semester preceding student teaching.
Communication (B.A.) At-a-Glance

Minimum hours required for major: 36

Minimum hours required for minor: 20

Joint Program Available: Political Communication with Department of Political Science

Evening Program: Yes

Foreign Study Program: Yes

Advising: (216) 687-4630

Financial aid: Several, including Max Axelrod Scholarship, and Robert O. and Naomi W. Walker Memorial Scholarship

The purpose of communication studies is to understand communication processes and problems. The program is thus designed to examine communication behaviors as they occur in social contexts, such as mass media and social systems, public address, large organizations, small groups, and interpersonal interactions. The conceptual framework of the program is based in the behavioral sciences.

The department prepares students to work in the rapidly growing communication sector, which is expected to double within the next decade, encompassing roughly half of the workforce. The department lays a strong conceptual and practical foundation in advertising, public relations, journalism, organizational communication, interpersonal communication, conflict mediation, health communication, and telecommunication.

Students elect a major in Communication for a variety of reasons. Some undertake an undergraduate program as preparation for graduate study, teaching, or consulting. Others choose this major in preparation for a professional career in which communication occupies a central role.

The program is designed to provide both theoretical and practical training in communication, especially in the areas of applied research or areas designed to prepare students for communication-related professions. In several courses, for example, students are encouraged to apply in-class training to communication problems found in the urban community. In other courses, students are oriented toward professions in the fields of journalism, promotional communication, and broadcasting.

Major Field Requirements

All majors are required to take a minimum total of 36 semester credit hours in Communication and maintain a 2.25 GPA across all communication courses to graduate with a major in Communication. Two core courses (COM 101: Principles of Communication; COM 303: Communication Inquiry), 8 credit hours of theory courses, 4 credit hours of a capstone course, and 16 credit hours of elective courses are required for the major. Transfer students must obtain at least 20 credit hours from Communication courses at Cleveland State University.

Areas of Emphases

Students may earn a general Communication degree or may concentrate in one or more of the areas of emphasis of
Below is a list of all communication courses. Students are encouraged to consult the Department of Communication Handbook to see how these courses apply to the specific areas of emphasis.

- COM 100, 200, 300 Communication Lab
- COM 101 Principles of Communication
- COM 131 Media Mystery Tour: Insiders’ Perspective
- COM 204 Single Source Video/Audio Production and Editing
- COM 211 Communicating in Personal Relationships
- COM 221 Introduction to Film
- COM 225 Media Writing
- COM 226 Mass Media and Society
- COM 231 Evolution of Mass Media
- COM 242 Public and Professional Speaking
- COM 303 Communication Inquiry
- COM 320 History of the Moving Image
- COM 321 Documentary Form in Film & Television
- COM 326 Advanced Reporting & Specialized Writing for the Media
- COM 327 Media Criticism
- COM 329 Contemporary Film
- COM 330 Nonverbal Communication
- COM 331 Gender and Communication
- COM 332 Interracial Communication
- COM 341 Group Process and Leadership
- COM 346 Communication in Organizations
- COM 347 Political Communication
- COM 348 Intercultural Communication
- COM 350 Persuasive Communication and Attitude Change
- COM 351 Audio Production for Radio
- COM 352 Multi-Source Video Production
- COM 353 Media Electronics
- COM 357 Principles of Public Relations
- COM 358 Media Law, Economics and Ethics
- COM 359 International Communication
- COM 360 Principles of Advertising
- COM 362 Health Communication
- COM 366 Communication and Conflict
- COM 368 Introduction to Language
- COM 370 Communication Technology & Social Change
- COM 379 Communication and Negotiation
- COM 380 Family Communication
- COM 388 Rhetoric of Black America
- COM 400 Studio & Media Production Department Management
- COM 401 Advanced Video/Audio Production
- COM 403 Advanced Video/Audio Editing
- COM 404 Performance for the Screen: Broadcast and Film
- COM 405 Electronic Journalism
- COM 425 Editing and Graphics
- COM 426 Laboratory Newspaper I
- COM 427 Laboratory Newspaper II
- COM 428 Imaging Africa
- COM 444 Mediation and Collaborative Problem-Solving
- COM 447 Public Relations Writing
- COM 448 Managing Organizational Teams
- COM 449 Advanced Issues in Health Communication
- COM 450 Media Programming and Research
- COM 455 Communication Campaigns
- COM 460 Advertising Copywriting and Layout Design
- COM 490 Internship in Communication
- COM 493 Special Topics in Communication
- COM 495 Seminar in Communication
- COM 496 Independent Study
Communication Minor

All minors are required to take a total of 20 credit hours in communication courses. Eight hours are to include COM 101 and COM 303. A total of 12 hours should include 4 hours of a theory course and 8 hours of elective courses. Transfer students must obtain at least 12 credit hours from communication courses at Cleveland State University.

Journalism

The Department of Communication Certificate Program in Journalism provides college undergraduates and professionals with an educational program that exposes students to an array of skills characterizing modern media: writing in various journalistic forms and styles; reporting principles and strategies; ethics; and expertise appropriate to various media: basic photography, computer design and layout, the Internet; and editing. The program introduces students to contemporary practices and theories while integrating traditional skills with emerging technologies such as computer graphics and design, and the Internet.

Requirements for the Certificate in Journalism

The certificate requires 16 semester hours of core courses in journalism. A list of recommended optional electives allows those who wish to specialize to also focus their program in broadcast journalism. The following courses make up the certificate program.

Prerequisite:
- COM 225 Media Writing

Required Courses:
- COM 326 Advanced Reporting and Specialized Writing for the Media
- COM 425 Editing and Graphics
- COM 426 Lab Newspaper I

Options: Students must choose one of the following for a capstone course:
- COM 405 Electronic Journalism
- COM 427 Lab Newspaper II
- COM 490 Internship in Communication

Suggested electives (not included in the certificate courses):
- COM 347 Political Communication
- COM 359 International Communication
- COM 447 Public Relations Writing
- COM 493 Special Topics in Communication (when appropriate)

Multimedia Advertising

This is an interdisciplinary program jointly offered by the departments of Art and Communication in the College of Arts & Sciences and the Marketing Department in the James J. Nance College of Business Administration. The program provides students with a breadth of information and practical know-how in advertising communication, marketing strategy, graphics, copywriting, and design. It introduces contemporary advertising theories and practices by integrating traditional media — such as print and broadcasting — with new media—such as computer graphics and the Internet.

Requirements for an Interdisciplinary Certificate in Multimedia Advertising

The certificate program includes 16 semester hours of core courses in visual art, advertising principles, advertising applications, and marketing analysis. The following courses are prerequisites to those required for the certificate.

Prerequisites:
ART 102 Introduction to Studio Art
MKT 301 Introduction to Marketing
COM 350 Persuasive Communication and Attitude Change

Required Core Courses:

- ART 244 Introduction to Macintosh
- COM 360 Principles of Advertising or MKT 441 Advertising and Promotion
- COM 450 Media Programming and Research or COM 455 Communication Campaigns or COM 460 Advertising Copywriting and Layout Design
- MKT 420 Buyer Behavior or MKT 431 Marketing Research

Recommended Electives:

- ART 344 Advanced Raster-Image Development
- ART 345 Advanced Vector-Image Development
- ART 444 Advanced Typography and Design
- ART 445 Introduction to Digital Media
- COM 204 Single-Source Video/Audio Production and Editing
- COM 352 Multi-Source Video Production
- COM 357 Principles of Public Relations
- COM 358 Media Law, Economics, and Ethics
- COM 370 Communication Technology and Social Change
- MKT 305 Marketing Management
- MKT 461 Global Marketing

For more information please contact the appropriate department: Art Department (216) 687-2040, Communication Department (216) 687-4630, Marketing Department (216) 687-4771.
Dramatic Arts (B.A.) At-a-Glance

Minimum hours required for major: 41
Minimum hours required for minor: 24

The major in Dramatic Arts is designed to enable students to study theater for the purpose of entering the commercial theater, preparing for graduate work with the expectation of teaching, or building a base which is useful in association with the fields of recreation, public relations, community development, and human communication.

Theater at CSU is viewed in the liberal-arts tradition as being part of the cultural heritage of our civilization. In both its practice and its content, theater is presumed to be relevant to 20th-century life in all phases. Through classes and strong production orientation, students with this major can expect improvement in oral expression; motor skills; increased understanding of themselves and others; and illumination of major social, political, philosophical, moral, and psychological issues.

Major Field Requirements

All Dramatic Arts majors are required to successfully complete a minimum of 41 credit hours consisting of the core curriculum (22 hours) and one specialization track (19 to 26 hours).

Core Curriculum to be completed by graduation:

- DRA 101 Production Practicum (6 credits with a minimum of 2 hours each in technical and performance activity)
- DRA 211 History of the Theatre I (3 credits)
- DRA 212 History of the Theatre II (3 credits)
- DRA 213 History of the Theatre III (3 credits)
- DRA 225 Principles of Acting (3 credits)
- DRA 491 Comprehensive Exam (4 credits)

TOTAL 22 credit hours

Specialization tracks:

The specialization tracks are designed to offer the student the main areas of concentration demanded by professional theater or expected of the modern academician.

1. Acting track:

The acting track focuses on acting skills while emphasizing the relation of acting to the necessary sister disciplines that directly affect the actor. An actor who does not know and understand the work of the director and the various designers and artisans of the “technical theater” is an actor ill-prepared to meet the challenges of a professional career or a graduate experience. A successful actor is an entrepreneur with a knowledge and understanding of the business of the theater,
hence the mandatory inclusion of DRA 381 Theatre Organization and Management.

- DRA 200 Intro to Tech Theatre (3 credits)
- DRA 321 Voice and Movement (4 credits)
- DRA 325 Intermediate Acting (4 credits)
- DRA 331 Principles of Directing (3 credits) or
  DRA 333 Directing a High School Production (3 credits)
- DRA 381 Theatre Organization and Management (4 credits) or
  DRA 451 Theatre Criticism (4 credits)
- DRA 425 Advanced Acting (4 credits) or
  DRA 426 Stand-up Comedy (3 credits)
- DRA 494 Studio Production Lab (1-4 credits)

TOTAL 22-26 credit hours

2. Directing track:

The successful director is one who is able to make informed decisions about every aspect of production from acting and design to movement and staging. The emphasis on directing courses augments a broad range of necessary skills courses needed to pursue an academic or professional career.

- DRA 200 Intro to Tech Theatre (3 credits)
- DRA 300 Stage Management (3 credits) or
  DRA 301 Lighting Design (3 credits) or
  DRA 351 Theatre Makeup (3 credits) or
  DRA 352 Creative Dramatics (3 credits) or
  DRA 353 Children's Theatre (3 credits) or
  DRA 354 Puppet Production (3 credits)
- DRA 325 Intermediate Acting (4 credits) or
  DRA 425 Advanced Acting (4 credits) or
  DRA 461(ENG 305) Playwriting (4 credits)
- DRA 331 Principles of Directing (3 credits) or
  DRA 333 Directing High School Production (3 credits)
- DRA 332 Advanced Directing (4 credits)
- DRA 494 Studio Directing Lab (2-4 credits)

TOTAL 19 to 21 credit hours

3. Technical Theatre track

Professional design unions and graduate programs in design now require two areas of specialization. In practice, design students and designers generally include lighting design as one specialty since lighting materially affects both costuming and scene design. Most professional designers choose to specialize in either costuming or scene design, hence the costuming and scene design subtracks. As in the other specialties, a designer needs to know what his collaborators bring to the creative process. A designer who has never been onstage will be unfamiliar with an actor's needs. A designer without a director's outlook will not be able to communicate with the organizing creator of theatrical performance. And practical experience and a portfolio are essentials for both the professional theater and admission to a graduate program in Technical Theatre.

- DRA 200 Introduction to Technical Theatre (3 credits)
- DRA 301 Lighting Design (3 credits)
- DRA 331 Principles of Directing (3 credits) or
  DRA 333 Directing a High School Production (3 credits)
- DRA 494 Studio Production Lab (2 - 4 credits)

Subtotal 11: to 13 credit hours

a. Costuming subtrack:

- DRA 391 Costume History & Design (3 credits)
- DRA 496 Construction & Drafting IS (3 credits)
- DRA 496 Millinery and Accessories IS (2 credits)

Costume Subtotal 8 credit hours
b. Scene Design subtrack

- DRA 371 Scene Design I (4 credits)
- DRA 372 Scene Design II (4 credits)

Scene design Subtotal 8 credit hours

TOTAL Technical Theatre Track 19 to 21 credit hours

4. Playwriting track:

"Playwrights who know nothing of the practical aspects of the theater are writing for the closet not the stage." George Bernard Shaw. This major track, designed in collaboration with Creative Writing, will be a unique program focusing on plays in performance.

- DRA 200 Intro to Tech Theatre (3 credits)
- ENG 303 Creative Writing (4 credits)
- DRA 321 (ENG 351) Contemporary Theatre (4 credits)
- DRA 331 Principles of Directing (3 credits)
- DRA 461 (ENG 305) Playwriting (4 credits)
- DRA 494 Studio Production Lab (1 to 4 credits)

TOTAL 19-22 credit hours

5. Dramatic Arts Content for Teaching track:

This track is designed for students contemplating a career in teaching at the elementary, middle-school, or high-school levels. This course of study is to be completed before commencing a Post Baccalaureate Teacher Preparation Program in the College of Education. (See note below.)

- DRA 200 Introduction to Technical Theatre (3 credits)
- DRA 300 Stage Management (3 credits) or DRA 391 Costume History & Design (3 credits)
- DRA 333 Directing a High School Production (3 credits) or DRA 331 Principles of Directing (3 credits)
- DRA 352 Creative Dramatics (3 credits)
- DRA 353 Children's Theatre (3 credits) or DRA 354 Puppet Production (3 credits)
- DRA 381 Theatre Organization and Management (4 credits)

TOTAL 19 credit hours

Note:
Students wishing to pursue a career teaching dramatic arts should investigate the certification or licensing requirements of the state in which they would like to teach. Post-Baccalaureate Teacher Preparation Programs are available through the College of Education, which offers a variety of teacher preparation programs for college graduates who have had little or no professional training in education. While most of these programs lead to licensure, most of the course work they require cannot be applied to a graduate degree. The course work in the professional education track is designed to fulfill licensing requirements for a teacher of the arts in Ohio in the coming years. Currently no undergraduate program for teaching theater exists in the College of Education at CSU.

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Drama Minor

Requirements

Minimum Total

24 credit hours total (minimum):

- DRA 101 Production Practicum (2 credits)
DRA 200 Introduction to Technical Theatre (3 credits)
DRA 211 Theatre History I (3 credits) or
DRA 212 Theatre History II (3 credits) or
DRA 213 Theatre History III (3 credits)
DRA 225 Principles of Acting (3 credits)

From the following groups (at least one from each group) for a total of 12 hours:

GROUP A
- DRA 300 Stage Management (3 credits)
- DRA 301 Lighting Design (3 credits)
- DRA 351 Theatre Makeup (3 credits)
- DRA 371 Scene Design I (4 credits)
- DRA 391 Costume History and Design (3 credits)

GROUP B
- DRA 216 African American Theatre (3 credits)
- DRA 314 Plays in Performance I (3 credits)
- DRA 321 Contemporary Drama (4 credits)
- DRA 381 Theatre Organization and Management (4 credits)
- DRA 451 Theatre Criticism (4 credits)

GROUP C
- DRA 325 Intermediate Acting (4 credits)
- DRA 326 Voice and Movement (4 credits)
- DRA 331 Principles of Directing (3 credits)
- DRA 333 Directing a High School Production (3 credits)
- DRA 354 Puppet Production (3 credits)
- DRA 461 Playwriting (4 credits)
Economics (B.A.) At-a-Glance

Admission to major: No requirements other than good academic standing in the College of Arts and Sciences

Minimum hours required for major:
31 hours of course work in economics, 3 hours in statistics, and an additional 6 hours of 100- to 200-level mathematics, and computer science course IST 203.

Minimum hours required for minor: 16

Advising:
Advising is done by faculty members in the Department of Economics. Students who are thinking of majoring in economics should contact the chairperson of the Economics Department's Undergraduate Committee. Phone: (216) 687-4520.

Student organization: Omicon Delta Epsilon

Additional information:
The Economics Department offers an honors program to those who have maintained a GPA of 3.3 or better both in overall course work and in major-field requirements. An annual award is made to the year's most outstanding senior economics major. A cash prize has been given to the recipient of this award in recent years. A Business Economics major is available to students in the College of Business Administration. Secondary teacher certification in economics (as a second teaching field) is available to students in the College of Education. Nonmajors should consult the Economics Department about elective courses to complement their majors.

A knowledge of economics is essential if one is to understand the nature of the economic problems confronting individuals, firms, and society. Economics is an appropriate major for those wishing to pursue careers in business, law, journalism, and industrial relations, as well as for those who wish to become professional economists.

An economics major provides an excellent background for graduate study in economics and other related fields. Economists are employed by universities; corporations; government agencies at the federal, state and local levels; labor organizations; trade associations; and professional societies. Economics majors are trained to develop the analytical skills needed to understand economic problems and to arrive at possible solutions.

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Major Field Requirements

Economics majors in a regular B.A. program must complete a total of 31 hours of course work in economics as well as additional hours in statistics and mathematics.

Core Courses. Core requirements are fulfilled by completing 12 hours from the following courses:

- ECN 201 Principles of Macroeconomics
Economics Electives.
In addition to the core courses for the economics major, with the exception of students in the Honors Program, five economics elective courses amounting to 19 credit hours must be completed. These elective courses should be chosen in consultation with a department advisor.

Statistics. Introductory course in statistics (MTH 147, OMS 201, PSY 311, SOC 354, or equivalent)

Mathematics.
Students must select a minimum of 2 courses (6 hours) of 100 to 200-level mathematics courses fulfilling the university's General Education Requirement in mathematics. Students may not choose PHL 131, or other logic course, to partially satisfy this requirement. Statistics courses cannot be used to satisfy this mathematics requirement.

Computer Literacy Requirement
- IST 203 Software Tools for Personal Productivity, 3 credit hours

Business Economics Major

The Economics Department, in cooperation with the College of Business Administration, offers a program in business economics which leads to a B.B.A. degree. For further information on the business economics major, see the section describing programs in the College of Business Administration.

Economics Minor

Students working toward undergraduate degrees from other departments and colleges at Cleveland State University are eligible to earn a minor in economics to complement their baccalaureate degrees from other disciplines. A minor in economics consists of 16 hours of three required and two elective courses.

Required Courses: ECN 201, ECN 202, ECN 301 or ECN 302.

Elective Courses: Seven hours of 300- to 400-level economics courses.

Honors Program

Students in the Economics Honors Program must complete the core requirements and statistics sequence for economics majors; however, the elective requirement is fulfilled by completing ECN 322, ECN 355, ECN 497 (Honors Essay), IST 203 or CIS 500, and two additional economics electives which have as a prerequisite at least one course in principles of economics. In addition, MTH 181 must be completed. For students planning to pursue graduate studies in economics, more than this minimum is recommended.

An honors candidate must have and maintain a 3.3 overall grade point average and a 3.3 GPA in major-field requirements. Information about the honors program will be provided to all students at the time a major is declared in economics. For further information, contact the Department of Economics.

Applied Economics and Public Policy
The certificate program in Applied Economics and Public Policy is designed for students who are interested in current economic issues and the public policy for dealing with these issues. The program is intended for students with minimal previous preparation in economics. With two exceptions, the courses required for the certificate in economics require no more than a background in principles of economics.

To a limited degree, the program is interdisciplinary. One course out of the four required for the program may be taken in either Sociology or Political Science.

Requirements for Certificate in Applied Economics and Public Policy

The program requires students to complete four courses (a minimum of 15 hours). The courses must be selected from the list below and must include at least three courses in economics.

- ECN 333 Economics of Health Care (4 hours)
- ECN 350 Economics of Crime and Punishment (4 hours)
- ECN 360 Public Sector Economics (4 hours)
- ECN 450 Economics of Law (4 hours)
- ECN 470 Urban Economics (4 hours)
- ECN 474 Environmental and Natural Resource Economics (4 hours)
- ECN 482 International Economics (4 hours)
- SOC 203 Sociology of Poverty (3 hours)
- PSC 315 Public Policy and Administration (4 hours)

There are three general paths to acquiring the certificate. For students who have completed only ECN 202, the certificate can be acquired with the following courses:

- ECN 333
- ECN 350
- ECN 360
- SOC 203 or PSC 315

For students who have completed ECN 201 and ECN 202, the program can be completed by taking any four of the following six options:

- ECN 333
- ECN 350
- ECN 360
- ECN 470
- ECN 482
- SOC 203 or PSC 315

For students who have completed ECN 201, ECN 202 and ECN 302, the certificate can be earned with any four of the following eight options:

- ECN 333
- ECN 350
- ECN 360
- ECN 450
- ECN 470
- ECN 474
- ECN 482
- SOC 203 or PSC 315
English (B.A.)

At-a-Glance

Admission to major: Completion of ENG 240, 241 (or equivalent)

Minimum hours required for major: 38

Minimum hours required for minor: 21

Special tracks:
The English major emphasizes the study of British and American literature. In addition to literary study, special tracks or concentrations are available in creative writing, linguistics, prelaw, secondary English licensure, and Multicultural/Multiethnic Literature. The department also offers a Writing Certificate.

Advising: Contact Dr. Donna Burns Phillips, Director of Undergraduate Studies, at (216) 523-7145.

Student activities: Student organization: Whiskey Island (creative writing magazine). Poetry Center activities include workshops and readings by students, writers in the Cleveland community, and distinguished visiting writers.

Scholarship information: Each year, the department offers Plain Dealer awards to recognize excellence in expository writing, tuition scholarships as prizes in creative writing, and English Alumni Association contests, as well as the Gulbenkian award as a cash prize to honor a distinguished graduating senior.

Career information: Students preparing to teach English in high school must meet the State of Ohio licensure requirements. Please contact the College of Education for further information on licensure. For students preparing for careers in writing, editing and publishing, the department offers a creative writing concentration. The linguistics concentration includes courses in linguistics as well as literature. Students preparing for law school should take the prelaw concentration. The English major is an ideal liberal arts major for students desiring to develop capabilities in research, writing, critical thinking, and textual analysis combined with the study of literature and language.

Freshman English and English as a Second Language Placement

Consult the course description section of this catalog under English for information about placement examinations and placement of students into basic writing, freshman English, and English as a Second Language courses.
Major Field Requirements

Courses required for the major are as follows (38 credit minimum):

1. Introductory courses (8 credits): ENG 240, 241
2. Electives: 26 credits in courses numbered ENG 300 and above
3. Senior seminar: ENG 495: 4 credits minimum

Equivalency rule for transfer students: A student who transfers to Cleveland State with 3 credits or more of 200-level literature course may take ENG 300 in lieu of either ENG 240 or 241. A student who transfers with 6 credits of more of 200-level literature course may take ENG 300 and one other upper-level literature course in lieu of ENG 240 or 241.

Special Concentrations

Concentration in Creative Writing

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. ENG 303 Creative Writing (4 credits; prerequisite for ENG 305)
3. Two courses in creative writing (8 credits): ENG 305 Creative Writing Workshop (fiction, poetry, playwrighting, special topics; may be repeated with change of topic)
4. Electives: 14 credits in courses numbered ENG 300 and above
5. Senior seminar: ENG 495 (4 credits minimum)

Linguistics Concentration

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. ENG 311 Elements of Linguistics (4 credits)
3. Two courses in linguistics (8 credits): ENG 313 (topics include American dialects, history of the English language, historical linguistics, sociolinguistics, semantics; may be repeated with change of topic)
4. Electives: 14 credits in courses numbered ENG 300 and above
5. Senior seminar: ENG 495 (4 credits minimum)

Pre-Law Concentration

The most significant attributes of baccalaureate education for a prelaw student are critical reading of primary texts, development of a mature writing style, critical and analytical thinking, knowledge of American history, and knowledge of Enlightenment thought as the basis for modern American and European legal and political institutions and philosophy. The prelaw concentration in English is designed to prepare students for law school based on these criteria.

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. Language analysis (4 credits): one course from the ENG 310-313 series. ENG 310 is
recommended.

3. Argument (4 credits): ENG 302, 307 or 361. ENG 302 is recommended.

4. Electives: 14 credits in courses numbered ENG 300 and above. At least one course in British or American Enlightenment literature is recommended.

5. Senior Seminar: ENG 495 (4 credits minimum)

We recommend that pre-law concentrators in English take a double major or a minor in history, philosophy, or political science.

Secondary English Licensure

Note: The department expects to redefine the English component of the licensure program beginning fall 2002. Please check in RT 1815 for the new requirement or check the English department website.

Students desiring to teach English in high school must complete 38 credits of English including courses required in the secondary English licensure track. This track includes courses that satisfy requirements of the Ohio Board of Education and NCATE accreditation; students should note that except for ENG 240 and 241, the sophomore-level courses do not count toward the English major.

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)

2. British literature survey (4 credits): ENG 321 or 322

3. American literature survey (4 credits): ENG 342

4. World literature (minimum 3 credits): Nonwestern literature course taken as a general education requirement (not counting toward the 38 credits needed to earn an English major). Examples of Nonwestern courses include ENG 204, 210, 348 (when offered as Native American Literature). Consult the department handbook for details about courses available each year.

5. Language requirement (4 credits): one course from the ENG 310-314 series.

6. Advanced composition & rhetoric (4 credits): ENG 302, 307, 308 or 309

7. Multicultural American literature (minimum 3 credits). This requirement can be satisfied in either of two ways: by taking ENG 207 or 208 as a general education requirement (not counted toward the English major), or by taking ENG 347 or 348 or another upper-division course on multicultural or African-American literature. The upper-division course counts toward the English major.

8. Women's literature (minimum 3 credits): ENG 208, or another 200-level ENG or ENF course in women's literature, or ENG 363 or an upper-division course on major women author(s) or feminist criticism.

9. Senior seminar (4 credits): ENG 495

For education requirements see the College of Education section of this catalog for details.

Concentration in Multicultural/Multiethnic Literature

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)

2. ENG 495 Senior Seminar (4 credits)
3. English electives: at least 10 credits of ENG 300-400 level courses

4. Multicultural literature electives: 16 credits from the following list. (At least 8 credits must be taken in the English department):

- ENG 347 Studies in African-American Literature
- ENG 348 Studies in Multicultural Literature
- ENG 349 Multicultural Literature: Theory and Methods

Other 300-400 level ENG courses may be counted when they have a multicultural/multiethnic topic. Examples include ENG 330 Studies in Ancient Literature (when taught as "Feminist Approaches to the Classics"), ENG 335 Studies in 20th-Century British Literature, ENG 345 Studies in American Literature, ENG 346 Studies in American Fiction, ENG 350 Studies in Fiction, ENG 351 Studies in Drama, ENG 352 Studies in Poetry, ENG 355 Major Themes or Genres, ENG 363 Gender Issues in Literature, ENG 364 Popular Culture, ENG 375 Major Author, ENG 495 Senior Seminar.

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Extra-departmental Electives

Students may count up to 8 credits of the following extra-departmental electives toward the English major. This option applies only to students who are completing the Multicultural/Multiethnic Literature Concentration.

**African-American and African Literature Courses**

- FRN 375 Francophone African Literature, Pan-Africanism, and Black Nationalism
- COM 428 Imaging Africa (with relevant topic only)

**General Multiethnic Literature Courses**

- DRA 317 Society and Minority Theater
- ENF 317 Images of Fascism in Film

**Latino/Spanish Literature Courses**

- SPN 365 Readings
- SPN 372 Introduction to Spanish American Literature
- SPN 484 Studies in Spanish American Literature

**Language and Methods Courses**

- ANT 322 Writing About Culture
- ANT 342 Languages in Contact
- COM 332 Interracial Communication
- MLA 341 Languages and Cultures in Contact

**World Literature Courses**

- FST 323 World Literature Workshop

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Writing Certificate Program (20 credits)

The Writing Certificate program is open to all CSU undergraduate and graduate students, as well as to CSU alumni and students and alumni at other colleges and universities. Students must be enrolled in a baccalaureate degree program, or already have a baccalaureate degree, in order to be eligible for a Writing Certificate. The Writing Certificate Program is housed in the English Department. Students
who intend to take the Writing Certificate program should register in the English department office, Rhodes Tower 1815, (216) 687-3951. There is no registration fee. To register by email, contact Dr. John Gerlach at j.gerlach@csuohio.edu.

**Certificate Requirements:**
20 credit hours, taken from at least three of the participating departments (Art, Communication, English, Urban Studies). Students must earn a grade of C or better in each course, and a grade point average of 2.5 in the courses applied to the Writing Certificate. No more than 4 credits may be taken on a satisfactory/unsatisfactory basis. Up to 12 credits may be transferred from other institutions. At least three courses must be designated as "Writing Courses."

**Courses in the Writing Certificate program**
Some of the courses in the Writing Certificate program (viz. ART 242, ART 244, COM 326, COM 357, COM 405, and UST 403) have specific course requirements. Students desiring to take these courses as part of the Certificate program must, therefore, take the prerequisites, in addition to the 20 credits required for the Certificate.

- **ART 242 Introduction to Typographic Principles and Design** (2-6-4)
- **ART 244 Introduction to Macintosh** (2-6-4)
- **COM 225 Media Writing** (4 credits)
- **COM 326 Advanced Reporting and Specialized Writing for the Media** (4 credits)
- **COM 327 Media Criticism** (4 credits)
- **COM 357 Principles of Public Relations** (4 credits)
- **COM 368 Introduction to Language Studies** (4 credits)
- **COM 405 Electronic Journalism** (4 credits)
- **COM 425 Editing and Graphics** (4 credits)
- **COM 460 Advertising Copywriting and Layout Design** (4 credits)
- **COM 490 Internship in Communication** (2 to 8 credits)
- **ENG 201 Grammar and Writing** (3-0-3)
- **ENG 301 Advanced Expository Writing** (4-0-4)
- **ENG 302 Rhetoric of the Law** (4-0-4)
- **ENG 303 Creative Writing** (4-0-4)
- **ENG 307 Style** (4-0-4)
- **ENG 309 Writing Center Practicum** (1-4-2)
- **ENG 310 Traditional Grammar** (2 or 4 credits)
- **ENG 361 Classical Rhetoric** (4-0-4)
- **ENG 397 Portfolio Preparation** (1 credit)
- **ENG 490 Professional Internship** (1 or 2 credits)
- **UST 403 Cartography and Graphics** (2-3-3)
- **UST 410 Proposal Writing and Program Evaluation** (4-0-4)

**Minor in English**
Courses required for the minor in English (21 credits) are as follows:

1. Introductory courses (8 credits): **ENG 240, 241** (or equivalent)
2. Electives: 13 credits in courses numbered **ENG 300** and above
Evening and Weekend Program

Students may obtain a major or minor in English by taking courses on evenings and weekends. Course selection is restricted, and each required course generally is offered once every other year.

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French (B.A.) At-a-Glance

Admissions to major: Completion of FRN 102 or equivalent

Minimum hours required for major: 36

Minimum hours required for minor: 18

Advising: Two designated faculty advisors; phone (216) 687-4645

Student organization: Le club francophone de CSU

Additional information:
Year and semester exchange programs to Chambéry and Clermont-Ferrand in France; summer study abroad programs in France and Canada

Languages are invaluable tools in a variety of human activities. But they are more than just tools. They open the way to knowledge of, and communication with, a world of other peoples, civilizations, and literatures. Moreover, study and knowledge of a language other than one's mother tongue opens the door of perception to phenomena otherwise inaccessible.

A student majoring in French will find career opportunities in teaching, foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself (philology, linguistics), its literature, culture, pedagogy, or its place and role in world affairs — business, politics, geography, history.

A student who has completed French course work in high school or at another institution who wishes to continue the study of that language must begin course work for credit at the level consistent with her or his academic background. A placement test is required for all students with less than three years of high school French or the equivalent. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. As a general guideline, students who read and write French fluently must begin course work for credit at the 300-level or higher. Students considering a major in French must consult with an advisor in the Department of Modern Languages concerning projected plans of study.

Retroactive Credit.
Students are eligible to earn up to 14 retroactive credits for previous knowledge of French. This policy is for students who have completed a foreign-language skills course and who earned a B or better in that course. For example, if your first French skills course is FRN 102 and you receive an A or B, you can receive credit for FRN 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

Credit by Examination.
Students who successfully pass the College Level Placement Examination (CLEP test) in French may earn 14 credit hours for previous knowledge of French. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center (216) 687-2277. Students who receive a score of 3, 4, or 5 on the Advanced Placement French language examination may earn 18 credit hours for FRN (101, 102, 201, and 202).

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**Major Field Requirements**

Students seeking a major in French must complete 36 credit hours in French above the 100 level, distributed as follows:

a. 8 credit hours of course in composition-conversation (FRN 301, 402)

b. 8 credit hours of courses in literature (two of the following: FRN 371, 372, 375)

c. A minimum of 28 credit hours at the 300- or 400-level

d. 2 courses in French at the 400-level, distributed as follows: FRN 402, plus one course at the 400 level taught in French

e. Among the 36 hours, no more than 8 hours of French courses may be at the 200 level

**Transfer Students.**

Transfer students must complete at least 18 credit hours of the 36 required for the major in residence at Cleveland State University in order to earn a degree.

**Major Credit.**

Up to 8 credit hours of English literature, practicum in language, independent study, literature in translation, or credit by examination may count toward the major.

No grade below C in a major course may count toward the major.

**Minors**

A minor consists of 18 credit hours beyond the 100 level, of which 8 must be at the 300- or -400 level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in French must have a departmental advisor to assist in the selection of courses. No grade below C in a minor course may count toward the minor.

**Study Abroad**

Majors and minors are encouraged to take advantage of CSU's exchange programs in Chambéry or Clermont Ferrand; and/or a summer study trip to France. Normally up to 18 semester hours of study abroad may count toward the major requirements (additional credit may count toward the total hours needed for graduation). Majors should seek departmental approval of foreign study plans before departure, and must complete at least two 300- or 400-level courses in their major area after return from study abroad. (See also the Foreign Study section listed under "Arts and Sciences."

For further information regarding the possibility of foreign study and summer programs available through the Modern Languages contact the department office, (216) 687-4645, or Dr. Engelking, (216) 523-7167.

**Teacher Licensure**

Students preparing to teach will fulfill the requirements for the B.A. in French and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12).

Students seeking a B.A. in French with teaching licensure must, in fulfilling the major requirements, take one course in civilization, one course in phonetics, and literature courses acquainting the student with the major genres of drama,
poetry, and the novel.

The PreK-12 Licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency. Modern Language methods courses should be taken the semester preceding student teaching.
Geological Sciences (B.S., B.A.)

At-a-Glance

Geology is the study of the composition, structure, and history of the earth and its planetary neighbors. It deals with phenomena on, above, and below the surface of the earth, including those that take place on land, in the oceans, and in the air. It is a basic entry point for studies of natural resources and the human environment. It is a multidisciplinary science, drawing upon and, in turn, contributing to, the body of knowledge in the fields of chemistry, physics, biology, and mathematics. In recognition of this fact, the undergraduate geology programs which are offered through the Department of Biological, Geological, and Environmental Sciences are designed to provide broad training in geological sciences. Students interested in either a B.S. degree in Environmental Sciences or a B.A. degree in Environmental Studies should consult the catalog listing for those programs.

All geology programs are modular. They include a common core in the earth sciences and a series of courses common to the B.A. and/or B.S. degree. A grade of C is the minimum passing grade for all required major courses offered by the department. A major program in geology is not available for evening students.

Common Core in the Earth Sciences

All geology majors must take the following first- and second-year courses in geology, basic science, and mathematics:

- GEO 100 Introductory Geology
- GEO 101 Introductory Geology Laboratory
- GEO 223 Map Interpretation and the Visualization of Space
- CHM 261/266 and 262/267 General Chemistry
- MTH 181 and 182 Calculus (required for the B.S.; optional for B.A.) or 6 credit hours from the MTH 150 series (required for B.A. if calculus is not taken)
- PHY 221 and 222 College Physics, or 241 and 242 University Physics

All geology majors must take a capstone course chosen from the following:

- GEO 451 Field Geology (4 credits minimum)
- GEO 490 Internship in Geology (3 credits minimum)
- GEO 496 Independent Study in Geology (3 credits minimum)
- GEO 497 Research in Geology (3 credits minimum)
- EST 482 Student Teaching (3 credits minimum)

Degree Programs in Geology

The bachelor of arts and the bachelor of science degree programs in Geology are designed for students who intend to pursue careers in geology or closely related fields. They provide a solid grounding in the earth sciences, as well as the ancillary subject areas upon which the earth sciences depend. The bachelor of science degree is recommended for students wishing to go on to graduate school in the sciences or engineering and whose career directions are primarily technical or scientific. The bachelor of arts degree is recommended for students who intend to pursue careers in teaching, law, planning, or business.
Candidates for the degree of bachelor of science must take 28 credit hours of courses chosen from the following list, and candidates for the degree of bachelor of arts must take 20 credit hours of courses chosen from the following list. The array of courses taken will be determined by the student, in consultation with the departmental academic advisor, (216) 687-3506:

- GEO 202/203 Paleontology
- EVS 206 Introduction to Environmental Science
- GEO 230 Natural Resources
- GEO 304/305 Mineralogy
- GEO 306/307 Petrology
- GEO 312/313 Sedimentation and Stratigraphy
- GEO 320/321 Structural Geology
- GEO 354 Geochemistry
- GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
- GEO 444/445 Hydrogeology
- GEO 451 Field Geology (4 credits minimum; may also count toward capstone requirement)
- GEO 460/461 Geomorphology

Geological Sciences Minor

The minor in Geological Sciences is intended as a flexible opportunity for students to incorporate significant course work dealing with the earth sciences into their university careers. All Geology minors must be approved by the departmental advisor and must meet the following criteria:

1. The geology minor consists of GEO 100/101 (Introductory Geology) and at least 13 credit hours above the 100 level. At least 9 credit hours must be above the 200 level.

2. The courses making up a geology minor must comprise a consistent set of courses that make sense to be taken together as a sequence. The sequence of courses will depend on the particular needs of the individual student, but the sequence as a whole must be approved in advance by the departmental advisor.

A grade of C is the minimum passing grade for all courses offered by the department and applied toward a minor. A minor program in geology is available for evening students.

Students interested in the minor program should consult with the departmental advisor.

Teacher Licensure

Students in Geological Sciences who also want to complete the requirements for secondary-teaching licensure in earth sciences should see the College of Education chapter in this catalog for information concerning the general education and professional education requirements for certification. Similarly, students seeking secondary-teaching licensure in earth sciences, but not majoring in Geological Sciences, should consult the College of Education chapter of this catalog for information regarding subject field, general education, and professional education requirements.
History (B.A.) At-a-Glance

Minimum hours required for the major: 32 distributed in three fields

Minimum hours required for the minor: 20

Areas of Specialization:
Europe, including England; United States; Non-Western, including Africa, Latin America and East Asia, African Diaspora, and Social History

Student Honor Society: Phi Alpha Theta (advisor: Dr. Gregory Conerly, (216) 687-3928)

Awards: Senior History prize


For Information: Call Dr. Donald Ramos or the History Department, (216) 687-3920.

The Program

History is the essential foundation of knowledge. It provides the context for a liberal education, the tools to understand ourselves and our contemporary world, and the skills for an educated person to live a more fulfilled and gratifying life in a wide range of careers. Because of these various functions, we study history for many reasons:

- to better understand our society and the times in which we live
- to better understand ourselves
- to place our own society in historical perspective
- to balance present-mindedness with historical memory
- to acquire skills such as conducting research, communicating effectively through writing or oral communication, critical thinking, evaluating evidence, and problem-solving
- to understand the roles which individuals and groups have played in shaping their worlds
- for the enjoyment of examining societies very different or very similar to our own

This is possible because history at the university-level is far more than a collection of facts, names, and dates. The emphasis is on accessing and analyzing information, the critical use of historical sources, learning to communicate the results, and the excitement which comes from exploring important ideas. To study history is to enter a time machine to explore the far reaches of the human experience — from classical times to the present; from the lives of great thinkers and kings to that of average people; from dramatic moments such as the Civil War to the routine. The past becomes the universe, all corners of which can be explored.

The department offers course work in European, U.S., African, Latin-American, and East Asian history and thematic foci on social and urban history and the History of the African Diaspora. The major program not only prepares students for teaching and for graduate study in history but many students have found history an appropriate preparatory foundation for careers in law, library science, international work, the foreign service, the ministry, business, government and archival and museum work.
History can be of inestimable value to nonmajors. This can be done through the minor, the certificate programs, or by taking appropriate courses. Thus, literature majors could benefit from taking history courses in the areas they are studying. Business students could take HIS 328 (History of American Business). Social Work or Sociology majors could gain historical perspective on contemporary issues by taking HIS 318 (History of the Family in America) or HIS 305 (Social Thought of Black Americans) or HIS 309 (History of U.S. Immigration).

**Major Field Requirements**

Thirty-two semester hours of history are required to complete a major. All students must include the history of different parts of the world and different chronological periods. These credits are to be distributed as follows:

- A minimum of 16 credits (12 of which are upper-level) must be taken in one of the three following fields: United States, European, and non-Western histories
- A total of 12 upper-level credits must be spread over the two remaining fields
- At least one two-course sequence (8 hours) must be included along with at least two upper-division courses (8 hours) dealing with preindustrial societies. (A list is available online or from the department office.)
- Overall a minimum of 24 credits must be at the 300-level or above
- One course should be in Public History or devoted to an internship in the field of historical studies

First College and transfer students must complete at least 20 credits in history courses taken within the Department of History at Cleveland State University in order to major in history.

**History Minor**

A minor in history consists of 20 credits in history, of which at least 12 must be earned at the 300-level or above. No more than one course may be taken on an S/U basis. Transfer students must earn at least 12 credits in the Department of History at Cleveland State University in order to complete a minor in history.

**Certificate Program: The History of the African Diaspora**

The African Diaspora constitutes one of the largest and most consequential migrations in the history of mankind. This forced migration of over 10 million human beings transformed many areas of Africa and the Americas. This certificate program recognizes the significance of this historical process and its enduring importance as the subject of study. Students are called upon to examine the Diaspora in its comparative perspective by focusing on the history of Africa, the United States and Latin America.

**Certificate Requirements**

The Certificate Program is 24 hours (6 courses) of which at least:

- 8 credits (2 courses) must be in African history
- 4 credits (1 course) must be in African-American (U.S.) history
- 4 credits (1 course) must be in Latin-American history
- 4 credits (1 course) must be an independent study research project involving any two of the three areas

For further information contact the History Department office.

Also, see Certificate in Central and European Studies, and Certificate in Latin American Studies.

**Honors Program**
The honors program is designed for the History major completing the last two years of study for an undergraduate degree who at the time of application has a 3.00 cumulative GPA and a 3.25 average in history. Application for admission to the program must be made 30 days before the semester in which the applicant wishes to enter.

The successful completion of the requirements for the program leads to a recommendation by the departmental Honors Committee for graduation with honors in History. For further information and application forms, contact the Department of History office, (216) 687-3920.

Evening Program

The requirements for both the major and minor program also apply to evening students. The History Department makes every effort to schedule courses in such a way as to make it possible for evening students to fulfill these requirements.

Teaching Licensure

New licensing requirements are being implemented by the Ohio State Board of Education. Students interested in teaching history/social studies at the high-school level in the state of Ohio must complete the requirements for both the bachelor of arts in Social Studies and the Adolescent & Young Adult Teaching License in Integrated Social Studies (offered through the College of Education). For further information, contact Dr. Lee Makela in the Department of History (216) 687-3927. To clarify licensing requirements during this period of transition, contact the College of Education.
International Relations (B.A.)

At-a-Glance

Minimum hours required for major:
35 hours — 17-hour core in political science, 3 hours in economics, and 15 to 16 hours in political science, other arts and sciences, or in business, depending on the specific concentration.

Language Competence:
Students must demonstrate mastery in a major world language of relevance to their concentration comparable to that obtained from two years of college-level instruction. Competence may be demonstrated by examination.

Admission to Major:
No requirement other than good academic standing in the College of Arts and Sciences. Double majors are encouraged.

Evening Program:
Because courses are offered in a variety of departments, no assurance can be given that the major can be fully completed at night. All core courses will be available (in political science and economics) over a two-year cycle.

Foreign Study Programs:
Students may apply for credit toward their concentration for study abroad programs including programs at Clermont (France), Germany, and China, as well as for other programs administered through the Center for International Services and Programs at CSU.

Internship Opportunities:
Students can acquire valuable work experience, and can earn up to 5 credit hours through an internship in the U.S. or abroad (sign up for PSC 406). The Political Science department maintains a list of established internship opportunities, particularly in international business. Specific intern assignments will be worked out on an individual basis by the department's International Relations Intern advisor. Hours earned will not reduce the minimum 35 required to satisfy the major.

Advising:
When a student signs up as an IR major, the director of the International Relations program assigns the student an advisor. Phone (216) 687-4541, or email d.schulz02@csuohio.edu.

Additional Information:
This major is designed to give students the opportunity to engage in a multidisciplinary study of the variety of subjects concerned with international affairs. Successful completion of the major does not assure job placement in an international career. It does offer a number of advantages to students seeking entry placement in domestic and overseas private-sector firms and nongovernmental organizations where a premium is placed on the ability to interact successfully with people and economic and political practices in other cultures. It also provides an excellent foundation for more specialized graduate study in international studies, and for taking entry-level examinations into international service.

All students follow a series of core courses in political science and economics. In addition, students choose from one of a number of concentrations in the areas of international business and economics, Western European studies, Central Europe and the former Soviet Union, Asia, Latin America, and a combined concentration in Africa and the Middle East. For each of these concentrations, students take four courses from a recommended list. Students, with the agreement of the IR Director, may also design their own concentration if a grouping of appropriate courses is available.

In addition to the analytic tools of political science and economics, all International Relations majors are required to demonstrate competence in at least one major world foreign language at a level comparable to two years of college
Instruction. Competence may be demonstrated either by completing course work or passing an examination. Non-native English speakers may submit English as their foreign language. All other students must obtain approval for their language and show its relevance to their area of concentration. IR majors are encouraged to gain or deepen their language competence through a period of residence and/or study abroad. The department works closely with the Center for International Services and Programs to develop study abroad opportunities for International Relations majors. In some cases scholarship support may be available to assist with travel expenses. Foreign language majors or minors are welcome to double major in International Relations.

The Department of Political Science also encourages students to benefit from an internship program which will further deepen their knowledge of international affairs and improve their marketability. The director of the International Relations program will work with interested students to arrange internship opportunities in Cleveland, elsewhere in the United States or in some instances with foreign corporations or organizations abroad. Students can consult a list of existing opportunities, or additional ones can be developed on an individual basis.

Major Requirements

The curriculum for the International Relations major consists of a common core and an area of concentration. The following courses are required of all International Relations majors:

The Core:

- PSC 231 International Politics (4 hours)
- PSC 328 International Political Economy (4 hours)
- PSC 421/422 Seminar in Comparative Politics or International Politics (5 hours)
- ECN 201 Macroeconomics (3 credit hours)

PLUS

one additional 300-level elective (4 hours) from among the following:

- PSC 321 Political Violence
- PSC 323 Politics of Africa
- PSC 324 Politics of Russia and the Successor States
- PSC 325 Western European Politics
- PSC 326 Politics of the Third World
- PSC 327 Politics of Peaceful World Change
- PSC 331 U.S. Foreign Policy
- PSC 332 Politics in the Middle East
- PSC 333 Latin American Politics
- PSC 335 East Asian Politics
- PSC 337 Canadian Government and Politics
- PSC 338 Central and East European Politics
- PSC 393, PSC 394 Special Topics in International and Comparative Politics

The Concentration:

(15 to 16 hours all at the 300-level or above, except for PSC 221, in area studies concentrations)

The purpose of the concentration is to enable students to pursue an in-depth study of one area of international studies corresponding to their intellectual and/or career interests. Courses in the concentration may be chosen from among a variety of courses in different disciplines of Arts and Sciences and from the College of Business. All courses selected for the concentration must be approved by the student's advisor or by the director of the International Relations major. Students can select from among the four concentrations listed below, or may create their own concentration with the approval of their advisor. Courses listed below for each concentration are indicative and may not all be available as needed. Students should see their advisors to work out their specific set of concentration courses.
1. Concentration in International Business and Economics (four of the following):

- PSC 394 Special Topics in Political Economy
- ECN 482 International Economics
- MKT 301 Introduction to Marketing (3 hours)
- MKT 305 Marketing Management
- MKT 321 International Business
- MKT 431 Marketing Research
- MKT 461 Global Marketing

or one of the above plus:

- MLR 301 Principles of Management (3 hours)
- MLR 302 Principles of Labor and Industrial Relations (3 hours)
- MLR 421 Comparative Labor Systems (3 hours)
- MLR 487 International Management (3 hours)

**Note:** To take advanced courses in marketing, students must take MKT 301; to take advanced courses in management, students must take MLR 301.

2. Asia Studies (four of the following):

- PSC 221 Comparative Politics
- PSC 335 East Asian Politics
- PSC 394 Special Topics when specified to deal with Asia, such as "Art and Politics in China"
- ANT 355 Cultures of Southeast Asia
- ART 383 Indian Art
- ART 385 The Hindu Temple
- HIS 372 Early Modern Japan
- HIS 373 Modern Japan
- HIS 374 Revolutionary Movements in Modern China
- REL 360 Hinduism
- REL 362 Buddhism
- REL 364 Islam

3. Central Europe, Russia and the Successor States

- PSC 221 Comparative Politics
- PSC 324 Russia and the Successor States
- PSC 338 Politics of Central and East Europe
- HIS 360 History of Russia to 1900
- HIS 361 History of Modern Russia
- HIS 362 History of Eastern Europe

4. Africa and the Middle East:

- PSC 221 Comparative Politics
- PSC 323 African Politics
- PSC 332 Politics in the Middle East
- ANT 353 Cultures of Africa
- ART 386 Regional Art in Africa
- HIS 375 Pre-Colonial Africa to 1880
- HIS 376 Modern Africa
- HIS 377 History of Islamic Civilizations
- REL 341 Origins of Judaism
- REL 364 Islam

5. Latin America and the Caribbean:
- PSC 221 Comparative Politics
- PSC 326 Politics of the Third World
- PSC 333 Latin American Politics
- PSC 334 U.S.-Latin American Security Issues
- ANT 352 Native South Americans
- ENF 210-211 Nonwestern Literature in English Translation (depends on specific content)
- HIS 165 Introduction to Latin American History
- HIS 367 Latin America Since 1825
Liberal Studies (B.A.) At-a-Glance

Telephone: (216) 687-3961

Internet: http://www.csuohio.edu/liberalst/

The bachelor of arts in Liberal Studies is administered by the College of Arts and Sciences. This degree provides a broad-based liberal education in the sciences and humanities. It is especially appropriate for students who wish to take an active role in shaping their studies.

The B.A. in Liberal Studies differs from traditional degree programs in allowing maximum freedom and flexibility in course selection. Students may organize programs that suit their own academic, professional, or other personal goals such as foundations for graduate study, as prerequisites for professional training, or as exploratory intellectual experiences in their own right. (Some graduate or professional careers require more specialized backgrounds than Liberal Studies permits, so for them a more traditional B.A. might be more appropriate. For a program that can be both individualized and specialized, see the Personally Designed Major [PDM] in CSU's First College.)

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Admission to the Bachelor of Arts in Liberal Studies Program

After admission to the university, a student makes an appointment with a Liberal Studies advisor in the College of Arts and Sciences located in Main Classroom 218. The advisor explains the nature of the program (including its advantages and disadvantages) and helps to determine whether such a broad-based education is in the student's best educational and career interests. Transfer credits from other schools and from other colleges within Cleveland State are also explained and evaluated. To enter the program, a student must have a minimum GPA of 2.75 either cumulatively or in the last 24 semester hours taken before admission.

The student then consults with the director of Liberal Studies or a faculty advisor about applying for admission to the program — ideally before attaining senior status. A letter of application requests admission to Liberal Studies and must include the following:

- a statement of understanding about the freedom of choice associated with this degree
- a statement of future plans to use this degree for itself, for further study, or for employment
- an outline of a projected course of study and date of graduation

The letter is reviewed by the program's director and advisory committee. When an application is approved, the student's major becomes effective in the following term. Exceptions require a special petition and are approved only in unusual cases.

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Advising

Majors in Liberal Studies meet each term with the director or an advisor assigned by the director to discuss progress in the program and to register for the following term. They are also encouraged to seek additional advising from specific departments and programs, especially if they are planning graduate study or other professional training after graduation.
Time for Completing the Degree

The B.A. in Liberal Studies can be completed in four years of full-time study, or longer through part-time attendance. Some transfer credits from other schools and from other colleges within Cleveland State may reduce the time required. Students entering the program in their junior year or later may require additional time.

Degree Requirements

A. Liberal Studies majors must complete all university residence and distribution requirements as well as all general requirements of the College of Arts and Sciences.

B. In addition to university and college requirements, a B.A. in Liberal Studies includes 66 semester credits of C or better:
   - 16 in Social and Behavioral Sciences
   - 16 in Natural Sciences and Mathematics
   - 16 in Humanities and Fine Arts
   - 18 in Electives

   These 66 credits may be broadly distributed across the four areas, they may be concentrated in various areas of interest (including certificates or formal minors in other departments), or they may be organized in a formal program of study of one or more major themes (such as critical thinking, cultural heritage, science and technology). No more than 18 credits in any one department will normally be counted toward the 66 credits of the major.

C. A Liberal Studies major must be enrolled in the program for at least two academic terms and earn at least 26 upper-level credits after admission. Completion of an exit questionnaire or other document is required for graduation.

D. Upon petition to the director and advisory committee, a student may include in the Liberal Studies major up to 42 transfer credits from other colleges within Cleveland State — typically for courses that have specific counterparts in Arts and Sciences courses. A maximum of 31 credits in business courses may be counted toward the 66 credits of the major.
Linguistics (B.A.)

At-a-Glance

Minimum hours required for major: 33

Minimum hours required for minor: 18

Special requirement: In order to earn a B.A. in Linguistics, a student must maintain an overall grade point average of 2.5 or better, and a grade point average of 3.0 or better in courses applied to the major.

Advising information: Freshmen and sophomores who are interested in majoring or minoring in Linguistics are advised to take LIN 260 Language, Society, and Culture (3 credits), which counts toward the social sciences graduation requirement and as a Linguistics elective. This course is cross-listed as ANT 260 and ENG 260. Students interested in majoring in Linguistics should contact John Greppin, director, Program in Linguistics, FT 1002 (216) 687-3967.

Foreign language requirement: The arts and sciences foreign language requirement may be satisfied by taking a two-semester sequence of LIN 318 Language Analysis (4 credits each, cross-listed as ENG 318 or MLA 310) and offered as Sanskrit, Old English, Old Norse, Mayan, or other languages. These count as core courses in the Linguistics major and minor.

Career information: Students preparing to teach English as a Second Language are advised to take courses in phonetics and phonology, English grammar, applied linguistics, teaching ESL, and ESL internship. For preprofessional and general liberal-arts majors, linguistics contributes to analytical and research skills that enhance a professional résumé. Opportunities are varied and include linguistic analysis of primary texts, the study of language diversity in social and educational contexts, field experiences, and internships. The Linguistics major is drawn from courses in anthropology, communication, education, English, modern languages, philosophy, psychology, and speech and hearing. Some students have found it advantageous to take a double major, combining linguistics with one of these fields.

Major Field Requirements

To earn a major in Linguistics, students must take at least 33 credits distributed among at least 9 courses. The number of credits in each course varies from 2 to 4. Course requirements are defined as follows:

1. Introductory course (one of the following):
   - ANT 304 Linguistic Anthropology
   - MLA 325 Introduction to Linguistics
   - ENG 311/LIN 311 Elements of Linguistics

2. Linguistic core courses (4 courses from the following list):
   - ANT 304 Linguistic Anthropology (may apply either as an introductory course or as a core course)
   - ANT 340/LIN 340 Phonology
   - ANT 341/LIN 341 Morphology and Syntax
   - ANT 342/LIN 342 Languages in Contact
   - ANT 344/LIN 313 Sociolinguistics
   - ENG 312/LIN 312 Modern English Grammar
   - ENG 313/LIN 313 Studies in Linguistics (may be repeated with change of topic)
ENG 318/LIN 318/MLA 310 Language Analysis (may be repeated as a 2-semester sequence or with change of topic)
SPH 228 Phonetics
SPH 229 Speech and Language Development
SPN 417 History of the Spanish Language

3. Electives in language and linguistics
(four courses or more as needed to bring the total number of credits to 33; at least three electives must be upper-division courses). Electives may include any courses from the core list, and courses from the following:

- ANT 343 Language and Gender
- EDL 406 Second Language Learning and Pedagogy
- EDL 407 TESOL Methods
- ENG 310/LIN 310 Traditional Grammar
- ENG 314/LIN 314 Applied Linguistics
- ENG/LIN 490 Professional Internship: Teaching Adult ESL
- FRN 315/LIN 315 French Phonetics and Diction
- FRN 434 Studies in French Linguistics
- GER 415/LIN 315 Phonetics and Contrastive Structures
- LIN 480/MLA 493 Special Topic in Linguistics
- LIN 496 Independent Study in Linguistics
- MLA 201 Words: An Introduction to Etymology
- PHL 377 Language and Philosophy
- PHL 432 Analytic and Linguistic Philosophy
- PSY 372 Memory and Cognition
- SPH 431 Language Disorders
- SPH 438/LIN 438 Urban Language Patterns
- SPN 293/393/493 Special Topics in Spanish (with linguistic topic)
- SPN 315/LIN 315 Spanish Phonetics
- SPN 416 Studies in Spanish Linguistics

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Linguistics Minor

The minor in Linguistics requires at least 18 credits, with courses distributed as follows:

1. Introductory course: ANT 304, ENG 311/LIN 311 or MLA 325

2. Two Linguistic core courses (from Section 2 above)

3. Two or more elective courses (from Sections 2 and 3 above)
Mathematics (B.A., B.S.)

At-a-Glance

Admission to major: MTH 181, MTH 182 with a grade of C or better in each

Minimum hours required for major: 42

Hours required for minor: 24

Special tracks: Actuarial, applied mathematics, pure mathematics, statistics, secondary education licensure

Teacher licensure: Yes

Student organization: Math Club, Pi Mu Epsilon

For further information: (216) 687-4680 or http://www.csuohio.edu/math

Each course offered by the Mathematics Department is designed to provide one or more of the following:

- part of the mathematical component of a liberal education
- the mathematical tools needed by students in business, computer science, education, engineering, and the biological, physical, and social sciences
- training beyond the introductory level in the major areas of pure and applied mathematics

For students interested in the third category, the department offers the bachelor of arts degree and the bachelor of science degree in mathematics. The mathematics requirements for the two degrees are identical; the difference between them is the number of science credits that are required (see below: BA, BS)

The core mathematics requirements for a bachelor's degree form the fundamental building blocks for almost every field of mathematics. By choosing suitable mathematics electives, students may obtain bachelor's degrees that prepare them for mathematical work in business or industry, for the actuarial profession, or for graduate study in mathematics.

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Major Field Requirements

All mathematics majors must complete a minimum of 42 credits in mathematics. These credits must include the following courses:

- MTH 181 Calculus I
- MTH 182 Calculus II
- Three courses from the following four:
  - MTH 220 Discrete Mathematics
  - MTH 281 Multivariable Calculus
  - MTH 286 Introduction to Differential Equations
  - MTH 288 Linear Algebra
- MTH 495 Senior Seminar (The two-credit course MTH 495 must be taken during the student's senior year.)
The remaining 20 credits must be in mathematics courses numbered 300 or above (excluding MTH 321 and MTH 347). Two of these courses must be numbered 400 or above.

A grade of C or better must be earned in each of MTH 181, MTH 182, MTH 220, MTH 281, MTH 286, and MTH 288.

For the bachelor of arts degree a Mathematics major must complete a minimum of 11 science credits, distributed in the following three fields: biological, geological, and environmental sciences; chemistry; and physics.

For the bachelor of science degree a mathematics major must complete a minimum of 24 science credits distributed in the following four fields: biological, geological, and environmental sciences; chemistry; physics; and computer and information science. These 24 credits must include PHY 241 (or PHY 243) and PHY 242 (or PHY 244). Any courses in computer and information science used to meet this requirement must be courses that satisfy CIS major field requirements.

Prospective Mathematics majors should make every effort to complete 100- and 200-level mathematics courses by the end of their sophomore year. Otherwise they may have difficulty in scheduling required advanced courses and electives. Students who decide to major in Mathematics should consult an advisor in the Mathematics Department early in the sophomore year to work out a program of advanced courses suited to their career objectives and capabilities. When preparing for this meeting, students should carefully consider the following recommendations.

**Recommended Electives for Various Major Concentrations**

1. Actuarial: MTH 301, MTH 323, and MTH 424
2. Applied mathematics with emphasis on engineering and the physical sciences: MTH 301, MTH 311, MTH 386, MTH 389, MTH 401, MTH 434, and MTH 487
3. Applied mathematics with emphasis on numerical computation: MTH 301, MTH 311, MTH 386, and MTH 487
4. Pure mathematics: MTH 301, MTH 358, MTH 381, MTH 420, and MTH 434
5. Statistics: MTH 301, MTH 323, and MTH 424
6. Secondary school teaching: MTH 301, MTH 323, MTH 333, MTH 358, MTH 401, and MTH 420
7. Another possible elective is MTH 493 (Special Topics in Mathematics). Its content varies widely from year to year; consult the Mathematics Department for current information. A student may also arrange to take an individual reading course (MTH 497) on an advanced mathematical topic not included in the regular course offerings of the department. Such reading courses are subject to departmental approval.

**Second Major for Computer Science Students**

Students in either the CIS or CSC program who choose a concentration in mathematics can, by suitably choosing electives and with no additional course work, complete all mathematics requirements for the bachelor of science degree with a major in Mathematics. Students can receive this additional degree by satisfying the College of Arts and Sciences foreign language and culture requirement in addition to CIS/CSC requirements. See your CIS Department advisor and an advisor in the Mathematics Department for further information.

**Mathematics Minor**

A minor in mathematics consists of 24 credits in mathematics, including:

- MTH 181 Calculus I
- MTH 182 Calculus II
- 8 credits chosen from among:
  - MTH 220 Discrete Mathematics
  - MTH 281 Multivariable Calculus
The remaining 8 credits must be in mathematics courses numbered 300 or above.

**Teacher Licensure**

Students who complete the requirements for a bachelor’s degree in Mathematics, including MTH 301, MTH 323, MTH 333, MTH 358, and MTH 401 as elective courses will need 46 credits in mathematics to fulfill the subject field requirements for secondary teaching license in mathematics. For information on the general education and professional educational requirements for certification, see the College of Education chapter of this catalog.

Students seeking secondary licensure in mathematics as a second teaching field must complete a minor in mathematics, plus 8 additional credits in mathematics courses numbered 200 or above. These students should consult the College of Education for information on general education and professional education requirements.
Music (B.Mus., B.A.)

At-a-Glance

Minimum hours required for B.A.: 49

Minimum hours required for B.-Mus. Composition: 86

Minimum hours required for B.-Mus. Education: 93

Minimum hours required for B.-Mus. Performance: 78

Minimum hours required for minor: 24

Two degree programs are offered: the bachelor of music, for the student who seeks primarily professional training, and the bachelor of arts with a major in music, for the student who seeks to study music in its wider cultural context. The Music Department offers training for music majors in the areas of music education, theory/composition and applied music. These programs have been accredited by the National Association of Schools of Music.

Private lessons in applied music are offered on campus. Students may register for either one or two half-hour lessons weekly. The last digit of the applied music course number indicates the amount of credit earned. Those who register for one half-hour lesson earn one semester hour; two half-hour lessons earn two semester hours. Special tuition fees are assessed for these courses. A successful performance audition is required for admission to music major status.

All music students are urged to obtain the Music Department Student Handbook for further clarification of the degree requirements listed below.

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Bachelor of Music Degree

In addition to fulfilling the general course requirements of the university and the College of Arts and Sciences, B.Mus. majors are required to complete course work in areas of common experience in music and in courses specific to one of three areas of concentration: music education, composition, or applied music.

1. Course work in areas of common experience includes performance experience in applied music and in ensembles, development of basic musicianship skills, knowledge of musical structures and styles in broad historical and cultural contexts.

   The courses required in the common experience are:
   ○ MUS 112 Macromusic
   ○ MUS 113 Writing About Music
   ○ MUA 102 and 103 Keyboard Skills I, II
   ○ MUS 231 through 234 Harmony and Form I, II, III, IV
   ○ MUS 241 through 244 Musicianship I, II, III, IV
   ○ MUS 411 and 412 Music History I, II
   ○ MUS 414 Ethnomusicology

2. In addition each major area of concentration requires applied music and ensemble participation as follows:
   ○ Music education: seven semesters of applied music and seven semesters of major ensembles
   ○ Composition: eight semesters of applied music and six semesters of ensembles
Applied music:
- eight semesters of applied music (includes eight credits at the 100-level and eight credits at the 300-level) and
- 12 semester hours of ensembles

Appropriate proficiency levels as defined by the Department of Music faculty must be passed for students to progress to upper-level applied music study.

3. Each area of concentration also requires degree candidates to present at least one recital as follows:
   - Music education: a 30-minute senior recital
   - Composition: a recital of representative works
   - Applied Music: two 60-minute recitals

Areas of Concentration

Music Education
A student choosing the option of music education must complete the following courses in addition to the common experiences listed above:

- MUS 205 Orientation to Music Education
- MUS 290 Elementary Music Field Experience
- MUS 300 Secondary Music Field Experience
- MUS 351 Teaching String Instruments
- MUS 352 Teaching Woodwind Instruments
- MUS 353 Teaching Brass Instruments
- MUS 354 Teaching Percussion Instruments
- MUS 355 Teaching Vocal/Choral Music
- MUS 443 Music Literacy and Learning
- MUS 444 Elementary Music Curriculum and Methods
- MUS 445 Secondary Music Curriculum and Methods
- MUS 461 Conducting School Ensembles
- EDB 305 Teaching and Management - Secondary School
- EDC 300 Diversity in Education Settings
- ESE 400 Teaching Students of Varying Abilities
  - EST 483 Multiage Student Teaching (10 hrs.)

Composition.
A student choosing the option in composition must complete the following music courses in addition to the common experiences listed above:

- MUS 320 Composition (four semesters)
- MUS 321 Composition Forum (six semesters)
- MUS 341 Counterpoint
- MUS 427, 428 Computer Music and MIDI I, II
- MUS 451 Orchestration
- Electives seven semester hours

Applied Music.
A student choosing the option in applied music must complete the following courses in addition to the common experiences listed above:

- MUS 310 The Business of Music
- Electives in Music: 6 semester hours chosen from among the following: MUS 108 Opera Theater Workshop; MUS 341 Counterpoint; MUS 356 Diction; MUS 427, 428 Computer Music and MIDI I, II; MUS 381, 382 Jazz Improvisation I, II; MUS 451 Orchestration; MUS 461 Conducting School Ensembles.
- Other electives: 11 semester hours. Voice majors must take two semesters of German and two semesters of a Romance language.

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Bachelor of Arts Degree

Major Field Requirements

The program leading to a B.A. with a major in Music requires a total of 128 semester hours. The 33 semester hours listed under Common Experiences (Section 1 above) are required of B.A. candidates. Eight semester hours in applied music or ensemble, 11 semester hours of music electives and a three-semester-hour senior project are also required.

The Music major provides for numerous electives (26 semester hours) outside of music as well as for the general course requirements of the university and the College of Arts and Sciences. The major's elective requirement provides the opportunity for broad coverage and even intensive work in other academic areas of interest. It also provides the additional background for an individually designed senior project which culminates the degree.

A full-time faculty member will be the principal advisor to and administrator of the program. Acceptance into the B.A. program in music requires an interview with the program advisor and written confirmation from the program advisor of the student's acceptance as a candidate for the B.A. in music. A successful entrance audition before a faculty committee is required of students whose focus in the B.A. program is to be performance. An entrance audition will also be required of applicants who have less than one year of private applied lessons at a recognized institution of higher education.

Music Minor

A minor in Music consists of 24 semester hours. Students accepted for the minor in music are required to select 8 semester hours from the Materials of Music, Harmony and Form, and Musicianship sequences; MUS 412 Music History II. Five semester hours in applied music and/or ensembles are required.

A minimum of 8 semester hours shall be at the 300-400 level.

A full-time faculty member will be principal advisor to and administrator of the program, coordinating students' interests with available course choices and documenting completion of the required courses and credits for official registry of the music minor on the students' transcripts. Acceptance as a minor in music requires an interview with the minor advisor and written confirmation from the advisor of the student's acceptance as a minor in music.
Philosophy (B.A.)

At-a-Glance

Minimum hours required for major:
32, including 16 hours of core courses in logic and the history of philosophy and 16 hours of electives, as described below.

Minimum hours required for minor: 16 credit hours selected from courses eligible to count for the major.

Advising: Designated faculty advisor; phone 687-3900.

Philosophy addresses fundamental questions about human knowledge and existence from constructive and critical perspectives. Students examine important historical and contemporary theories concerning ethics, social justice, reality and the nature and extent of knowledge. Logic is also central to philosophy, since the critical evaluation of the reasons given for ideas is as important as the study of the ideas themselves. For this reason, philosophy classes are well known for the presentation of philosophical problems and issues in a manner that stimulates questions, discussion, and a general appreciation for the pursuit of truth.

A philosophy major or minor is excellent preparation for fields such as law and business, which rely on skills of critical thinking, as well as for fields such as medicine and social work, where practitioners face ethical dilemmas in their work. Though useful in many careers, the study of philosophy can be expected to enrich a person's life beyond the rewards of the marketplace, through a deeper understanding of important beliefs and their foundations.

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Major Field Requirements

1. Core Courses: 16 credits;

   - PHL 131 Deductive Logic I or
   - PHL 332 Deductive Logic II
   - PHL 261 Ancient Philosophy
   - PHL 262 Medieval Philosophy
   - PHL 263 Early Modern Philosophy

2. Electives: 16 credits, no more than 4 credits below the 300 level.

Majoring in Philosophy with a concentration in Ethics

Philosophy majors with an interest in ethics may declare a major in Philosophy with a concentration in Ethics. Students pursuing this program take core courses in the fundamentals of philosophy and ethics. Additional electives include courses in key areas of the study of values and conduct, such as the philosophy of art, religion, law, or politics, as well as courses in bioethics. A major in philosophy with a concentration in ethics is excellent preparation for advanced study in ethics, law, public administration, social work, and other fields in which ethical dilemmas arise amidst unresolved conflicts.
Requirements for a B.A. in Philosophy with a concentration in Ethics:

Core courses, 16 credits:
- PHL 131 Deductive Logic
- PHL 211 Morals and Rights or PHL 215 Engineering Ethics
- PHL 263 Early Modern Philosophy
- PHL 283 Introduction to Ethics

Ethical Theory, 4 credits:
- PHL 311 Ethics

Value Theory Electives, at least 4 credits selected from the following fields:
- PHL 321 Philosophy of Art
- PHL 331 Philosophy of Religion
- PHL 341 Philosophy of Law
- PHL 351 Social and Political Philosophy

Other Upper Level Electives, 8 credits:

As part of the Bioethics Certificate program, the Philosophy Department offers a wide variety of upper-level courses in bioethics. Students may elect courses from those counting toward the Certificate in Bioethics, or any other advanced Philosophy courses.
Physics (B.S., B.A)

At-a-Glance

Minimum hours required for B.A. major: 76

Minimum hours required for B.S. major: 68

Minimum hours required for minor: 18

A major or minor in physics will help you prepare for a wide range of exciting careers in product development, research, teaching, and many other fields where you combine your knowledge of physics with other disciplines. The Physics Department offers you a choice of three undergraduate programs to suit your particular goals, interests and strengths:

Bachelor of Science: preparation for technical careers in industry and research centers and for graduate studies

Bachelor of Arts: preparation for careers in applied (engineering) physics, computer science, education, medicine, law, technical sales, scientific journalism or other fields where analytic skills and broad understanding of physics are important. Students majoring in Engineering or in Computer and Information Science (CIM and CIS calculus based; physics option) can earn the B.A. in Physics as an additional degree with a modest increase in course requirements.

Physics Minor: provides students majoring in other technical fields with additional skills thus broadening their career options.

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Major Field Requirements for B.S. in Physics

- the following required physics courses: PHY 243, PHY 244, PHY 330, PHY 340, PHY 350, PHY 440, PHY 450, PHY 455, PHY 474, PHY 475
- at least 10 credits of technical electives to be selected from 300- and 400-level courses in physics, chemistry, mathematics, or engineering approved by the physics advisor
- the following required mathematics and computer science courses: MTH 181, MTH 182, MTH 281, CIS 260

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Major Field Requirements for B.A. in Physics are:

- the following required physics courses: PHY 243, PHY 244, PHY 330; PHY 474;
- 16 credits of physics electives to be selected from the following list: PHY 201, PHY 202, and all the 300 and 400 level physics courses;
- the following required mathematics and computer science courses: MTH 181, MTH 182, MTH 281 or (MTH 220 and MTH 284), CIS 260;
- introductory sequence of chemistry with associated laboratory courses (CHM 261, CHM 262, CHM 266, CHM 267) or introductory sequence of biology with associated laboratory courses (BIO 200, BIO 201, BIO 202, BIO 203) or the following computer and information science courses: CIS 265, CIS 270;
- at least 16 credits in a coherent program from a different discipline such as biology, chemistry, computer science,
mathematics, environmental science, education or engineering. Program must be approved by the Physics Department advisor.

Physics Minor Requirements

- the following required physics courses: PHY 243, PHY 244
- at least 8 credits of 300- and 400-level physics courses

Teacher Licensure

Any student who has completed the requirements for the B.S or B.A. degree in Physics would have largely completed the subject requirements for a provisional high-school teaching licensure in the physical sciences. For information concerning the other requirements for teaching licensure see the College of Education section of this catalog.

Advising: Call (216) 687-2425
Political Science (B.A.) At-a-Glance

Minimum Hours Required for Major: 32

Minimum Hours Required for Minor: 16

Special Tracks and Joint Programs: public service specialization, political communication

Foreign Study Abroad: China (Suzhou), Germany, France (Clermont) and others which can be arranged through the Center for International Services and Programs

Awards: Distinguished Student Award, Distinguished Senior Seminar Paper Award, Outstanding Student Intern Award, Membership in Pi Sigma Alpha National Political Science Honor Society

Admission to the Major: Majors in the regular political science program must complete PSC 111 (Introduction to American Government) prior to declaring their major. Prospective majors are encouraged to take PSC 111 in their freshman year as part of their university culture curricular requirement. Then, early in the sophomore year, students should arrange a meeting with the department chair to discuss declaring a major. Transfer students from community colleges and other four-year institutions should declare their political science major as soon as possible after arriving on campus. NOTE: The prerequisite of PSC 111 does not apply to International Relations majors (see Interdisciplinary Programs).

Advising: The department has an intensive student advising system. All prospective majors should schedule an appointment with the chair to discuss their education and career interests. On the basis of this meeting, students decide which political science program they will follow and are assigned to a specific advisor. They can see their advisor each semester to discuss the next semester's registration and any career or post-B.A. training issues. There are also separate advisors available to assist students with internships in public service or international relations.

Service Courses: In addition to the major, the Department of Political Science offers a number of courses which fulfill university curricular requirements.

- PSC 111 American Government (4 hours) (Western Culture and Civilization, Social Science)
- PSC 227 Power, Authority and Culture in Nonwestern Communities (Nonwestern Culture and Civilization, Social Science) (3 hours)
- PSC 241 Freedom and Authority (Western Culture and Civilization, Social Science) (3 hours)
- PSC 305 Cultural Diversity in U.S. Politics (African-American Experience, Diversity, Social Science) (4 hours)

In addition, a number of the department's 300-level courses have been designated as Western Culture and Civilization, Non-Western Culture and Civilization, and Writing courses. Please check the course bulletin.

Department Office and Contacts: Rhodes Tower 1744; Telephone: 687-4541; email address: v.varaljay@csuohio.edu; home page: http://www.csuohio.edu/polisci. All political science faculty members can be reached through the home page, or by sending an email to them at [first initial].[last name]@csuohio.edu. Several faculty members have their own home pages which can be accessed through the World Wide Web.

Additional Information:

The program in political science is designed to help students understand contemporary public policy, the importance of...
politics and democracy in their lives, and the means of influencing government to respond to collective needs. The Department of Political Science offers a major and a minor for both day and evening students. Details of the minor program are available in the department office.

The department also offers a public-service specialization as an alternative track to the regular departmental major. This specialization is designed specifically for those majors planning a career in the public sector, although it could prove equally useful to those seeking careers in the private sector. Details of this specialization are available in the department office. The department also offers a separate interdisciplinary major in international relations (see separate listing).

Students majoring in either communication and/or political science may select political communication as a specialization. Two departments jointly administer the program, providing students with a systematic and comprehensive orientation to political communication.

The political science curriculum stresses a broad understanding of the workings of political processes in the United States and abroad; the cultural and ideological bases of modern governments; and the acquisition of skills for evaluating public policies and participating in the political process. Political science bridges liberal arts and sciences, and the CSU Department of Political Science stresses the importance of both scientific and humanistic approaches to the field.

A major in political science helps to prepare students for careers in government, the legal profession, politics, community organizations, national and international nonprofit organizations, journalism and the mass media, and education. Many political science graduates take positions in business and industry as well.

Students must maintain at least a 2.0 GPA in political science courses in order to graduate with a major or minor.

Evening Program

The department offers a major and a minor in the evening. Required core courses are offered at night at least once during the regular academic year, and intermediate- and advanced-level courses are offered with sufficient regularity so that a student could complete the degree over a four-year period.

Political Science Major

(32 semester hours)

A minimum of 32 hours in political science beyond PSC 111 is required for the major. The program is divided into three parts: The Common Core, Field Distribution Requirements, and Seminar (or Internship)

1. Common Core: 7 hours

- PSC 251 Introduction to Data Analysis (3 hours)
- PLUS EITHER
- PSC 221 Comparative Politics (4 hours)
- OR
- PSC 231 International Politics (4 hours)

2. Field Distribution Requirements (20 hours at the 300- to 400-level)

   A. One course in political theory (PSC 340, 341, 342) (4 hours)
   B. Two courses in American politics (8 hours)
   C. Two courses in the comparative/international politics field (8 hours)

3. Seminar
Public Service Specialization

(36 Semester Hours)

Students who seek a political science program which is more oriented toward practical politics and government service can take the regular political science degree with a specialization in public service. Requirements of this program are identical to those of the political science major with two exceptions: public service track majors take an internship (PSC 401, 402, 403 or 405, for 6 hours of credit) instead of the senior seminar, as their capstone course. They also take one course specifically related to their internship, as well as the usual field-distribution requirements for the major. This brings the major to a minimum of 36 semester credit hours.

Admission to the Public Service Track:

Students wishing to specialize in the public-service track must meet the same requirements as regular political science majors. They must complete PSC 111 (Introduction to American Government) prior to declaring their major. When they declare their major they should inform the chair of their intention to specialize in public service. They will then be assigned to the internship advisor for all further advising on their program and on their internship.

1. Common Core: 7 hours

   - PSC 251 Introduction to Data Analysis (3 hours)
   - PLUS EITHER
     - PSC 221 Comparative Politics (4 hours)
     - OR
       - PSC 231 International Politics (4 hours)

2. Field Distribution Requirements (24 hours)

   A. One course in political theory (PSC 340, 341, 342) (4 hours)

   B. One course in American politics linked to the internship (4 hours) Students should select this course as a function of the Internship which they intend to pursue

   C. Two additional courses in American politics and institutions (other than PSC 301 or PSC 314) in the series 312-318 (8 hours)

   D. Two courses in the comparative/international politics field (8 hours)

Tracks in Public Service

A. Urban Politics: PSC 301 Urban Politics and Policy, any two 300-level courses in the American sub-field, and the City Council Internship (PSC 401)

B. State Politics: PSC 314 State Government and Politics, any two 300-level courses in the American subfield, and the State Government Internship (PSC 405)

C. National Politics: Any three courses in the American field, excluding PSC 301 or PSC 314, plus the Administrative Internship (PSC 403)

D. Electoral Politics: PSC 317 Parties and Elections, any two courses in the American subfield, and Campaign Politics Internship (PSC 402)

3. Internship (6 hours)

   Prerequisite: completion of Common Core, relevant 300-level course in preparation for the internship (PSC 301, PSC 305, PSC 314, PSC 317), or permission of the instructor. PSC 401
The Minor

The department allows students to take a minor in any one of four areas of Political Science: American Politics, Law and Theory (of particular interest to prelaw students not wishing to major in Political Science), Comparative Politics, and International Politics.

Requirements for the Minor: 16 to 17 semester hours depending on choice of courses

Minor in American Politics

- **PSC 111** (4 hours)
- 2 courses in American Politics at 300-level (8 hours)
- Any additional 300- or 400-level course, including **PSC 423 Seminar in American Politics** (5 hours)

Minor in Law and Theory

- **PSC 111** (4 hours)
- Two 300 Law or Theory Courses
  - (PSC 310, PSC 311, PSC 340, PSC 341, PSC 342)
- Any additional 300- or 400-level course, including **PSC 423 Seminar in Legal Theory** (5 hours)

Minor in Comparative Politics:

- **PSC 221** (4 hours)
- 2 comparative politics courses at 300-level from among **PSC 323, PSC 324, PSC 325, PSC 326, PSC 332, PSC 333, PSC 335, PSC 337, PSC 338**
- Any additional 300- or 400-level course, including **PSC 421 Seminar in Comparative Politics** (5 hours)

Minor in International Politics:

- **PSC 231** (4 hours)
- Two international politics courses at 300-level from among **PSC 321, PSC 327, PSC 328, PSC 330, PSC 331, PSC 334**
- Any additional 300- or 400-level course, including **PSC 422 Seminar in International Politics** (5 hours)

Certificates

- Central and Eastern European Studies
- Latin American Studies

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Psychology (B.A.)

At-a-Glance

Minimum hours required for major: 36

Minimum hours required for minor:
19 to 20. Students may design a minor which best fits with their major. Guidelines are available in the Psychology Department, Chester Building 158.

Advising: Please make an appointment with the Psychology Department secretary in CB 158

Student Organizations:  
Psi Chi (a national psychology scholastic honorary), and the Psychology Club (an organization of undergraduate psychology majors)

Additional information:  
It is possible to major in Psychology by taking courses only in the evening, but course offerings will be limited.

Undergraduate credit is available for approved internships and fieldwork experience (PSY 390)

Independent Study opportunities may be arranged by the student (PSY 396)

An Outstanding Senior award is presented annually by the department.

The study of psychology is concerned with explaining, predicting, and describing the thoughts, emotions, and actions of humans and animals. A major or minor in Psychology provides an excellent background for occupations in such diverse fields as business, education, and the social services. A major provides the basis for graduate training leading to the pursuit of psychology as a profession in either the academic or applied areas.

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Major Field Requirements

All majors are required to take a minimum of 36 credits of psychology. Students must earn grades of C or above in order for courses to count toward satisfying the requirements for the psychology major.

1. Required courses:
   - PSY 101 Introduction to Psychology
   - PSY 311 Behavioral Science Statistics (ANT 305 or OMS 201 and OMS 202 may be substituted)
   - PSY 412 Psychology Laboratory

2. One course from each of the following areas:

   Core A
   - PSY 339 Social Psychology
   - PSY 342 Psychology of Personality
   - PSY 344 Intellectual and Personality Testing
   - PSY 345 Abnormal Psychology

   Core B
PSY 368 Perceptual Processes
PSY 370 Psychology of Learning
PSY 372 Memory and Cognition
PSY 451 Human Performance
PSY 479 History of Psychology

Core C
- PSY 385 Psychology of Motivation
- PSY 481 Psychopharmacology
- PSY 482 Biological Basis of Behavior
- PSY 487 Brain and Cognition

3. 12 hours of electives: any course offered by the Psychology Department

No more than 8 credit hours (combined) of PSY 390 and PSY 396 may be applied toward the major.

Students majoring in Psychology also are encouraged to do general course work in the areas of sociology, the philosophy of science, biology, and anthropology. Those planning to go to graduate school should obtain a solid background in mathematics, research methods, and experimental psychology.

Students anticipating application for admission to graduate programs in psychology should consult the advisor in the department about the appropriate structuring of their undergraduate curriculum. This is advisable for both Psychology and nonpsychology majors.

Evening Major in Psychology

A major in Psychology is available to evening students.

Psychology Minor

The minimum requirements for the Psychology minor are: PSY 101 (Introduction to Psychology); 2 courses, one each from any two of the three Core areas (A, B, or C); 7 to 8 credit hours of psychology electives, with at least one course at the 300- to 400-level.

Students must earn grades of C or above in order for courses to count toward satisfying the requirements for the Psychology minor.
Religious Studies (B.A.)

At-a-Glance

Minimum hours required for major: 32
(28 if a second major)

Minimum hours required for minor: 18

Advising: department chairperson, phone: (216) 687-2170.

Student Organizations: Religious Studies Student Association

Religion is an important aspect of every civilization. In order to fully understand a civilization, it is necessary to understand the religious phenomena in it. Therefore, it is the purpose of this program to supply the student with data, methods, and tools to facilitate an understanding of religion and to provide a preparation for a wide range of professional and graduate training.

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Major Field Requirements

The Department of Religious Studies requires 32 credit hours for a major. Of the 32 required credit hours, at least 20 credits must be in 300- or 400-level courses. The specific courses required for the major will be determined on an individual basis in consultation with a departmental advisor.

A Religious Studies major who wishes to complete a second major in another field may have the number of credits required for the Religious Studies major reduced from 32 to 28.

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Religious Studies Minor

The Department of Religious Studies requires 18 credit hours for a minor. Of the 18 required credit hours, at least 12 credits must be in 300- or 400-level courses.

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Courses in Cognate Fields

The Department of Religious Studies will allow students to take courses offered by cognate departments to satisfy some requirements for the major and minor. These courses must be approved by the Department of Religious Studies. A student may take up to 8 hours for the major or up to 4 hours for the minor.

A major or a minor in Religious Studies is not available to evening students.

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Social Science (B.A.)

At-a-Glance

Admission to major: No requirement other than good academic standing in the College of Arts and Sciences

Hours for major:
48 (including 11 hours in three of the following fields and 15 hours in the other: sociology, political science, economics and psychology)

Advising: Individual faculty advisors and Student Handbook

Student Organization: Sociology Club

For Information: Contact the Sociology Department. Phone 687-4500

The major in Social Science is designed for students seeking a broad, diverse background as preparation for various occupations or for more specialized training in such fields as law, journalism, the ministry, social work, or education.

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Major Field Requirements

Students electing a major in Social Science must complete a total of 48 semester hours distributed among economics, political science, psychology, and sociology. Fifteen hours must be earned in one of these fields and 11 hours in each of the remaining three. This composite major is administered by the Department of Sociology.

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Social Studies (B.A.)

At-a-Glance

Mission:
The primary mission of the Social Studies major is to provide students with the content competency to teach Social Studies in secondary schools. It forms the content knowledge basis for students to initiate teaching professions and provides the necessary critical thinking, analytical reasoning, and academic judgement skills upon which to embark on a lifetime of intellectual growth.

Hours Required in the Major:
73 - 82 hours of specific courses or thematic areas chosen from history, anthropology, economics, political science and sociology. Some of these courses also can be used to partially fulfill General Education requirements.

Major Field Requirements:
The curriculum for the Social Studies major consists of a common core and one area of concentration chosen from three areas. The following courses are required of all Social Studies majors:

The Core:

- HIS 101 Western Civilization I
  OR
  HIS 102 Western Civilization II
- HIS 111 U.S. History to 1877
- HIS 112 U.S. History since 1877
- HIS 165 Introduction to Latin American History
  OR
  HIS 175 Introduction to African History
- HIS 200 Introduction to Geography
- HIS 215 History of African-Americans to 1877
  OR
  HIS 216 History of African-Americans since 1877
- HIS 301 American Cultural History
  OR
  HIS 304 U.S. Urban History
- HIS 370 World History
- HIS 390 Introduction to Social Studies
- HIS 400 Local History Seminar
- ECN 201 Principles of Macroeconomics
- ECN 202 Principles of Microeconomics
- PSC 111 American Government
- PSC 221 Comparative Politics
  OR
  PSC 231 International Politics
- PSC/HIS/ANT/SOC 227 Power, Authority and Society in Non-Western Communities
- ANT 202 The Study of Culture
  OR
  HIS 323 Recent American History
OR
SOC 101 Introduction to Sociology

Complementary Core:
(Select 1 of the 3 areas below)

Anthropology Core
Two of the following:

- ANT 270 African American Culture
- ANT 324 Anthropology of Gender
- ANT 351 Native North Americans

Two of the following:

- ANT 352 Native South Americans
- ANT 353 Cultures of Africa
- ANT 354 Cultures of Oceania
- ANT 355 Cultures of Southeast Asia
- ANT 494 Advanced Area Studies in Anthropology

Political Science Core

- PSC 217 Urban Politics & the African American Experience
  OR
  PSC 305 Cultural Diversity in U.S. Politics
- PSC 318 The Presidency and Congress
  OR
  PSC 342 American Political Thought

Two of the following:

- PSC 310 Constitutional Law
- PSC 311 Civil Rights and Civil Liberties
- PSC 314 State Government and Politics
- PSC 315 Public Policy Administration
- PSC 327 Peaceful World Change

Sociology Core

- SOC 101 Introduction to Sociology

One of the following:

- SOC 342 Sociology of Law
- SOC 383 Political Sociology

Two of the following:

- SOC 201 Race, Class, and Gender
- SOC 203 Sociology of Poverty
- SOC 215 Black/White Interaction
- SOC 267 Studies in the Black Family
• SOC 317 Sociology of Gender
• SOC 380 Minorities

**Distribution:** Additional courses needed to ensure that at least one course is included from Anthropology and Sociology.

**Teaching Licensure:**
A comprehensive program for students seeking teaching licensure in Social Studies is administered through the College of Education. Interested students are urged to contact the college for further information.

**Advising:** Students register their intentions to pursue an academic major in Social Studies with the Department of History; those interested in teaching must be admitted to the teaching licensure program in the College of Education.

The Social Studies major will have an academic advisor in the College of Arts and Sciences as assigned by the Department of History. Those seeking a teaching license should have an advisor for education course work in the College of Education.

This interdisciplinary major is administered by the Department of History and is primarily intended for students seeking secondary licensure. It provides comprehensive training to history and related social-studies fields taught in Ohio secondary schools. Interested students should also consider pursuing academic major(s) and/or academic minor(s) in history, political science, or economics.

**For information:** Call Lee A. Makela, (216) 687-3927, or the History Department secretary, (216) 687-3920. Those interested in certification should contact the College of Education.

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Social Work (B.A.)

At-a-Glance

Mission: Accreditation

The mission of the Social Work major is to prepare students as beginning-level generalist social-work practitioners who are committed to the basic value of human dignity and the individual's right to determine his or her destiny guided by freedom, justice, and fairness. The program offers students the values and ethics, knowledge, and skills necessary to meet human needs and improve the social conditions under which persons grow and develop, focusing on diversity and vulnerable populations.

Social Work offers a basic understanding of the human service system as it addresses current social concerns. The core Social-Work curriculum prepares students for practice in diverse settings, such as child welfare, health, mental health, criminal justice, aging, community organization, and other areas of human service practice, in varied roles.

Graduates are eligible for membership in the National Association of Social Workers and/or the National Association of Black Social Workers, and are eligible to take the social-work licensure exam in Ohio. The program is fully accredited by the Council on Social Work Education.

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Admission to the Major

Application to the major may be submitted at the point of matriculation at the university in the College of Arts and Sciences, or any time thereafter, at which time the student is assigned an advisor in Social Work. The major in Social Work is designed to prepare the student to seek careers in a vast number of public and private organizations that provide human services utilizing generalist social-work practitioners. Social Work is a professional degree which requires licensure to practice in most private agencies.

To acquaint potential students with the profession of social work and the Social Work major at Cleveland State University, the department conducts orientation sessions which are designed to provide information about the profession; its history; fields of practice; current trends and social issues, and career opportunities; as well as the mission of the department and the admission and curriculum requirements for majors. The prerequisites for entering the Social Work core curriculum for the major requires the student to:

- Have a cumulative 2.20 grade point average and complete Introduction to Social Work, American Government and one Human Biology course
- Submit one letter of reference from either a teacher/professor, employer, religious leader, or a health or human services professional
- Submit a completed college checklist from Arts and Sciences

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Advising
Majors are assigned a faculty advisor to individually guide and direct the student to ensure that the maximum benefit is gained in the pursuit of the social-work degree. Pre-major advising is available for those students who are interested in exploring the social-work profession as a major field of study.

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Major Field Requirements

A Social Work major must maintain a 2.5 cumulative grade point average in the social-work core curriculum and a 2.2 cumulative grade point average overall in the university. All majors are assigned a faculty advisor to assist in establishing objectives, planning a program, and course sequencing. Students must maintain regular contact with their advisor.

The Social Work major is founded upon a liberal-arts perspective which requires 20 credits in liberal-arts courses and 45 credits in the core social-work curriculum. The Practice Sequence courses are restricted to social-work majors. Social Work majors are required to complete the prescribed curriculum.

Liberal Arts Perspective:

Biology: 4 credits. The department requires Biology and Man: Basic Concepts or Biology and Man: Reproduction and Development or Biology and Man: Heredity.

Social and Behavioral Sciences: 3 credits each in prerequisite courses such as American government and additional 18 credits taken in department-approved courses. Twelve credits in at least three of the following fields must be completed prior to entry to the interventions sequence: anthropology, communications, economics, political science (excluding PSC 111), psychology, and sociology. An additional 6 credits in these and/or related fields are required. These courses shall be selected through advising.

Core Requirements (45 credit hours)

- SWK 200 Introduction to Social Work (prerequisite)
- SWK 201 Contemporary Social Welfare
- SWK 300 Social Welfare Policy
- SWK 302 Human Behavior and Social Environment - Micro
- SWK 303 Human Behavior and Social Environment - Macro
- SWK 304 Perspectives on Social Work Research I
- SWK 305 Perspectives on Social Work Research II
- SWK 385 Interventions I
- SWK 390 Field Practicum I
- SWK 395 Field Seminar I
- SWK 485 Interventions II
- SWK 490 Field Practicum II
- SWK 495 Field Seminar II

Completion of a major in Social Work depends upon successful completion of two semesters of student practice in a field placement. Pre-majors with little or no previous exposure to the human service field are advised, therefore, to explore their potential effectiveness and satisfaction in working directly in human service.

Students are required to obtain a grade of B or better in Interventions I & II, Field Practicum I & II, and Field Seminar I & II. Students receiving less than a B in Interventions I and/or Field Practicum I and/or Field Seminar I may not proceed in the major without review and assessment by the department Admissions and Continuance Committee.

Elective courses include:

- SWK 150 The Black Experience and Contemporary Society
Certificate Program: Criminal Justice

Criminal justice electives help prepare students for work in law enforcement (i.e., as police officers, park rangers, or customs agents) or corrections (i.e., as probation or parole officers, or prison social workers).

Students must take the following Criminal Justice core electives:
- PSC 310 Constitutional Law
- SWK 240 Administration of Justice
- SWK 470 Problems and Issues in Criminal Justice

Students who wish to emphasize law enforcement must take the following electives:
- SOC 340 Criminology
- PSC 301 Urban Politics and Policy
- SWK 259 The Child, the Family and the Law
- SWK 371 Constitutional Criminal Procedure
- SWK 374 Law Enforcement and Society
- SWK 375 Criminal Law

Students who wish to emphasize corrections must take the following electives:
- SWK 259 The Child, the Family and the Law
- SWK 340 Legal Aspects of Human Services
- SWK 341 Corrections: Institutional and Community-Based
- SWK 342 Prisoner's Rights
- Any two courses from the Law Enforcement course listed above, excluding SWK 259.
Sociology (B.A.)
At-a-Glance

Admission to major: No requirement other than good academic standing in the College of Arts and Sciences.

Minimum hours required for major: 33 (including SOC 101, 201, 352, 353, 354 and four other courses, with at least 3 at the 300- to 400-level)

Minimum hours required for minor: 18 (including SOC 101, 352, and 353, with at least 12 hours at the 300- to 400-level)

Advising: Individual faculty advisors and Student Handbook.

Student Honorary Society: Alpha Kappa Delta

Awards: Annual Distinguished Sociology Student Award

Student Organizations: Sociology Club

For Information: Contact the Sociology Department. Phone: (216) 687-4500

Sociology is the study of social life and the social causes and consequences of human behavior. Sometimes this behavior involves personal relationships, perhaps among teen-agers or the elderly, sometimes the difficulties facing the urban poor or drug addicts, sometimes the development of modern nation-states and political conflict. Sociology opens new windows — challenging conventional wisdom, dissolving myths about social reality, illuminating how the world is socially constructed, and clarifying our options and choices.

Sociology students at Cleveland State University are taught to analyze modern social problems scientifically. In addition, they are taught how to do research about these issues using statistics, interviews, and participant observation. Good research requires a grasp of the sociological imagination — the connections between historical, large-scale social forces and biography, and the ways in which people live and understand their lives.

Majors in Sociology develop the critical thinking and writing skills basic to a sound liberal-arts education. They learn research skills and an understanding of the sociological perspective. This prepares them for a wide range of careers. Some students use the degree as preparation for graduate work in one of the social sciences or law, others work in human resource management, social service, corporations, or schools.

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Major Field Requirements

In establishing the requirements of the major in Sociology, the Department of Sociology maintains these objectives: to introduce students to the sociological perspective and its uses, to teach the principles of sociological research and the fundamental skills needed to use them, and to prepare students for advanced training at the professional and graduate-school levels.

A minimum of 33 hours in sociology is required for a major. The hours must include these core courses:

- SOC 101 Introduction to Sociology
In addition, students must complete four elective courses, at least three of which must be at the 300- to 400-level.

Although a student is free to complete the major requirements with any combination of sociology electives, the department believes that the major program is greatly strengthened and better organized when there is judicious selection of electives. The department makes available a faculty advisor to every student who declares a major in Sociology. The student is expected to plan a total academic program with the assistance of a departmental advisor.

When appropriately selected, the sociology offerings permit a student to concentrate in one of the following subfields: criminology, aging and the life course, race, class, and gender; social organization and change.

Majoring in Sociology with a Concentration in Criminology

Sociology majors with an interest in criminology and criminal justice may declare a major in Sociology with a concentration in Criminology. Students pursuing this program take core courses in the fundamentals of sociology and additional courses focusing on key areas and issues in the study of crime. This program familiarizes students with the principal theories and research findings of criminology and is designed to develop critical-thinking abilities and the knowledge, research and writing skills central to a liberal-arts education. It prepares students for a wide variety of careers in applied criminal justice fields such as corrections, parole or policing; the field of justice research and in social-service settings. In addition, students who complete this concentration are well prepared for graduate work in criminology, one of the social sciences or law.

For more information, call the Sociology Department, (216) 687-4500.

Requirements for a BA in Sociology with a concentration in Criminology:

- SOC 101 Introduction to Sociology
- SOC 201 Race, Class and Gender
- SOC 340 Criminology
- SOC 352 Sociological Theory
- SOC 353 Methods of Social Research
- SOC 354 Quantitative Social Research

Four electives from the two groups listed below, at least two of which must be from Group A:

**Group A Electives:** SOC 260, SOC 311, SOC 341, SOC 342, SOC 344, SOC 345, SOC 346, SOC 494

**Group B Electives:** ECN 350, PHL 341, PSC 310, PSC 311, PSY 345, SWK 240, SWK 259, SWK 341, SWK 342, SWK 371, SWK 374, SWK 375, SWK 376

**Internships in Sociology-Criminology:** Students may qualify for an internship in Sociology-Criminology (SOC 490) by achieving an overall GPA of 3.0 in the required courses for the major. Students who qualify must arrange an internship with the departmental coordinator (call 216-687-4500). Internships may be for up to 8 credit hours. However, only 4 of these hours may be applied toward the requirements for the major (in lieu of 4 hours of Group B electives).

Sociology Minor

A minimum of 18 hours in sociology is required for a minor. The 18 hours must include:

- SOC 101 Introduction to Sociology
- SOC 352 Sociological Theory
- SOC 353 Methods of Social Research

In addition, students must complete two electives, at least one of which must be at the 300- to 400-level.

**Minor Program: Criminal Justice**
The Criminal Justice minor, which is administered through the Department of Sociology, introduces students to the institutions involved in society's handling of crime. It is also designed to heighten awareness of the theoretical and philosophical issues involved in defining, explaining, and deterring crime and to introduce students to some of the social-science research on the nature and extent of crime. In addition, the minor provides students with the appropriate entry-level qualifications for many professional positions in criminal justice fields.

**Requirements for an Interdisciplinary Minor in Criminal Justice**

Students wishing to minor in Criminal Justice must complete three core, one law elective, and three general elective courses from the list below for a minimum of 23 semester credit hours:

1. **Criminal Justice Core Courses**
   - SOC 260 Deviance in the United States
   - SOC 340 Criminology
   - SWK 240 Administration of Justice

2. **Law electives:**
   - PSC 310 Constitutional Law
   - PSC 311 Civil Rights and Civil Liberties
   - SOC 342 Sociology of Law
   - SWK 259 The Child, the Family, and the Law
   - SWK 375 Criminal Law

3. **Elective Courses:** (A course taken as a law elective cannot also be counted as a general elective)
   - SOC 311 Individual and Society
   - SOC 341 Juvenile Delinquency
   - SOC 342 Sociology of Law
   - SOC 344 U.S. Criminal Justice System
   - SOC 345 Social Control
   - SOC 346 Corporate and Governmental Deviance
   - SOC 494 ST: Sociology of Prisons
   - SWK 259 The Child, the Family, and the Law
   - SWK 341 Corrections: Institutional and Community-Based
   - SWK 371 Constitutional Criminal Procedure
   - SWK 374 Law Enforcement and Society
   - SWK 375 Criminal Law
   - SWK 470 Problems and Issues in Criminal Justice
   - PSC 310 Constitutional Law
   - PSC 311 Civil Rights and Civil Liberties
   - PSY 345 Abnormal Psychology
   - PHL 341 Philosophy of Law
   - ECN 350 Economics of Crime and Punishment

No more than 4 hours of internship credit may be applied toward this program.

For additional information, contact the chairperson of the Department of Sociology at (216) 687-4500.

**Note:** A criminal justice certificate is also available. See Arts & Sciences Certificate information.

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Spanish (B.A)

At-a-Glance

Admission to major: Completion of SPN 102 or equivalent

Minimum hours required for major: 36

Minimum hours required for minor: 18

Special tracks: Peninsular and Latin-American literature and culture

Advising: Faculty advisors for majors, minors and prospective students. Phone (216) 687-4645

Student organizations: Los Latinos Unidos, Sigma Delta Pi Honorary Society, Phi Sigma Iota Honorary Society

Additional information: Study-Abroad programs in Mexico and Spain

The sequence of courses in Spanish leads from competence in Spanish language skills to thorough understanding of Hispanic language, civilization, and literature. Programs concentrate equally on Spanish and Hispanic-American content through a cyclical offering of courses. Programs in the Spanish minor, major, and graduate studies are available, including the B.A. with Honors in Spanish. Spanish is also a valuable adjunct skill to any other major program or career. Over the next few decades virtually every area of professional activity in this country will become more and more involved with Spanish-speaking Americans and with corporations in Spanish-speaking countries.

A student majoring in Spanish will find career opportunities in teaching, foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself, its literature, culture, or pedagogy.

Language Skill Courses:

A student who has completed Spanish course work in high school or at another institution who wishes to continue the study of Spanish must begin course work for credit at the level consistent with academic background. A placement test is required for all students with less than three years of high-school Spanish or the equivalent. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. Native speakers: as a general guideline, students who read and write Spanish fluently must begin course work for credit at the 300-level or higher. Students considering a major in Spanish should consult an advisor in the Department of Modern Languages as early as possible to plan an effective course of study.

Retroactive Credit.

Students are eligible to earn up to 14 "retroactive" credits for previous knowledge of Spanish. This policy is for students who have completed a foreign language skills course and who earned a B or better in that course. For example, if your first Spanish skills course is SPN 102 and you receive an A or B, you can receive credit for SPN 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

Credit by Examination.

Students who successfully pass the College Level Placement Examination (CLEP test) in Spanish may earn 14 credit-hours for previous knowledge of Spanish. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center.
(216) 687-2277. Students who receive a score of 3, 4 or 5 on the Advanced Placement Spanish language examination may earn 18 credit hours for SPN (101, 102, 201, and 202).

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**Major Field Requirements**

Students seeking a major in Spanish must complete 36 credit hours in Spanish above the 100 level, distributed as follows:

**Core A: Composition and Conversation Requirements:**

- Sixteen credit hours of courses in composition and conversation: SPN 202, 203, 301, 302, 303, 393 (Business Spanish); 405; or equivalent as determined by the Spanish faculty, of which no more than 8 credit hours can be at the 200 level. Students beginning at the 300 level will take 8 credit hours at the 300- and 400-level.

**Core B: Distribution Requirements:**

- One course each in phonetics (SPN 315), in literature (SPN 371 or SPN 372), and in culture and civilization (SPN 345 or SPN 346) are required (three courses total).

**Notes:** No more than 8 credit hours at the 200 level will be counted. At least 9 credit-hours must be at the 400 level. At least 28 credit hours must be in upper-division courses at the 300- or 400-level. Up to 6 credit hours of practicum in Spanish or independent study may count toward the major. These credits must be approved by the Spanish faculty. No grade below C may count toward the major.

**Transfer Students.**

Transfer students are required to complete at least 18 credit hours while in residence at Cleveland State University in order to earn a degree.

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**Minors**

A minor in Spanish consists of 18 credit hours beyond the 100 level, of which 9 credit hours must be at the 300- and 400-level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in Spanish must have an advisor in Spanish to assist in the selection of courses. No grade below a C in a minor course may count toward the minor.

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**Study Abroad**

Majors are encouraged to arrange for study in a Spanish-speaking country. The department administers summer programs in Mexico and Spain. Credit earned on these programs is considered part of the CSU Spanish sequence.

Students may also undertake independent study abroad at other institutions. Normally, up to 16 hours of independent study abroad may count toward their major requirements (additional credit may count toward the total hours needed for graduation). Majors should seek departmental approval of foreign-study plans before departure, and must complete at least two 300-level or 400-level courses in Spanish after return from independent study abroad. (See also the Study Abroad section listed under "Arts and Sciences").

For further information regarding the possibility of foreign study and summer programs available through the Department of Modern Languages, contact the department office, (216) 687-4645.

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**Teacher Licensure**
Students preparing to teach will fulfill the requirements for the B.A. in Spanish and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12). They must also pass national examinations and fulfill state requirements.

The PreK-12 licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency by completing at least one conversation and composition course at the 300 level with a C or better. Modern Language methods courses should be taken the semester preceding student teaching.
Speech and Hearing (B.A.)

At-a-Glance

Minimum hours required for major: 40

Minimum hours required for minor: 18

Advising: Faculty advisor assigned upon declaration of major. Phone (216) 687-3807.

Student organization: Speech and Hearing Club

The Speech and Hearing Department offers course work for students who wish to enter the profession of speech-language pathology which is concerned with the identification and treatment of communication disorders in human beings across the life span. Speech and hearing are interrelated fields concerned with human communication, and require knowledge of biology, psychology, sociology, and linguistics. The program at Cleveland State University provides an excellent pre-professional foundation that prepares students for professional training at the master's level. Students may also earn an undergraduate minor in Speech and Hearing, which is especially valuable for students majoring in education, special education, or the health-care professions.

Major Field Requirements

At the undergraduate level, students majoring in Speech and Hearing are required to take the following 40 credit hours:

Core Courses

- SPH 228 Phonetics
- SPH 229 Speech and Language Development
- SPH 231 Introduction to Communication Disorders
- SPH 232 Introduction to Audiology
- SPH 251 American Sign Language I
- SPH 335 Clinical Methods in Communication Disorders
- SPH 351 Anatomy and Physiology of the Speech and Hearing Mechanism
- SPH 431 Basic Speech-Language Disorders
- SPH 434 Clinical Practicum in Speech-Language Disorders
- SPH 438 Seminar in Urban Language Patterns
- SPH 481 Aural Rehabilitation
- SPH 482 Audiometry
- SPH 485 Speech and Hearing Science
- SPH 486 Clinical Practicum in Audiology

Evening Program
It is not possible to complete the undergraduate Speech and Hearing major solely in the evening. The department attempts to offer a variety of required courses in the evening but cannot staff a complete evening major. Evening students should make an appointment with the department chairperson to discuss the program and its offerings.

Speech and Hearing Minor

The speech and hearing minor provides the student with a foundation regarding the developmental and normative aspects of speech, language, and hearing. Required courses amounting to 18 hours include: SPH 228, SPH 229, SPH 231, and SPH 232. Two additional courses are to be selected from the following: SPH 331, SPH 351, SPH 431, SPH 435, SPH 438, SPH 481, SPH 482, and SPH 485.

Teacher Licensure

The master's is the minimum degree requirement for those students seeking the provisional special education teacher's license for Speech and Hearing Therapy. In addition to required graduate course work, the following must be completed:

- ESE 402 Introduction to Individuals with Mild and Moderate Disabilities
- SPH 435 Organization and Administration of a Public School Speech and Hearing Program
- SPH 562 Advanced Language Disorders (See Graduate Bulletin)
- EST 580 Practicum in Speech and Hearing Therapy (See Graduate Bulletin)
Women's Studies (B.A.)

At-a-Glance

Admission to the major: No requirement other than good academic standing in the College of Arts and Sciences.

Minimum hours required for the major: 38 distributed in three fields

Minimum hours required for the minor: 16 distributed in three fields

Awards: Senior Scholarship award

Advising: Individual faculty advisor, Internet Web page, Women's Studies handbook and career information package

Student organization: Student Women's Association

For Information: Contact the Women's Comprehensive Program. Telephone: (216) 687-4674

Women's Studies, an interdisciplinary approach to the study of women's status, contributions and experiences, is a thriving academic field that offers new scholarship. Women's Studies enables students to:

- discover and communicate new knowledge and encourage new research in neglected areas
- transcend traditional disciplinary boundaries, to analyze the role of gender in shaping human societies of the past and the present
- develop a more balanced and accurate interpretation of existing knowledge
- comprehend crucial intersection of race, class, and gender in the global society and in their own lives

As an interdisciplinary field of inquiry Women's Studies encourages students to consider ways to restructure social institutions and interactions for a more democratic society. By addressing past and present social disparities Women's Studies promotes intellectual and practical problem-solving, on both the individual and societal levels. Women's Studies helps students develop written and oral communication skills and the analytical and critical thinking skills needed to prepare them for leadership and a variety of careers in an increasingly diverse economic and political environment. Women's Studies students will develop these skills while receiving a well-rounded liberal-arts education. These skills will prepare graduates for graduate work or for career development in the changing economic and social realities of the 21st century.

Major Field Requirements

To earn a Women's Studies major, students must take a minimum of 38 semester hours in Women's Studies courses. Courses are to be distributed over three departments with at least 6 hours in the humanities, and 6 hours in the social sciences. Up to 4 hours of independent study (WST 496) may be included as part of the major. A grade of C or better must be earned in courses used to fulfill requirements for the major. Students are encouraged to use this framework to develop a more specialized Women's Studies curriculum based upon their particular career interests.

Required Courses
WST 151 Intro to Women's Studies
WST 351 Practicum in Women's Studies
WST 495 Advanced Seminar in Women's Studies

Other courses which apply to the major.

In addition to this list, certain special-topics courses may apply if approved by the Women's Studies Advisory Committee. See individual departmental listing for course descriptions and prerequisites.

- ANT 324 Anthropology of Gender
- ANT 343 Language and Gender
- EDB 455 Women and Education
- ENF 214 Women Writers in English Translation
- ENF 215 Women Writers in English Translation
- ENG 207 Black Masterpieces (when taught by Women's Studies faculty)
- ENG 208 Womanism/Feminism
- ENG 333 Studies in 18th Century British Literature Feminist Approaches to 18th Century Fiction
- ENG 334 Studies in 19th Century British Literature Feminist Approaches to 19th Century Fiction
- ENG 335 Studies in 20th Century British Literature Feminist Approaches to 20th Century Fiction
- ENG 363 Gender Issues in Literature
- ENG 375 Major Authors (Jane Austen, the Bronte sisters, Emily Dickinson, Toni Morrison, Virginia Woolf)
- FRN 365 Readings in French Literature French Decadence: Literature & Sexuality
- FRN 493 Special Topics in French French Women Writers: From the Middle Ages to the Present
- FST 221/321 English Workshop
- FST 251/351 American History Workshop American Women in History
- FST 252/352 American History Workshop African-American Women in History
- FST 257/357 Social Work Workshop: The Women's Movement
- FST 366 Religious Studies Workshop Women in Religion
- HIS 284 History of Women
- HIS 318 History of the Family
- HIS 354 European Women's History
- HIS 393 Special Topics in History: History of Women in America, History of African-American Women
- HSC 346 Women's Health
- PHL 253 Philosophy of Feminism
- PSY 255 Psychology of Women
- REL 260 Women and Religion
- REL 370 Sexual Ethics
- REL 376 Women in Early Christianity
- SOC 201 Race, Class, Gender
- SOC 302 Women in Corporate America
- SOC 310 Sociology of Marriage and Family
- SOC 317 Sociology of Gender
- SOC 388 Sociology of Work and Organization
- SPN 484 Studies in Spanish American Literature Latin American Women Writers in the 20th Century
- UST 455 Gender and Leadership

Women's Studies Minor

A minor in Women's Studies complements majors in other disciplines, (i.e. education, history, marketing). To earn a Women's Studies minor, students must take a minimum of 16 semester hours in designated Women's Studies courses, 8 hours of which must be at the 300/400 level. Courses must be selected from at least three different academic areas, and include at least one humanities course, and one social science course.

The Advanced Seminar in Women's Studies (WST 495) is required for the minor in Women's Studies.
Music (B.Mus., B.A.)

At-a-Glance

Minimum hours required for B.A.: 49

Minimum hours required for B.-Mus. Composition: 86

Minimum hours required for B.-Mus. Education: 93

Minimum hours required for B.-Mus. Performance: 78

Minimum hours required for minor: 24

Two degree programs are offered: the bachelor of music, for the student who seeks primarily professional training, and the bachelor of arts with a major in music, for the student who seeks to study music in its wider cultural context. The Music Department offers training for music majors in the areas of music education, theory/composition and applied music. These programs have been accredited by the National Association of Schools of Music.

Private lessons in applied music are offered on campus. Students may register for either one or two half-hour lessons weekly. The last digit of the applied music course number indicates the amount of credit earned. Those who register for one half-hour lesson earn one semester hour; two half-hour lessons earn two semester hours. Special tuition fees are assessed for these courses. A successful performance audition is required for admission to music major status.

All music students are urged to obtain the Music Department Student Handbook for further clarification of the degree requirements listed below.

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Bachelor of Music Degree

In addition to fulfilling the general course requirements of the university and the College of Arts and Sciences, B.Mus. majors are required to complete course work in areas of common experience in music and in courses specific to one of three areas of concentration: music education, theory/composition and applied music.

1. Course work in areas of common experience includes performance experience in applied music and in ensembles, development of basic musicianship skills, knowledge of musical structures and styles in broad historical and cultural contexts.

   The courses required in the common experience are:
   ○ MUS 112 Macromusic
   ○ MUS 113 Writing About Music
   ○ MUA 102 and 103 Keyboard Skills I, II
   ○ MUS 231 through 234 Harmony and Form I, II, III, IV
   ○ MUS 241 through 244 Musicianship I, II, III, IV
   ○ MUS 411 and 412 Music History I, II
   ○ MUS 414 Ethnomusicology

2. In addition each major area of concentration requires applied music and ensemble participation as follows:
   ○ Music education: seven semesters of applied music and seven semesters of major ensembles
   ○ Composition: eight semesters of applied music and six semesters of ensembles
Applied music:

- eight semesters of applied music (includes eight credits at the 100-level and eight credits at the 300-level) and 12 semester hours of ensembles
- Appropriate proficiency levels as defined by the Department of Music faculty must be passed for students to progress to upper-level applied music study.

3. Each area of concentration also requires degree candidates to present at least one recital as follows:
   - Music education: a 30-minute senior recital
   - Composition: a recital of representative works
   - Applied Music: two 60-minute recitals

Areas of Concentration

Music Education

A student choosing the option of music education must complete the following courses in addition to the common experiences listed above:

- MUS 205 Orientation to Music Education
- MUS 290 Elementary Music Field Experience
- MUS 300 Secondary Music Field Experience
- MUS 351 Teaching String Instruments
- MUS 352 Teaching Woodwind Instruments
- MUS 353 Teaching Brass Instruments
- MUS 354 Teaching Percussion Instruments
- MUS 355 Teaching Vocal/Choral Music
- MUS 443 Music Literacy and Learning
- MUS 444 Elementary Music Curriculum and Methods
- MUS 445 Secondary Music Curriculum and Methods
- MUS 461 Conducting School Ensembles
- EDB 305 Teaching and Management - Secondary School
- EDC 300 Diversity in Education Settings
- ESE 400 Teaching Students of Varying Abilities
- EST 483 Multiage Student Teaching (10 hrs.)

Composition.

A student choosing the option in composition must complete the following music courses in addition to the common experiences listed above:

- MUS 320 Composition (four semesters)
- MUS 321 Composition Forum (six semesters)
- MUS 341 Counterpoint
- MUS 427, 428 Computer Music and MIDI I, II
- MUS 451 Orchestration
- Electives seven semester hours

Applied Music.

A student choosing the option in applied music must complete the following courses in addition to the common experiences listed above:

- MUS 310 The Business of Music
- Electives in Music: 6 semester hours chosen from among the following: MUS 108 Opera Theater Workshop; MUS 341 Counterpoint; MUS 356 Diction; MUS 427, 428 Computer Music and MIDI I, II; MUS 381, 382 Jazz Improvisation I, II; MUS 451 Orchestration; MUS 461 Conducting School Ensembles.
- Other electives: 11 semester hours. Voice majors must take two semesters of German and two semesters of a Romance language.
Bachelor of Arts Degree

Major Field Requirements

The program leading to a B.A. with a major in Music requires a total of 128 semester hours. The 33 semester hours listed under Common Experiences (Section 1 above) are required of B.A. candidates. Eight semester hours in applied music or ensemble, 11 semester hours of music electives and a three-semester-hour senior project are also required.

The Music major provides for numerous electives (26 semester hours) outside of music as well as for the general course requirements of the university and the College of Arts and Sciences. The major's elective requirement provides the opportunity for broad coverage and even intensive work in other academic areas of interest. It also provides the additional background for an individually designed senior project which culminates the degree.

A full-time faculty member will be the principal advisor to and administrator of the program. Acceptance into the B.A. program in music requires an interview with the program advisor and written confirmation from the program advisor of the student's acceptance as a candidate for the B.A. in music. A successful entrance audition before a faculty committee is required of students whose focus in the B.A. program is to be performance. An entrance audition will also be required of applicants who have less than one year of private applied lessons at a recognized institution of higher education.

Music Minor

A minor in Music consists of 24 semester hours. Students accepted for the minor in music are required to select 8 semester hours from the Materials of Music, Harmony and Form, and Musicianship sequences; MUS 412 Music History II. Five semester hours in applied music and/or ensembles are required.

A minimum of 8 semester hours shall be at the 300-400 level.

A full-time faculty member will be principal advisor to and administrator of the program, coordinating students' interests with available course choices and documenting completion of the required courses and credits for official registry of the music minor on the students' transcripts. Acceptance as a minor in music requires an interview with the minor advisor and written confirmation from the advisor of the student's acceptance as a minor in music.
Nursing (B.S.N.)

At-a-Glance

Degree granted: Bachelor of Science in Nursing

Admission to major:
Admission is selective and will be granted only after successful completion of prerequisite courses. Minimum overall GPA of 2.50 is required in prerequisite courses. Applications for fall semester must be submitted by March 1. Those students with a prerequisite GPA of 3.0 or above may apply for consideration of early admission status. Deadline for receipt of applications for early admission is January 1.

Minimum hours required in the major: 68 hours for basic students, 28 hours for R.N. students

Registered Nurses:
Two-year program for registered nurses with associate degree or diploma in nursing. Nursing courses for the R.N. are one day a week except for the last half of spring semester of the senior year. 12 hours a week for clinical are then required. Part-time program available to all students in major.

Advising:
One recruiter/advisor for prospective students; phone 687-3810. Faculty serve as advisors for students in major.

Student organization: Student Nurse Association (SNA)

Membership and Accreditation:
The Department of Nursing is a member of the Council of Baccalaureate and Higher Degree Programs, the National League for Nursing, and the American Association of Colleges of Nursing.

The Department of Nursing offers an undergraduate curriculum in professional nursing leading to the bachelor of science in nursing (B.S.N.) The professional nursing curriculum is approved by the Ohio Board of Nursing, and is accredited by the National League for Nursing Accreditation Commission, 350 Hudson Street, New York, New York 10014.

Overview:
The program is available to men and women who have been admitted to CSU and the College of Arts and Sciences. High-school graduates and licensed practical nurses who fulfill admission requirements are considered for admission to the program. A special educational track is designed for registered nurses. Another track is especially designed for students who already have a bachelor's degree in a non-nursing field. This track, an accelerated option, permits qualified students to take nursing major courses at a fast pace to obtain a second bachelor's degree.

The baccalaureate nursing curriculum includes courses from the liberal arts and sciences and the professional Nursing major. The liberal arts component provides a foundation of knowledge from the natural and behavioral sciences and the humanities. The Nursing major provides students with the opportunity to develop attitudes, values, and skills essential for enacting the practice of professional nursing.

Students develop the ability to use a conceptual framework to implement the nursing process with clients. The
baccalaureate nursing program prepares graduates to use critical thinking and therapeutic nursing interventions to provide direct and indirect care to individuals, families, groups, and communities. Clinical experience is provided in a variety of community-based settings: hospitals, ambulatory and long-term care facilities, and community health agencies in the Greater Cleveland area.

The purposes of the program are to prepare graduates for professional nursing practice, for undertaking graduate study in nursing, and for leadership in health care. Graduates are committed to the health and well-being of people and demonstrate respect for their dignity, worth, cultural diversity, and autonomy. The baccalaureate nursing curriculum provides learning opportunities that foster the development of self-direction, creativity, analytical thinking, and discriminative judgement.

Nursing Program Requirements

Pre-Nursing Program for Basic Students

Persons interested in the nursing program must first complete an application to Cleveland State University, listing college choice as Arts and Sciences and intended major as nursing.

Prospective students are required to make an appointment with the department's recruiter/advisor to discuss the nursing program and to plan a course of study. Prerequisite courses may be completed throughout the summer the year admission is sought.*

*Students with a prerequisite GPA of 3.00 or above may apply by January 1 and will be considered for early admission. Such students will be notified of their admission status by the end of January.

Admission to the Nursing Major

Admission to the Nursing major is selective and is granted on a competitive basis. Selection of students for the Nursing major is based on a number of criteria including prerequisite and overall grade point averages, essays, and related health-care experience. The number of available spaces in the program is limited. Students are notified of their acceptance by the end of the spring semester. Students not admitted may formally reapply to the program for admission in the following year. Students who are accepted and who choose not to enter the program in the year for which they have been accepted will not be deferred to the following year. They must reapply to the program. Prior acceptance does not guarantee acceptance at a later date.

All admission requirements must be completed prior to the beginning of the fall semester to begin the Nursing major. Admission requirements include:

1. Admission to Cleveland State University and the College of Arts and Sciences. Applications are available through the Office of Admissions and should be submitted at least one month prior to the program application deadline (March 1)
2. Application for fall semester admission to the nursing program must be submitted to the Department of Nursing by March 1 of that year. Applications are available in the Department of Nursing.
3. Completion of all prerequisite courses by fall semester with a prerequisite grade point average of 2.50 or above and at least a C in each prerequisite course. Please note that all former grades earned in prerequisite courses are factored into the prerequisite G.P.A. Students who have more than two failing grades may not meet admission criteria. See university policy regarding freshman forgiveness.
4. Successful completion of two of the following science courses by the end of fall semester: BIO 264, BIO 266, BIO 267, CHM 251/256, CHM 252, 257
5. A cumulative overall grade point average of 2.00 or above in all course work
6. Required meeting with recruiter/advisor
7. English for Speakers of Other Languages (ESOL): Students who have received their secondary or tertiary education in a language other than English will be required to contact the English as a Second Language Department and arrange for additional prerequisites that must be completed by the student prior to enrollment in

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Transferring From Other Nursing Programs

Students previously enrolled in a nursing program at another institution who are interested in transferring to Cleveland State University should contact the recruiter/advisor to begin a transcript evaluation. Acceptance of transfer students into CSU's nursing program depends on the student's profile, prior standing in the previous nursing school, a nursing GPA above 2.3 each term in the nursing major from the previous school, and space availability. The level of the program into which the student transfers (sophomore, junior, or senior) depends on the evaluation of previous nursing course work by the Admission, Progression, and Academic Standard Committee of the Department of Nursing.

Students accepted via transfer must complete a minimum of 20 semester credits in the Nursing major. Students who need to complete a nursing course at CSU in order to graduate from another institution will be reviewed on an individual basis.

Licensed Practical Nurses

LPNs follow the basic student sequence but have the opportunity to test out of selected skill portions of the curriculum.

Registered Nurse Students

Admission requirements include:

1. Completion of items 1 to 3, and 5 to 7 above
2. Current Ohio license as a Registered Nurse

Credit for previous nursing course work will be awarded based on the department's participation in the Access in Nursing Model. Ohio graduates of both community colleges and diploma nursing programs will receive credit for prior nursing courses in which a grade of C or above was obtained. These credits granted at time of admission by CSU's Office of Admission will be held in escrow until the student has successfully completed the junior year in the Nursing major. These credits will only count toward a baccalaureate degree in nursing.

Graduates from schools of nursing outside of Ohio will have their prior nursing course work evaluated on an individual basis.

Elective Courses

The department offers several elective courses that are open to all university students. These include: NUR 110, NUR 250, and NUR 498.

Prerequisite Courses for Basic Students

All prerequisite courses must be completed prior to entry into the program in the fall semester. The prerequisite GPA is composed of all grades earned in the following courses:

- BIO 264/265 Introductory Microbiology, Medical
Prerequisite Courses for R.N. Students

All prerequisite courses must be completed prior to entry into the program in the fall semester. The prerequisite GPA is composed of all grades earned in the following courses:

- BIO 264/265 Introductory Microbiology, Medical
- BIO 266/267 Anatomy and Physiology, Human I
- BIO 268/269 Anatomy and Physiology, Human II
- CHM 252/257 College Chemistry II
- ENG 101 English I
- ENG 102 English II
- PSY 101 Principles of Psychology
- SOC 101 Principles of Sociology

AND

one of the following courses in statistics:

- COM 303 Communication Inquiry/Behavioral Science Statistics
- PSY 311 Quantitative Methods
- SOC 354 Quantitative Sociologic Research

Support Courses for Basic Students

Support courses are prerequisite or corequisite to nursing courses. Their content is required for courses in the nursing curriculum. They may be completed at any time prior to the nursing course for which they are prerequisite. See Course Descriptions section of this catalog for required sequence.

- PHL 211 Morals and Rights

AND

one of the following courses in statistics:

- COM 303 Communication Inquiry/Behavioral Science Statistics
- PSY 311 Quantitative Methods
- SOC 354 Quantitative Sociologic Research

Support Courses for R.N. Students

Support courses are corequisite to nursing courses. Their content is required for courses in the nursing curriculum. They may be completed at any time prior to the nursing course for which they are prerequisite. See Course Descriptions section of this Bulletin for required sequence.

- PHL 211 Morals and Rights
Nursing Courses for Basic Student

- NUR 200 Stress: A Framework for Professional Nursing
- NUR 215 Strategies for Nursing Practice
- NUR 216 Strategies for Nursing Practice Clinical
- NUR 218 Nursing Pharmacology
- NUR 220 Health Assessment
- NUR 221 Health Assessment - Lab
- NUR 222 Tertiary Preventive Strategies for the Elderly Experiencing Stress
- NUR 225 Tertiary Preventive Strategies for Adults Experiencing Stress
- NUR 226 Tertiary Preventive Strategies for Adults Experiencing Stress - Clinical
- NUR 300 Nursing Leadership and Management
- NUR 302 Group Process
- NUR 305 Secondary Preventive Strategies for Adults Experiencing Stress
- NUR 306 Secondary Preventive Strategies for Adults Experiencing Stress - Clinical
- NUR 310 Nursing Research
- NUR 312 Secondary Preventive Strategies for Adults Experiencing Psychosocial Stressors
- NUR 313 Secondary Preventive Strategies for Adults Experiencing Psychosocial Stressors - Clinical
- NUR 325 Secondary Preventive Strategies for Children Experiencing Stress
- NUR 326 Secondary Preventive Strategies for Children Experiencing Stress - Clinical
- NUR 380 Primary Preventive Strategies for Childbearing Families
- NUR 382 Primary Preventive Strategies for Childbearing Families - Clinical
- NUR 410 Primary Preventive Strategies for Communities I
- NUR 411 Primary Preventive Strategies for Communities I - Clinical
- NUR 412 Primary Preventive Strategies for Communities II
- NUR 414 Primary Preventive Strategies for Communities II - Clinical
- NUR 415 Preventive Strategies in Complex and Critical Situations
- NUR 416 Preventive Strategies in Complex and Critical
- NUR 420 Role Practicum
- NUR 430 Professional Seminar

Nursing Courses for Registered Nurse Students

- NUR 340 Stress: A Framework for Professional Nursing
- *** NUR 343 Health Assessment
  (R.N. students may complete departmental examination for credit in this course.)
- *** NUR 344 Health Assessment Lab
  (R.N. students may complete departmental examination for credit in this course.)
- NUR 345 Computers and Health Care
- NUR 350 Nursing Leadership and Management
- NUR 360 Nursing Research
- NUR 407 Preventive Strategies for Gerontologic Nursing
- NUR 408 Preventive Strategies for Nursing - Home Care
- NUR 409 Preventive Strategies for Nursing - Clinical
- NUR 430 Professional Seminar
- NUR 440 Primary Preventive Strategies for Communities
- NUR 441 Primary Preventive Strategies for Communities - Clinical
- NUR 460 Role Practicum

***R.N. students may complete departmental examination for credit in this course.

Clinicals for R.N.s are scheduled only during the senior year of the program. They are designed to enhance the students' professional development and to provide new learning opportunities.
Biology (B.S.) At-a-Glance

Admission to the major: No requirements other than good academic standing in the College of Arts and Sciences

Minimum hours required for major: 72

Minimum hours required for minor: 16

Special programs:
Honors program, preprofessional programs (medicine, dentistry, veterinary science), medical technology program, secondary education teacher licensure program, Biotechnology Certificate Program

Additional information: The Doretta Thielker Award is presented annually to outstanding graduating biology major(s)

Student Organization: The Ecology & Conservation Biology Association

Description of program:
The Department of Biological, Geological and Environmental Studies offers a comprehensive program providing the education and training necessary for careers in modern biological science, including the background for admission to graduate schools and to professional schools (medicine, dentistry, veterinary science). The Biology major provides a solid foundation in fundamental areas of biology while permitting sufficient choice in course selection that majors may explore and develop areas of interest within the field.

Advising for Biology majors:
Biology and Medical Technology majors must discuss their program of study with the undergraduate advisor for Biology prior to registration each semester. Contact the biology office (216) 687-2440 to schedule an advising appointment.

Transfer students intending to major in Biology:
Transfer students intending to major in Biology must meet, prior to registering for courses, with the undergraduate advisor for biology for evaluation of their transferred science courses. Contact the biology office (216) 687-2440 to schedule an advising appointment.

Biology Minor: A minor program of study in biology consists of 16 credit hours. BIO 200, 201, 202, and 203 are required courses. The remaining eight credits must be 200-, 300-, or 400-level biology courses. BIO 400 does not qualify for the minor program.

Required Grade Point Average:
To qualify for graduation, all Biology majors must have a cumulative GPA of not less than 2.00 across all biology courses used to fulfill the major field requirements. This is in addition to the university requirement of a cumulative GPA of not less than 2.00. Check the University Regulations section of this Bulletin to determine how a GPA is calculated.

Suggested Freshman Program:
To minimize the time needed to complete the major field requirements, academically proficient students are advised to complete the Introductory Biology (BIO 200/201 and 202/203) and the General Chemistry (CHM 261/266 and 262/267) sequences in their first year.

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Major Field Requirements

Bachelor of Science

Biology Courses (47 credit hours)
BIO 200/201 Introductory Biology I and Laboratory
BIO 202/203 Introductory Biology II and Laboratory
BIO 300/301 Plant Biology and Laboratory
BIO 302/303 Animal Biology and Laboratory
BIO 304/305 Population Biology and Evolution, and Laboratory
BIO 306 Biochemistry and Molecular Biology
BIO 308/309 Cell Biology and Laboratory
BIO 495 or 492 Seminar
Biology Electives (at least 18 credit hours)
Select from EVS 454/455, and with approval of the biology advisor 490, 493, 494; HSC 381, 475, 476; CHE 366; and all biology courses numbered 410 to 499, except BIO 490, 491, and 492. All but one course numbered 410 to 499 must have a 300-level course as a prerequisite. A maximum of 8 credit hours from any combination of BIO 496 and 497 may be used as Biology Electives.

Chemistry Courses (16 credit hours)

- CHM 261/266 General Chemistry I and Laboratory
- CHM 262/267 General Chemistry II and Laboratory
- CHM 331/336 Organic Chemistry I and Laboratory

Mathematics or Statistics Course (four credit hours)

One of the following courses

- MTH 181 Calculus I
- MTH 147 Statistical Concepts
- ANT 305 Quantitative Anthropology
- PSY 311 Behavioral Science Statistics
- SOC 354 Quantitative Sociological Research

Physics Course (five credit hours)

- PHY 221 College Physics I

Honors Program

Biology majors with junior or senior standing, who have grade point averages of at least 3.00 overall and at least 3.20 in courses required for the Biology major, are encouraged to apply for admission to the Honors Program. The honors degree requires, in addition to the requirements for the regular Biology major, a minimum of 8 credit hours of honors research and seminar, and a successful oral defense of the written thesis.

Honors students will undertake three or four credits of research (BIO 490) in a supervising faculty member's laboratory on a project approved by the faculty member and by the Honors Program Committee. A written report on the research project must be defended before a three-person faculty review committee (BIO 491). Honors Seminar (BIO 492) must be taken twice, and an oral report on the project must be given as a research seminar when the student takes BIO 492 for the second time. Honors students do not take BIO 495. All honors courses are graded on an S/U basis, but to remain in the program the student must sustain the grade point averages required for admission to the program, as well as the approval of the faculty member supervising the student's honors research.

Upon successful completion of the honors program, the student will receive a certificate from the department, and a recommendation to the university for graduation with honors in Biology. For further information, contact the biology office (216) 687-2440.

Teacher Licensure

For information concerning the education courses required for licensure see the College of Education chapter in this catalog. Students seeking secondary teaching licensure in Biology, but not majoring in Biology, should consult with the College of Education. Students seeking secondary education licensure with a major in Biology must take the following courses (72 credit hours).
Biology Courses (34 credit hours)
- All of the Biology courses specified for the regular Biology major
- BIO 416/417 Microbiology and Laboratory
- Zero credit hours of Biology Electives

Chemistry Courses (16 credit hours)
- All of the chemistry courses specified for the regular Biology major

Mathematics or Statistics Course (4 credit hours)
- A mathematics or statistics course as specified for the regular Biology major
  OR
- MTH 151-156 Mathematical Concepts.

Physics Courses (10 credit hours)
- PHY 221 College Physics I
- PHY 222 College Physics II

Anthropology Course (4 credit hours)
- ANT 301 Biological Anthropology
  The Introductory Biology sequence satisfies the listed prerequisite

Geology Course (4 credit hours)
- GEO 101 Introductory Geology

Medical Technology Program
The Department of Biological, Geological and Environmental Sciences offers a program in medical technology that leads to a B.S. degree with a major in Biology. Students interested in the Medical Technology Program should contact the undergraduate advisor for Biology (216) 687-2440. There are two routes to prepare for clinical training in medical technology. When pursuing the first route, students declare the regular Biology major and independently prepare for their clinical training, but do not formally enter the Medical Technology Program. These students are considered by the department to be regular Biology majors. Consequently, they may not substitute BIO 414/415 Parasitology for BIO 304/305 Population Biology and Evolution, and they must complete BIO 412/413 Elements of Immunology and BIO 416/417 Microbiology as Biology electives. When pursuing the second route students declare Medical Technology as their major. Students formally enrolling in the Medical Technology Program have two options available to them.

Option I (3 + 1)
Option I consists of three years of study at Cleveland State University followed by one year of clinical laboratory training in an approved school of medical technology for which 32 semester credits are earned toward the B.S. degree. The letter grades earned during the internship appear on the student's records, but are not included in the computation of the grade-point average. Students enrolling in Option I must complete the following courses:

Biology Courses (30 credit hours)
- BIO 200/201 Introductory Biology I and Laboratory
- BIO 202/203 Introductory Biology II and Laboratory
- BIO 306 Biochemistry and Molecular Biology
- BIO 308/309 Cell Biology and Laboratory
- BIO 400 Medical Technology Orientation
- BIO 412/413 Elements of Immunology and Laboratory
- BIO 414/415 Parasitology and Laboratory
- BIO 416/417 Microbiology and Laboratory
Mathematics and Physical Science Courses (29 credit hours)

- CHM 261/266 General Chemistry I and Laboratory
- CHM 262/267 General Chemistry II and Laboratory
- CHM 310/315 Analytical Chemistry and Laboratory
- CHM 331/336 Organic Chemistry I and Laboratory
- MTH 181 Calculus I OR an approved statistics course
- PHY 221 College Physics I

Option II (4 + 1).

Option II consists of the successful completion of the B.S. degree with a major in Medical Technology prior to enrolling in an approved school of medical technology. This option is recommended for students who desire increased options for career choice and career development in the future. Students enrolling in Option II must complete the following courses:

- All Option I courses
- BIO 300/301 Plant Biology and Laboratory
- BIO 302/303 Animal Biology and Laboratory
- BIO 495 Seminar
- Biology Electives (at least three credits)
- Select from Biology courses numbered 410 to 497

Regardless of the route and option selected, students subsequently must be accepted into a school of medical technology approved by the Council on Medical Education of the American Medical Association in collaboration with the National Accrediting Agency for Clinical Laboratory Sciences as part of the requirement for taking the certifying examination in medical technology. In the Cleveland area, there is one approved and active hospital school of medical technology affiliated with Cleveland State University. However, students may attend any approved school of medical technology in the United States. Following satisfactory completion of their clinical training program, students are eligible to take the national certifying examination of the Registry of Medical Technologists (American Society of Clinical Pathologists) or of the National Certification Agency for Medical Laboratory Personnel.

Pre-Professional Studies

The curriculum for the Biology major provides students with the knowledge to take the aptitude tests required for admission by most professional schools. A suggested program of study for premedical students might consist of the following courses:

All the specified courses (biology, chemistry, mathematics, and physics) for the Biology major

Suggested Biology Electives:

- BIO 412/413 Elements of Immunology and Laboratory
- BIO 416/417 Microbiology and Laboratory
- BIO 424/425 Principles of Animal Physiology and Laboratory
- BIO 430/431 Genetics and Recitation

Suggested Additional Courses:

- CHM 332/337 Organic Chemistry II and Laboratory
- PHY 222 General Physics II
- Economics - one semester
- Psychology - one semester

The biology pre-professional advisor coordinates a seminar program for all students at which representatives from professional schools (medical, dental, veterinary, etc.) discuss their program's admission requirements and procedures. Contact the department's preprofessional advisor (216) 687-2440 for the seminar schedule and for preprofessional advising.

A Postbaccalaureate Program

is available to individuals with a bachelor's degree who lack the minimal science requirements for professional schools. Those interested in the Postbaccalaureate Program should contact the department's preprofessional advisor (216) 687-2440.
Certificate Program: Biotechnology

This program prepares students majoring in biology or chemistry, or with a baccalaureate degree that includes many biology and chemistry courses, for entry into positions in the biotechnology industry responsible for development of new products and quality control. The certificate program is interdisciplinary and enhances majors in biology or chemistry by exposing students to areas of engineering and bulk processing that are important in the biotechnology industry. The certificate program is 16 credit hours of classes taken in the colleges of Arts and Sciences, and Engineering.

Requirements for a certificate in Biotechnology

1. Prerequisites:

   Either currently majoring in biology or chemistry, and completion of a year of introductory biology, biochemistry, cell biology and laboratory, microbiology and laboratory, and calculus; or a baccalaureate degree that includes the following courses: a year of introductory biology, biochemistry, cell biology and laboratory, microbiology and laboratory, a year of general chemistry, organic chemistry, and calculus.

2. Required courses:

   MTH 147 (4-0-4) Statistical Concepts with Applications
   ESC 120 (1-0-1) Introduction to Engineering Design
   BIO 435 (1-6-4) Techniques in Molecular Biology
   CHE 366 (4-0-4) Bioprocessing Engineering Principles
   IME 465 (3-0-3) Manufacturing Systems Engineering

See the Certificate Programs section located earlier in the College of Arts and Sciences chapter of the catalog for additional information. Students in the Biotechnology Certificate Program are eligible to participate in the Cooperative Education Program through the Career Services Center even if they are not seeking a degree at Cleveland State University.
Chemistry (B.S.) At-a-Glance

Admission to major: No additional requirements beyond the prerequisites for the required courses

Minimum hours required for major with ACS Certification: 68

Minimum hours required for pre-professional major: 42

Minimum hours required for minor: 24

Requirements for minor: General Chemistry (CHM 261, 262 or 272, 266 and 267 or 277) and 14 additional credits in chemistry courses numbered 300 or higher

Special tracks: American Chemical Society certification, premedical/predental/preveterinarian, secondary school teacher preparation programs

Advising: Most faculty are advisors. A handbook: "The Compleat Chemistry Major" is available from the Chemistry Department office. Phone (216) 687-2451.

Student organization: The CSU American Chemical Society Student Affiliates Chapter

Additional information: Honors General Chemistry (CHM 272 and 277) is available to students selected by the director of General Chemistry. A Chemistry major may be completed in the evening. Senior Research (CHM 489) provides an opportunity in the senior year for independent research with department faculty. The department also has a vigorous seminar program.

Prerequisite Statement

It is important that the student pay particular attention to the prerequisites and corequisites in this catalog. These courses serve as essential background, and without them the student will experience significant difficulty. If a student has not satisfied the prerequisites and/or corequisites, the instructor may have the student de-registered.

Cooperative Education Program

In earning the bachelor of science degree with A.C.S. certification, the Chemistry major may elect the Cooperative Education Program (see Special Programs Chapter) in order to alternate periods in school with periods of paid employment in chemical industry.
Bachelor of Science in Chemistry with Professional Certification by the American Chemical Society

The program leading to the bachelor of science degree provides a strong foundation in the fundamentals of chemistry, physics, and mathematics, and meets the requirements for professional certification by the American Chemical Society. This program provides the broad fundamental knowledge most suited to students planning to become professional chemists or planning to pursue graduate training.

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<th>First Fall Semester</th>
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<td>MTH 181 Calculus I</td>
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<td>ENG 101 English I</td>
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<td>ASC 101 Orientation</td>
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<td>MTH 182 Calculus II</td>
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<td>MTH 281 Multivariable Calculus</td>
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<td>PHY 241 or 243 University Physics I</td>
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<tr>
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<td>CHM 337 Organic Chem. Lab. II</td>
<td>2</td>
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<tr>
<td>CHM 401 Chemical Information</td>
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<td>PHY 242 or 244 University Physics II</td>
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<td>CHM 321 Physical Chemistry I</td>
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<td>CHM 311 Quantitative Analysis</td>
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<td>CHM 402 Biochemistry</td>
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CHM 322 Physical Chemistry II  
CHM 411 Adv. Instr. Analysis  
CHM 431 Advanced Organic Chem.  
Total  

**Fourth Fall Semester**  
CHM 426 Physical Chem. Lab. I  
CHM 446 Inorganic Chem. Lab.  
CHM 471 Faculty Colloquium  
Elective  
Elective  
Total  

**Fourth Spring Semester**  
CHM 427 Physical Chem. Lab. II  
CHM 489 Senior Research  
CHM 472 Student Colloquium  
Elective  
Elective  
Elective  
Total  

*Electives are to meet general requirements for B.S. degree*

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**Pre-Professional Program**

The B.S. program in chemistry for students who plan to continue graduate study in the medical sciences provides those courses required and strongly recommended by most medical schools and also affords an excellent base for students considering careers in medicine, medical research, dentistry, or veterinary medicine. This program does not lead to certification by the American Chemical Society.

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**Bachelor of Science in Chemistry for Premedical, Predental, and Preveterinary Students**

**First Fall Semester**  
CHM 261 General Chemistry I  
CHM 266 General Chem. Lab. I  
ENG 101 English I  
BIO 200 Introductory Biology I  
BIO 201 Introduction to Bio. Lab 1  
ASC 101 Orientation  
Total  

**First Spring Semester**  
CHM 262 General Chemistry II  

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<td>BIO 202 Introductory Biol. II</td>
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<tr>
<td>BIO 203 Introduction to Bio. Lab II</td>
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<td>PHY 221 College Physics I</td>
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<tr>
<td>MTH 181 Calculus I</td>
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<td>CHM 337 Organic Chem. Lab. II</td>
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<tr>
<td>PHY 222 College Physics II</td>
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<td>CHM 315 Analytical Chem. Lab.</td>
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<td>CHM 402 Biochemistry</td>
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<td>BIO 308 Cell Biology</td>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>Third Spring Semester</strong></td>
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<tr>
<td>BIO 302 Animal Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 303 Animal Biology Lab I</td>
<td>1</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>Fourth Fall Semester</strong></td>
<td></td>
</tr>
<tr>
<td>CHM 471 Faculty Colloquium</td>
<td>1</td>
</tr>
<tr>
<td>*Chemistry Elective</td>
<td>4</td>
</tr>
<tr>
<td>*300- or 400-level chemistry or biology courses</td>
<td></td>
</tr>
<tr>
<td>*Biology Elective</td>
<td>4</td>
</tr>
<tr>
<td>*300- or 400-level chemistry or biology courses</td>
<td></td>
</tr>
<tr>
<td>BIO 416 Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 417 Microbiology Lab</td>
<td>2</td>
</tr>
<tr>
<td>Elective</td>
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### Fourth Spring Semester

<table>
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<td>*Biology Elective</td>
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<tr>
<td>*300- or 400-level chemistry or biology courses</td>
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<tr>
<td>*Chemistry Elective</td>
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<td>*300- or 400-level chemistry or biology courses</td>
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<tr>
<td>Elective</td>
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<td>Elective</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</tbody>
</table>

*Electives are to meet general requirements for B.S. degree
*300- or 400-level chemistry or biology courses

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### Teacher Licensure

The program in chemistry leading to the bachelor of science degree with secondary teacher licensure provides a strong foundation in the fundamentals of chemistry, physics, and mathematics, and permits completion of courses necessary for high-school teaching within a normal four-year program.

For further information concerning the general education and professional education requirements for certification, see the [College of Education](#). This program does not lead to certification by the American Chemical Society.

Students seeking secondary certification in chemistry, but not majoring in the field, also should consult the [College of Education](#) for information regarding subject field, general education, and professional education requirements.

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### Recommended Program for Chemistry Teaching Licensure

Students interested in this program should contact the [Chemistry Department](#) office in Room 397 of the Science Research Building, phone (216) 687-2451.
Environmental Science (B.S.)

The B.S. in Environmental Science is a multidisciplinary degree offered through the Department of Biological, Geological, and Environmental Sciences (BGES) that provides a solid foundation in the basic sciences while permitting specialization in an area of focused study.

At-a-Glance

Hours required for major: 80

Special Tracks: Environmental Biology, Environmental Geology, Environmental Chemistry, Environmental Technology, Environmental Planning

Advising: Consult the BGES office (216)687-2440 or email bges@csuohio.edu

Major Field Requirements

All majors must take 61 credits of core courses and 19 elective credits in one of the special environmental foci.

A. Required Core Courses (61 credits)

- MTH 181 Calculus I
- MTH 147 Statistical Concepts with Applications (or one of the following: ANT 305, PSY 311, SOC 354, BIO 538)
- PHY 221 College Physics I (or PHY 241, University Physics I)
- PHY 222 College Physics II, or PHY 242, University Physics II)
- CHM 261/266 General Chemistry I
- CHM 262/267 General Chemistry II (or CHM 272/277, Honors General Chemistry)
- BIO 200/201 Introductory Biology I
- BIO 202/203 Introductory Biology II
- GEO 223 Map Interpretation and the Visualization of Space (or UST 403, Cartography and Graphics)
- GEO 230 Natural Resources
- EVS 206 Introduction to Environmental Science
- ENV 435 Environmental Policy
- ENV 441 Environmental Planning
- ENV 442 Environmental Finance and Capital Budgeting

and one of the following capstone courses:

- EVS 490 Internship in Environmental Science
- EVS 496 Independent Study in Environmental Science
- EVS 497 Research in Environmental Science

B. Elective Environmental Focus (19 credits)

Students earning a B. S. in Environmental Science must choose a focus area by selecting elective courses (totaling at least 19 credits) from among those given in one of the following course lists.
- Environmental Biology
- Environmental Geology
- Environmental Chemistry
- Environmental Technology
- Environmental Planning

Environmental Biology

- MTH 182 Calculus II
- BIO 300/301 Plant Biology
- BIO 302/303 Animal Biology
- BIO 304/305 Population Biology and Evolution
- BIO 416/417 Microbiology
- BIO 420/421 Comparative Vertebrate Anatomy
- BIO 424/425 Principles of Animal Physiology
- BIO 450/451 Evolutionary Biology
- BIO 453 Field Experience in Ecology and Conservation
- BIO 454/455 Ecology
- BIO 471 Summer Local Flora
- BIO 473 Spring Local Flora
- BIO 476/477 Plant Physiology
- BIO 478/479 Morphology of Angiosperms
- EVS 454 Conservation Biology
- EVS 455 Conservation Biology Laboratory

Environmental Geology

- MTH 182 Calculus II
- GEO 304/305 Mineralogy
- GEO 306/307 Petrology
- GEO 312/313 Stratigraphy and Sedimentation
- GEO 354 Geochemistry
- GEO 420/421 Rivers and Watershed of Northeast Ohio
- GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
- GEO 427 Advanced Topics in Geographic Information Systems & Remote Sensing
- GEO 444/445 Hydrogeology
- GEO 460/461 Geomorphology
- UST 434 Introduction to Geographic Information Systems

Environmental Chemistry

- MTH 182 Calculus II
- CHM 310/315 Survey Analytical Chemistry
- CHM 311/316 Quantitative Analysis
- CHM 320 Survey of Physical Chemistry
- CHM 331/336 Organic Chemistry I
- CHM 332/337 Organic Chemistry II
- CHM 404/406 Environmental Chemistry

Environmental Technology

- MTH 182 Calculus II
• ESC 203 Statics and Dynamics
• ESC 250 Differential Equations for Engineers
• ESC 301 Fluid Mechanics
• CHE 461 Principles of Air Pollution Control
• CVE 211/212 Surveying
• CVE 361 Hydraulic Engineering
• CVE 371 Environmental Engineering I
• CVE 372/373 Environmental Engineering II
• CVE 450 Environmental Technology
• CVE 471 Environmental Law, Regulation, and Compliance
• CVE 475 Solid Waste Engineering Management

Environmental Planning

• MTH 182 Calculus II
• GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
• GEO 427 Advanced Topics in Geographic Information Systems and Remote Sensing
• UST 300 Economics of Policy Analysis
• UST 302 Contemporary Urban Issues
• UST 375 Cities and Planning
• UST 401 Computer Applications for Urban Research
• UST 403 Cartography and Graphics
• UST 434 Introduction to Geographic Information Systems
• ENV 440 Environment and Human Affairs
• ENV 443 Environmental Regulatory Compliance
• MLR 301 Principles of Management

With the approval of the departmental advisor, a student may petition the Department's Undergraduate Curriculum Committee to request approval of an alternative selection of focused electives from the above lists.

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Geological Sciences (B.S., B.A.)

At-a-Glance

Geology is the study of the composition, structure, and history of the earth and its planetary neighbors. It deals with phenomena on, above, and below the surface of the earth, including those that take place on land, in the oceans, and in the air. It is a basic entry point for studies of natural resources and the human environment. It is a multidisciplinary science, drawing upon and, in turn, contributing to, the body of knowledge in the fields of chemistry, physics, biology, and mathematics. In recognition of this fact, the undergraduate geology programs which are offered through the Department of Biological, Geological, and Environmental Sciences are designed to provide broad training in geological sciences. Students interested in either a B.S. degree in Environmental Sciences or a B.A. degree in Environmental Studies should consult the catalog listing for those programs.

All geology programs are modular. They include a common core in the earth sciences and a series of courses common to the B.A. and/or B.S. degree. A grade of C is the minimum passing grade for all required major courses offered by the department. A major program in geology is not available for evening students.

Common Core in the Earth Sciences

All geology majors must take the following first- and second-year courses in geology, basic science, and mathematics:

- **GEO 100 Introductory Geology**
- **GEO 101 Introductory Geology Laboratory**
- **GEO 223 Map Interpretation and the Visualization of Space**
- **CHM 261/266 and 262/267 General Chemistry**
- **MTH 181 and 182 Calculus (required for the B.S.; optional for B.A.)** or 6 credit hours from the **MTH 150 series** (required for B.A. if calculus is not taken)
- **PHY 221 and 222 College Physics**, or **241 and 242 University Physics**

All geology majors must take a capstone course chosen from the following:

- **GEO 451 Field Geology** (4 credits minimum)
- **GEO 490 Internship in Geology** (3 credits minimum)
- **GEO 496 Independent Study in Geology** (3 credits minimum)
- **GEO 497 Research in Geology** (3 credits minimum)
- **EST 482 Student Teaching** (3 credits minimum)

Degree Programs in Geology

The bachelor of arts and the bachelor of science degree programs in Geology are designed for students who intend to pursue careers in geology or closely related fields. They provide a solid grounding in the earth sciences, as well as the ancillary subject areas upon which the earth sciences depend. The bachelor of science degree is recommended for students wishing to go on to graduate school in the sciences or engineering and whose career directions are primarily technical or scientific. The bachelor of arts degree is recommended for students who intend to pursue careers in teaching, law, planning, or business.
Candidates for the degree of bachelor of science must take 28 credit hours of courses chosen from the following list, and candidates for the degree of bachelor of arts must take 20 credit hours of courses chosen from the following list. The array of courses taken will be determined by the student, in consultation with the departmental academic advisor, (216) 687-3506:

- GEO 202/203 Paleontology
- EVS 206 Introduction to Environmental Science
- GEO 230 Natural Resources
- GEO 304/305 Mineralogy
- GEO 306/307 Petrology
- GEO 312/313 Sedimentation and Stratigraphy
- GEO 320/321 Structural Geology
- GEO 354 Geochemistry
- GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
- GEO 444/445 Hydrogeology
- GEO 451 Field Geology (4 credits minimum; may also count toward capstone requirement)
- GEO 460/461 Geomorphology

Geological Sciences Minor

The minor in Geological Sciences is intended as a flexible opportunity for students to incorporate significant course work dealing with the earth sciences into their university careers. All Geology minors must be approved by the departmental advisor and must meet the following criteria:

1. The geology minor consists of GEO 100/101 (Introductory Geology) and at least 13 credit hours above the 100 level. At least 9 credit hours must be above the 200 level.

2. The courses making up a geology minor must comprise a consistent set of courses that make sense to be taken together as a sequence. The sequence of courses will depend on the particular needs of the individual student, but the sequence as a whole must be approved in advance by the departmental advisor.

A grade of C is the minimum passing grade for all courses offered by the department and applied toward a minor. A minor program in geology is available for evening students.

Students interested in the minor program should consult with the departmental advisor.

Teacher Licensure

Students in Geological Sciences who also want to complete the requirements for secondary-teaching licensure in earth sciences should see the College of Education chapter in this catalog for information concerning the general education and professional education requirements for certification. Similarly, students seeking secondary-teaching licensure in earth sciences, but not majoring in Geological Sciences, should consult the College of Education chapter of this catalog for information regarding subject field, general education, and professional education requirements.
Mathematics (B.A., B.S.)  

At-a-Glance

Admission to major: MTH 181, MTH 182 with a grade of C or better in each

Minimum hours required for major: 42

Hours required for minor: 24

Special tracks: Actuarial, applied mathematics, pure mathematics, statistics, secondary education licensure

Teacher licensure: Yes

Student organization: Math Club, Pi Mu Epsilon

For further information: (216) 687-4680 or http://www.csuohio.edu/math

Each course offered by the Mathematics Department is designed to provide one or more of the following:

- part of the mathematical component of a liberal education
- the mathematical tools needed by students in business, computer science, education, engineering, and the biological, physical, and social sciences
- training beyond the introductory level in the major areas of pure and applied mathematics

For students interested in the third category, the department offers the bachelor of arts degree and the bachelor of science degree in mathematics. The mathematics requirements for the two degrees are identical, the difference between them is the number of science credits that are required (see below: BA, BS)

The core mathematics requirements for a bachelor's degree form the fundamental building blocks for almost every field of mathematics. By choosing suitable mathematics electives, students may obtain bachelor's degrees that prepare them for mathematical work in business or industry, for the actuarial profession, or for graduate study in mathematics.

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Major Field Requirements

All mathematics majors must complete a minimum of 42 credits in mathematics. These credits must include the following courses:

- MTH 181 Calculus I
- MTH 182 Calculus II
- Three courses from the following four:
  - MTH 220 Discrete Mathematics
  - MTH 281 Multivariable Calculus
  - MTH 286 Introduction to Differential Equations
  - MTH 288 Linear Algebra
- MTH 495 Senior Seminar (The two-credit course MTH 495 must be taken during the student's senior year.)
The remaining 20 credits must be in mathematics courses numbered 300 or above (excluding MTH 321 and MTH 347). Two of these courses must be numbered 400 or above.

A grade of C or better must be earned in each of MTH 181, MTH 182, MTH 220, MTH 281, MTH 286, and MTH 288.

For the bachelor of arts degree a Mathematics major must complete a minimum of 11 science credits, distributed in the following three fields: biological, geological, and environmental sciences; chemistry; and physics.

For the bachelor of science degree a mathematics major must complete a minimum of 24 science credits distributed in the following four fields: biological, geological, and environmental sciences; chemistry; physics; and computer and information science. These 24 credits must include PHY 241 (or PHY 243) and PHY 242 (or PHY 244). Any courses in computer and information science used to meet this requirement must be courses that satisfy CIS major field requirements.

Prospective Mathematics majors should make every effort to complete 100- and 200-level mathematics courses by the end of their sophomore year. Otherwise they may have difficulty in scheduling required advanced courses and electives. Students who decide to major in Mathematics should consult an advisor in the Mathematics Department early in the sophomore year to work out a program of advanced courses suited to their career objectives and capabilities. When preparing for this meeting, students should carefully consider the following recommendations.

**Recommended Electives for Various Major Concentrations**

1. Actuarial: MTH 301, MTH 323, and MTH 424
2. Applied mathematics with emphasis on engineering and the physical sciences: MTH 301, MTH 311, MTH 386, MTH 389, MTH 401, MTH 434, and MTH 487
3. Applied mathematics with emphasis on numerical computation: MTH 301, MTH 311, MTH 386, and MTH 487
4. Pure mathematics: MTH 301, MTH 358, MTH 381, MTH 420, and MTH 434
5. Statistics: MTH 301, MTH 323, and MTH 424
6. Secondary school teaching: MTH 301, MTH 323, MTH 333, MTH 358, MTH 401, and MTH 420
7. Another possible elective is MTH 493 (Special Topics in Mathematics). Its content varies widely from year to year; consult the Mathematics Department for current information. A student may also arrange to take an individual reading course (MTH 497) on an advanced mathematical topic not included in the regular course offerings of the department. Such reading courses are subject to departmental approval.

**Second Major for Computer Science Students**

Students in either the CIS or CSC program who choose a concentration in mathematics can, by suitably choosing electives and with no additional course work, complete all mathematics requirements for the bachelor of science degree with a major in Mathematics. Students can receive this additional degree by satisfying the College of Arts and Sciences foreign language and culture requirement in addition to CIS/CSC requirements. See your CIS Department advisor and an advisor in the Mathematics Department for further information.

**Mathematics Minor**

A minor in mathematics consists of 24 credits in mathematics, including:

- MTH 181 Calculus I
- MTH 182 Calculus II
- 8 credits chosen from among:
  - MTH 220 Discrete Mathematics
  - MTH 281 Multivariable Calculus
MTH 283 Multivariable Calculus for Engineers
MTH 284 Matrices for Engineers
MTH 286 Introduction to Differential Equations
MTH 288 Linear Algebra

Note: MTH 281 and MTH 283 may not both be used.
MTH 284 and MTH 288 may not both be used.

The remaining 8 credits must be in mathematics courses numbered 300 or above.

Teacher Licensure

Students who complete the requirements for a bachelor's degree in Mathematics, including MTH 301, MTH 323, MTH 333, MTH 358, and MTH 401 as elective courses will need 46 credits in mathematics to fulfill the subject field requirements for secondary teaching license in mathematics. For information on the general education and professional educational requirements for certification, see the College of Education chapter of this catalog.

Students seeking secondary licensure in mathematics as a second teaching field must complete a minor in mathematics, plus 8 additional credits in mathematics courses numbered 200 or above. These students should consult the College of Education for information on general education and professional education requirements.
Physics (B.S., B.A)

At-a-Glance

Minimum hours required for B.A. major: 76

Minimum hours required for B.S. major: 68

Minimum hours required for minor: 18

A major or minor in physics will help you prepare for a wide range of exciting careers in product development, research, teaching, and many other fields where you combine your knowledge of physics with other disciplines. The Physics Department offers you a choice of three undergraduate programs to suit your particular goals, interests and strengths:

Bachelor of Science: preparation for technical careers in industry and research centers and for graduate studies

Bachelor of Arts: preparation for careers in applied (engineering) physics, computer science, education, medicine, law, technical sales, scientific journalism or other fields where analytic skills and broad understanding of physics are important. Students majoring in Engineering or in Computer and Information Science (CIM and CIS calculus based; physics option) can earn the B.A. in Physics as an additional degree with a modest increase in course requirements.

Physics Minor: provides students majoring in other technical fields with additional skills thus broadening their career options.

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Major Field Requirements for B.S. in Physics

- the following required physics courses: PHY 243, PHY 244, PHY 330, PHY 340, PHY 350, PHY 440, PHY 450, PHY 455, PHY 474, PHY 475
- at least 10 credits of technical electives to be selected from 300- and 400-level courses in physics, chemistry, mathematics, or engineering approved by the physics advisor
- the following required mathematics and computer science courses: MTH 181, MTH 182, MTH 281, CIS 260

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Major Field Requirements for B.A. in Physics are:

- the following required physics courses: PHY 243, PHY 244, PHY 330, PHY 474;
- 16 credits of physics electives to be selected from the following list: PHY 201, PHY 202, and all the 300 and 400 level physics courses;
- the following required mathematics and computer science courses: MTH 181, MTH 182, MTH 281 or (MTH 220 and MTH 284), CIS 260;
- introductory sequence of chemistry with associated laboratory courses (CHM 261, CHM 262, CHM 266, CHM 267) or introductory sequence of biology with associated laboratory courses (BIO 200, BIO 201, BIO 202, BIO 203) or the following computer and information science courses: CIS 265, CIS 270;
- at least 16 credits in a coherent program from a different discipline such as biology, chemistry, computer science,
Physics Minor Requirements

- the following required physics courses: PHY 243, PHY 244
- at least 8 credits of 300- and 400-level physics courses

Teacher Licensure

Any student who has completed the requirements for the B.S or B.A. degree in Physics would have largely completed the subject requirements for a provisional high-school teaching licensure in the physical sciences. For information concerning the other requirements for teaching licensure see the College of Education section of this catalog.

Advising: Call (216) 687-2425
Library Collections and Services

The University Library supports CSU's instructional programs through resources and services made available to students both in the library and on its web homepage, [http://www.ulib.csuohio.edu](http://www.ulib.csuohio.edu). Located on the first five floors of Rhodes Tower, the library contains more than 975,000 volumes of print resources; 5,000 serial subscriptions (both online and in-print); over 100 online research databases; 700,000 microforms; and substantial holdings of sound recordings, curriculum materials, art slides, films, videotapes, and multimedia products. The library provides more than 100 public computers connected to the Internet for access to online resources to conduct research. Information regarding library holdings is available online through SCHOLAR from any computer on the Internet at [http://scholar.csuohio.edu/](http://scholar.csuohio.edu/).

The Library Computer Learning Center (LCLC) is a hands-on training center for all students needing assistance with word processing, spreadsheets, email, web browsing, and other basic computing operations. No appointment is necessary for individual help. An [Adaptive Technology Lab](http://www.ulib.csuohio.edu/lclc/) is also available where students with disabilities will find hardware and software programs especially designed for their use.

The library facilitates the integration of information technology into the instructional program by offering course-related instruction when requested by faculty and research assistance to students and faculty. When classes are in session, library hours are typically Monday, Tuesday, Wednesday, and Thursday: 7:30 a.m. - 9:30 p.m.; Friday 7:30 a.m. - 5 p.m.; Saturday: 11:00 a.m. - 5 p.m.; Sunday: noon to 6 p.m. Changes to hours are posted in the library and on the library's web page, [http://www.ulib.csuohio.edu/hours.shtml](http://www.ulib.csuohio.edu/hours.shtml).

Electronic Information

Providing easy access to online full-text information is a top priority of the University Library. The library implemented the first Electronic Course Reserve service in Ohio, which provides the full text of selected course reserve materials online both from inside the library or remotely from any computer that can access the Internet. The library also makes information resources and services available from its home page, [http://www.ulib.csuohio.edu](http://www.ulib.csuohio.edu). This page provides links to a multitude of web sites and online research databases via the Virtual Reference page, [http://www.ulib.csuohio.edu/vrd.shtml](http://www.ulib.csuohio.edu/vrd.shtml), or the various Subject Trees pages, [http://www.ulib.csuohio.edu/trees.shtml](http://www.ulib.csuohio.edu/trees.shtml), where relevant electronic resources are arranged by discipline. Distance learners are further served from the Distance Learning Web page at [http://html.ulib.csuohio.edu/de/](http://html.ulib.csuohio.edu/de/).

Resource Sharing, OhioLINK, and Beyond

The University Library's in-house collections are complemented by retrieval and delivery services made possible through resource sharing networks, traditional interlibrary loan, document delivery, and OhioLINK. OhioLINK, a statewide academic network reporting to the Ohio Board of Regents, provides the Cleveland State community with access to 31 million library...
items statewide. Through its retrieval and delivery services, OhioLINK delivers print materials to other libraries within a few days. Other retrieval services are available which can provide users with access to information from sources around the world, often in a matter of days, sometimes faster.

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Special Collections

Special Collections at Cleveland State University Library focuses on primary research materials for the study of the economic, cultural, social, and political history of Cleveland, northeastern Ohio, and the Great Lakes region. Of special interest are the Cleveland Press Collection, the Cleveland Union Terminal Collection, the Watson Bridge Collection, the Great Lakes Industrial History Collection, and the Archives of the Sacred Landmarks Initiative. Many images from Special Collections are digitized and added to the “Cleveland Memory Project” page at http://www.clevelandmemory.org. Additional information about the library's Special Collections is available on the Special Collections web page at http://web.ulib.csuohio.edu/SpecColl/.

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University Archives

The Archives is the University's official repository for records, publications, audio-visual materials, and artifacts pertinent to Cleveland State's history and development. Materials are noncirculating and are available to users under controlled conditions. The Archives maintains electronic indexes to the minutes of the University Board of Trustees, Faculty Senate, and Graduate Council that are available to users online. The Archives is located in the University Library, Room 320; Phone: (216) 687-3529.

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### Information Services and Technology

#### Introduction

The Department of Information Services and Technology is maintained by the university as an educational and research facility for its faculty, staff, and students. Additionally, it supports the administrative data-processing and university duplicating and telephony services for Cleveland State.

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#### Websites for Students

Through the use of technology, students can explore faster and better ways to find books, do research with the Internet, and communicate with others around the world. The following is a brief description of the many services that are available to our students.

**CSU Web Site:** ([http://www.csuohio.edu](http://www.csuohio.edu)) Cleveland State University has a web site full of useful information. Anyone who has a personal computer and access to the Internet also has access to information about the university. General data about the university is available to everyone. In addition, students can use Web Access, a secured system that provides grades, unofficial transcripts, course offerings, and more.

In our CSU web site, a wide variety of information is available, including an international student guide, a student admissions guide, a campus map with photos of all buildings, directories on how to reach Cleveland State and where to park, and even weather information. In addition, each college has its own home page, which includes a general description, course offerings, names of faculty members, information about special programs, and more. Many individual departments and professors also have web pages.

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#### Useful Web Sites

Resources for classes, research, etc.: [www.csuohio.edu/ats/stu.html](http://www.csuohio.edu/ats/stu.html)
Internet Access

CSU students have access to an Internet access account that provides 320 hours of free dial-up Internet access per month. To use the Internet account, a network and dial-up connection needs to be added to the student's home computer. Instructions on this are available online at http://www.csuohio.edu/iap/documentation/inetsetup.html or are available on paper from RT 1104. Students can also contact the Call Center for instructions at (216) 687-5050.

The Internet Access account log-on ID is the student's CSU ID number. The password will be the VIKing PIN. If you do not know your VIKing PIN, please contact the Call Center at 687-5050.

Internet-Related Software

IS&T provides free virus scanning software, as well as several freeware packages through IAP (Internet Access Pack). Students can get IAP free by downloading it from the Web site: http://www.csuohio.edu/iap. A copy of the software is also available on a free CD (in RT1104).

Electronic Mail (Email)

Every applicant and registered CSU student - part-time, full-time, graduate, undergraduate and law - has an account on the campus email system. Students who prefer to forward their CSU email to another email address can do this in Web Access or by contacting the Call Center (216-687-5050). As emergencies, many special events, and other student-specific announcements are sent via email, we recommend that student check their CSU email regularly or forward their CSU email to another email address.

For help accessing your email, call the Call Center at (216) 687-5050 or check out the following site: www.csuohio.edu/ist - and just follow the links.

Email is available from any networked PC, anywhere. Access to your email is available from a link on the CSU home page or by following http://www.csuohio.edu/email. If you prefer, you can also access your email via Outlook, Outlook Express or Eudora, or other POP mail clients. The student labs have Eudora installed and can run email. Instructions for using Eudora and Outlook are available from the CSU IS&T web pages: http://www.csuohio.edu/ist.

Web Access

Web Access is a user-friendly information system available to students. Web Access is available from any computer with an Internet connection, including home computers, on-campus VIKing kiosks, and campus networked computers. The Internet address for the Web Access system is: https://director1.csuohio.edu. Current kiosk locations on campus include first and fourth floors of University Center, Rhodes Tower Lobby, Chester Building Annex (Police & Parking), the College of Business, and the bookstore.

Web Access provides commonly requested student information. A student may view and print his or her Bursar's account balance, registration schedule, course list, financial-aid award amount, student record information, unofficial transcript, and personal information, such as address and email address.

The Web Access system is accessible with the student's CSU ID and Web Access password. Students who do not know their ID or Web Access password can contact the Call Center at (216) 687-5050.

Computer Use on Campus
**Laptops on Campus**

Students may use their own laptops on campus or may borrow a wireless laptop from the Mobile Campus in the UC cage.

**WIRELESS**: Students who want to use their own laptop and a wireless connection will need a Cisco wireless card (available in the bookstore), and their CSU ID number and ViKing PIN (available from the IS&T Call Center at 216-687-5050). By December, 2003, the entire campus will be wireless.

**NETWORK DROPS**: Students who want to connect their laptop to the Internet on campus using an Ethernet card will need:

1. An Ethernet card set-up for the CSU environment. Instructions available in labs and RT 1104.
2. Their CSU ID number and ViKing PIN (available from the IS&T Call Center at 216-687-5050)
3. A port to plug into, available in each General Purpose Lab, the library, the law library and areas of Urban Studies
4. A network cable

**Mobile Campus**

Currently registered students of Cleveland State University may check out a Gateway laptop computer for on-campus use. Over 35 laptops are available on a first-come/first-served basis (reservations are not accepted). Laptops may be borrowed for a 4 hour period of time or until a half hour before closing, which ever is shorter.

**Campus Connection Lounge**

The UC Campus Connection Lounge is available for casual computer use. Over 50 computers, including MACs, are available with MS Office, Internet-access, email access, etc. To use a lounge computer, students will need their CSU ID number and ViKing PIN. The Call Center can help students who do not know these (216-687-5050). For a schedule of hours, please go to: www.csuohio.edu/ist.

**General Purpose Labs**

Student labs are available across the campus. General Purpose Labs are located in Rhodes Tower 403 (in the Main Library), Stilwell Hall 128 and Main Classroom 446. The General Purpose labs provide free printing and scanning. Stilwell Hall lab also has two group work areas where 4-5 students can use a PC together. For a list of hours, software & equipment, visit the following website: www.csuohio.edu/ist.

In the labs, students can use software such as the current Microsoft Office Suite of products and SAS and SPSS statistical software, search the Internet and check email. Lab Assistants are available to answer questions and help with problems.

To use the labs, students will need to sign in using their CSU ID number and ViKing PIN (available from the Call Center at 216-687-5050).

**College Computing Labs**

In addition, many colleges also maintain student labs. They are listed in our web pages with information about equipment and hours. Visit: www.csuohio.edu/ats/campuslabs/

**Discounts on Purchases**

**Computer Purchases**

Students may purchase Gateway computers at significant discounts by visiting the following website and following the links: www.csuohio.edu/ist. Apple computers are also available at an educational discount rate from this website.

**Microsoft Office**
Through a special contract with Microsoft, the university offers a significant discount on most Microsoft products to students, staff, and faculty. For information about available products, contact the IS&T Call Center at (216) 687-5050. Microsoft special deals include Microsoft Office (Word, Excel, Access, Outlook and PowerPoint) and Front Page as well as other specialized products.

Software Training

Online training on many software topics such as Word and Excel is available on CD to students, staff, and faculty. CDs, each containing several courses, can be purchased for a nominal fee by contacting (216) 687-2182 or coming to RT 1104 during regular work hours. For a list of currently offered programs, see the website: http://www.csuohio.edu/training/.

IS&T Call Center

The IS&T Call Center at (216) 687-5050 provides technical and software assistance to students, staff, and faculty. The IS&T Call Center can assist with Internet access, email, and many other problems.

Contact the IS&T Call Center by

• checking the web site: http://www.csuohio.edu/ist
• coming to RT 1104
• emailing a question to callcenter@csuohio.edu, OR
• calling (216) 687-5050.

IS&T Call Center normal hours during Fall and Spring semesters are:

<table>
<thead>
<tr>
<th>Day</th>
<th>Phone Hours</th>
<th>Walk-in Hours</th>
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<tbody>
<tr>
<td>Sun</td>
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<td>Closed</td>
</tr>
<tr>
<td>Mon</td>
<td>7:30 a.m. - 10 p.m.</td>
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<tr>
<td>Sat</td>
<td>7:30 a.m. - 5 p.m.</td>
<td>Closed</td>
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</table>

Check the web site for vacation, holiday and summer hours (www.csuohio.edu/ist).

System News

IS&T also maintains a phone line with a recording listing any current system outages: System News line is updated each weekday. Call (216) 687-5252.

Mass Mailings

When the university needs fast communication with students, IS&T sends a mass email message using students' CSU email addresses. These messages help students keep in touch with campus events. Students can forward their CSU email to another email address using Web Access. Contact the Call Center at (216) 687-5050 for more information.

Distance Learning

Some classes use WebCT to enhance or replace traditional classrooms. Each professor using WebCT or other web-accessed course materials will
provide students with directions for access and use. Once students have accessed WebCT, they can contact the Call Center for password changes.

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IS&T Communications - askvp & info@csuohio.edu

IS&T provides a bimonthly newsletter online at http://www.csuohio.edu/ist/info.html. When students have specific questions, they can send an email directly to the IS&T VP at askvp@csuohio.edu.

Return to IS&T Menu | Return to top
Instructional Media Services (IMS)

Instructional Media Services (IMS) is primarily devoted to assisting CSU faculty with the development, production, and utilization of media materials and facilities. Experienced IMS staff work closely with faculty members to plan and develop quality materials for the enhancement of teaching. IMS also provides cutting-edge equipment and facilities.

Services include media consultation with emphasis on creative applications of media in the teaching-learning process; production of goal-specific media materials; media equipment loan with or without operator assistance; use of lab, microteaching, and distance learning facilities; maintenance and repair of media equipment and installations; distribution of media programming through the university's instructor-controllable media retrieval system; and satellite teleconferencing.

IMS offers a full range of production services such as: original artwork and computer graphics, including design and illustration for research and publication; broadcast-quality audio and video production; slides, prints, and transparencies; display materials; and multimedia presentations.

For loan purposes, IMS holds an inventory of portable media equipment, including video camcorders, video monitor or playback equipment (3/4" and VHS), and computer LCD displays.

IMS maintains and repairs more than 80 media installations on the CSU campus and is responsible for transmitting all types of media programs to approximately 20 classrooms via the media retrieval system.

IMS manages facilities for the use of media materials. The IMS Media Lab provides CSU students with a facility and the equipment for individualized and small group use of instructional media materials. The lab is equipped with various kinds of audio and video equipment. In addition, instructors may place materials on reserve in the lab for student review outside of class.

IMS also offers microteaching rooms and "Smart Rooms" equipped for distance learning.

The IMS Main Office is located in Rhodes Tower, Room 801. Equipment loan centers are located in Rhodes Tower, Room 705, and the Main Classroom Building, Room 201A. The IMS Media Lab is located in Rhodes Tower, Room 31 (ground level).

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University Center

- Conference Services
- Dining Services
- Return to top

Many of CSU's student activities and services take place in University Center, 2121 Euclid Avenue, west of the Main Classroom Building. The atrium, commonly referred to as "the cage," is the site of major campus activities and programs throughout the year. UC is the home of the Department of Student Life, Student Government, student publications,
student organizations, Financial Aid, Bursar's, Registrar's, Collegiate Studies, Handicapped Services, and Black Studies and the African-American Cultural Center. It also contains lounges and eating facilities.

Conference Services

- Go to Conference Services' website

Conference Services, located in UC 161, provides service and set-up information for all students and their organizations. This service provides meeting rooms and places for special functions along with special-event planning. General information about campus events, university services, and activities sponsored by student organizations may be obtained here.

Dining Services

- Go to Dining Services' website

For dining services at the University Center, see the section on Dining on Campus.

Convocation Center

- Go to Convocation Center Web Site

The Cleveland State University Convocation Center plays host to a myriad of special events, including contemporary concerts by international recording artists, nationally acclaimed family shows, professional and amateur sporting events, trade shows and conventions, consumer shows, and a vast array of community and civic functions. The center is the home of the Division I, Midwestern Collegiate Conference — CSU Vikings Men's and Women's Basketball games and Cleveland Crunch Indoor Professional soccer.

The arena is a state-of-the-art, full-service, multipurpose facility that is capable of seating up to 15,000 people for special events.

The pavilion at the Convocation Center is a 10,000-square-foot conference center and annex area which has the flexibility to host banquets, receptions, and conferences to serve a wide variety of needs. The facility has two large ballrooms that can be divided into smaller rooms for more intimate gatherings. The pavilion also has a full range of audiovisual equipment available for special events. The in-house caterer, National Catering, provides a full line of catering services for events in the pavilion.

For more information or to reserve a date, contact Cheryll McCarty, pavilion director at (216) 687-5081.

The Convocation Center is located on the campus of Cleveland State University, between East 21st and East 18th streets and Carnegie and Prospect avenues. For more information and employment opportunities, call (216) 687-9292.

Writing Center

- Go to Writing Center Web Site

The CSU Writing Center, located in Main Classroom 321, provides several opportunities for students of all levels to improve their writing. Any student can enroll in a two-credit-hour course (English 105 or 106) which gives extra support throughout the semester in a combination of 10 private tutorials and seven group workshops. This course is Pass/Fail and counts toward graduation.

Any student can also call to schedule a private 30-minute tutorial on any aspect of the writing process — from planning, researching, drafting and revising to editing.
Students can drop in for a tutorial or they can leave a paper and schedule a phone conference if they cannot visit the center due to their schedules.

Students can ask questions via email at writingcenter@csuohio.edu or visit our web site, www.csuohio.edu/writingcenter/, which has links to online handouts on grammar and writing.

Students can also stop by to pick up handouts on all aspects of writing and grammar or to use our collection of handbooks and style manuals.

Tutors are graduate and undergraduate students in English who enjoy talking about writing and see each tutoring session as a learning session. Call (216) 687-6981 for an appointment or stop by Main Classroom 321 for a brochure with hours. The center is open some evenings and weekends.
The bookstore is located at 2400 Euclid Avenue, across from Fenn Tower. It sells new and used textbooks, books related to various disciplines; reference books in professional fields; bargain books; magazines; school, office and computing supplies; educationally-priced computer software; souvenirs; stamps; Hallmark cards and wrap; gift items; and seasonal promotions.

The bookstore repurchases textbooks needed for the next term at 50 percent of the new price. Books are repurchased until the term's estimated demand is filled. Once the demand is filled, other textbooks are repurchased at wholesale prices.

The bookstore accepts cash; checks made payable to the CSU Bookstore; Visa, MasterCard, Discover, American Express, and most ATM cards. Picture IDs are necessary for all noncash transactions, refunds and book buyback.

Call (216) 687-2128 for more information.

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Bookstore Hours

October through June

Monday - Thursday
9 a.m. - 6 p.m.

Friday
9 a.m. - 5 p.m.

Saturday
10 a.m. - 2 p.m.

July through September

Monday - Friday
9 a.m. - 5 p.m.

The bookstore is closed on all federal holidays unless the university is open. Hours are subject to change.
Located at the heart of campus, Viking Hall is more than just a place to live. Viking Hall can accommodate up to 495 students and offers large, spacious rooms that contain wall-to-wall carpeting, individual heating and air conditioning, individual bathrooms, cable television, network wiring for easy computer access and phone mail. Other amenities include 24-hour security, a secured parking lot, an in-house computer lab, study lounges, game room, dining hall, convenience store, laundry facilities, and a workout room.

Special options for living arrangements include Graduate/Law, Quiet Study, and First-Year Experience floors. Students may choose to live in either a double- or single-occupancy room. Single rooms are available on a limited basis.

All residents participate in a dining program and can choose from a variety of meal options. The dining hall, located on the first floor of Viking Hall, provides a convenient, full-service meal program seven days a week.

Further information and a housing application may be obtained by calling the Department of Residence Life at (216) 687-5196 Monday through Friday between 8 a.m. and 5 p.m.

The Cleveland State University Housing Bureau is a referral service provided by International Student Services to aid members of the university community in securing off-campus housing. Housing lists are updated weekly and distributed to CSU students, faculty, and staff upon request. A valid CSU identification card or letter of admission is required. In addition to available rentals for apartments, houses, and rooms in and around the Greater Cleveland area, this office also maintains listings of individuals looking for roommates. For further information, stop in International Student Services, Euclid Building 103, or call (216) 687-3910.

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Full Service Dining

- **University Center Food Court** -
  This full-service dining area, located on the second floor of University Center, is open for breakfast and lunch. Among the selections available in the food court are:
  - Starbucks coffee and continental breakfast items
  - Chick-Fil-A
  - Subway
  - Bene Pizzeria
  - Home Zone - homestyle hot meals
  - Huge salad bar
  - "Grab and go" salads and sandwiches

- **Viking Hall Dining Room** -
  All current VikingCard ID holders are able to dine in the Viking Hall Dining Room. Fall, 2003 introduced a great new concept in residential dining service. The kitchen has moved to the front of the house and is center stage. Breakfast, lunch and dinner are offered on an all-you-care-to-eat basis. All meals can be cooked to order and include grille items, a cook to order stir fry station, all day waffle bar and much more.

- **101 Cafe** -
  Located on the lower level of the University Center as of Fall, 2003, 101 Café offers Milano sandwiches in the
European style, an all-day breakfast sandwich, classic grill items including the All-American burger, vegetarian sandwich options, Pizza, soups and salads and a wide variety of beverages. Items are available to go - or eat in and enjoy the jukebox and pool tables.

Quick and Convenient

- **The Market at UC** -
  Located on the first floor of UC, in the "Cage" the Market is a convenience store with a whole lot more...juices, candy, pop, sundries and a wide selection of snacks.
- **Rhodes Tower, College of Business and Stilwell Hall lobbies** - Food carts located in these lobbies provide gourmet coffees and espresso drinks, chai, lattes, bottled juices and a variety of bagels, pastries, salads, and "grab and go" sandwiches.
- **Sidebar at the Law School** -
  Personal sized pan pizza, salads, sandwiches and a variety of hot and cold beverages are available at the Sidebar.

Parking Services

- **Go to Parking Services Web Site**

Parking is available to any student who registers with the Parking Services office and obtains either a daily pay-per-day hangtag or a prepaid parking hangtag.

The daily hangtag allows designated access to CSU lots for $3.00 per day (hangtag is free).

The prepaid hangtag holders are entitled to park in the core of campus at any time.

The Parking Services office is located in the Chester Building Annex, Room 128. A student must provide the license plate numbers and a photo ID to obtain a hangtag.

Students are responsible for observing the regulations governing parking on campus, as listed in the parking guide and campus map distributed with your parking registration. Click on [www.csuohio.edu/parking](http://www.csuohio.edu/parking) for complete information.

The Office of Parking Services also offers emergency road service to parking patrons, and student employment opportunities.

Parking Services hours of operation are:

Monday - Friday, 8 a.m. - 5 p.m.

Extended hours are maintained during the first week of classes.

For more information, call (216) 687-2023.

Banking Service

A full-service electronic banking office is available on the ground floor of University Center that is staffed 30 hours a week. Full-service ATMs are available in the College of Business and in the Bookstore.

Student Identification

- **Go to the VIKINGCARD Identification Service website**
Cleveland State University provides every student with an identification card at the time of first enrollment. It is called the VIKINGCARD and it is your key to programs and services across campus. The VIKINGCARD Office is located in University Center, Room 272B. Phone: (216) 875-9888, Web Site: www.csuohio.edu/vcard

University Police

- Go to University Police Web Site

The primary function of the University Police is to preserve the peace and protect life and property in a manner that is sensitive to the rights of the individual and the values of the university. The CSU Police are located in the annex of the Chester Building, 2300 Chester Avenue, and operate 24 hours a day, stressing patrol, crime prevention, and community service. A safety escort service operates under the jurisdiction of the police, providing pedestrian protection from any campus location to your car or public transportation stop. The safety escort service is available Monday through Friday from 5:30 p.m. to 11 p.m. Call extension 2020 from any campus phone to request an escort, or from a public pay phone, (216) 687-2020. In emergencies, reach CSU police at extension 2111, or by simply lifting the receiver and depressing the phone button designated "Police/Fire" on campus phones. Emergency phones, located at various sites throughout the campus, ring directly into the CSU Police Dispatch office when the receiver is lifted. The police also facilitate the activities of Campus Watch, CSU's nationally recognized volunteer crime prevention organization.

Campus Safety Report

In compliance with the federal Crime Awareness and Campus Security Act of 1990 and the Student Right-to-Know and Campus Security Act (P.L. 101-542), the university produces an annual report on campus safety and crime rates. For a copy of this report, contact the Department of Public Safety located in the annex of the Chester Building, 2300 Chester Avenue, (216) 687-2020.

Athletics

- Go to Athletics Web Site

Intramural and intercollegiate athletics provide opportunities for students to engage in healthy exercise and sports activity. Intramural athletics for students, faculty, and staff include flag football, basketball, volleyball, table tennis, indoor soccer, racquetball, and badminton. Intercollegiate athletics provide athletic expression for more highly skilled students. Games are scheduled with institutions of similar background, standards, and resources to assure balanced competition.

Cleveland State is a member of NCAA Division I, and it fields men's varsity teams in soccer, basketball, wrestling, tennis, swimming, fencing, baseball, and golf. It fields women's intercollegiate teams in basketball, volleyball, fencing, softball, tennis, swimming, cross-country, and golf. Phone: (216) 687-4800.

University Center for Teaching and Learning

- Go to University Center for Teaching and Learning Web Site

The University Center for Teaching and Learning (UCTL) is located in RT 203 within the university library. Its purpose is to assist faculty throughout the university in improving their existing teaching skills and acquiring new teaching techniques, including, but not limited to, the use of evolving information technologies. To this end the UCTL offers a wide variety of training sessions and workshops for faculty, sponsors, external speakers, and symposia on teaching-related topics; provides one-on-one consultation and mentoring with individual faculty members; and disseminates internal grant funding to faculty for use in teaching-related projects.

For more information, contact the UCTL via email at uctl@csuohio.edu, or call (216) 687-5502.
Introduction

The Division of Student Affairs and Minority Affairs is committed to "supporting the total development of each and every student so that they achieve their educational goals in a satisfying way." CSU Student Affairs professionals recognize and value the unique and diverse nature of students and utilize a holistic approach to student development. The broad array of high-quality services and cocurricular experiences is designed to complement student learning, nurture leadership and personal development, and build campus community.

The chief student affairs officer is the Vice President for Student Affairs and Minority Affairs, whose office is located in Rhodes Tower 1227. The Student Affairs and Minority Affairs Division is comprised of the Department of Student Life, Counseling and Testing Center, Health Services, Career Services Center, the Office of Minority Affairs and Community Relations, and the Division of University Studies. Programs and services offered by these units are described below.

Counseling and Testing Center

Counseling Services

Counseling Services, located on the second floor balcony Room 254B of University Center, offers a range of services to students and staff. The purpose of the services is to help students maximize their university experience by helping them better adjust to changes in the personal, interpersonal, educational, and vocational areas of their lives.

The following services are available:

- **Individual Counseling**
  is short-term counseling, usually one to 10 sessions with a counselor to resolve any concerns that a student may have.

- **Couples Counseling**
  is designed to enrich couples' relationships by solving problems, improving communication, and resolving conflicts. Couples counseling is offered to all students and their partners.

- **Group Counseling**
  involves a small number of students who meet to discuss common concerns. The supportive atmosphere and variety of perspectives in group counseling can be particularly helpful.

- **Personal, Educational, and Occupational Information**
  is available through self-help books, educational and vocational planning aids, and information about a variety of psychological problems in the Counseling Center's library.
• **Academic Counseling**
  is aimed at improving student skills and eliminating blocks to optimal academic performance.
• **Vocational/Career Counseling**
  employs assessment tools and other counseling interventions to help students clarify their interests, select majors, and decide on the career that best fits their interests, abilities, and values.
• **Outreach Programming**
  addresses the specific needs of the CSU community and relates to a wide domain of psychological issues.
• **University Community Assistance Program (UCAP)**
  provides initial consultation, assessment, and referral when personal problems begin to interfere with a Cleveland State University employee's well-being or work performance.
• **Consultation Services**
  include private consultation with faculty or staff to assist them in working with each other as well as with students who are of particular concern. Consultation also may be with students who are concerned with the well-being of a friend.
• **Workshops and Seminars**
  are designed to address specific topics such as test-anxiety control, stress management, career decision-making, and overcoming blocks to learning. Counseling Services also offers single-session programs. A variety of topics can be addressed in talks with student or faculty groups. They can be presented in one 60- to 90-minute session, or arrangements can be made to adapt the program to suit a group's special needs.
  - Educational and Vocational Programs
    - Choosing a Major
    - Discovering Interests
    - Reducing Stress During Mid-Terms and Finals
    - Blocks to Learning and How to Overcome Them
  - Study Skills/Academic Services
    - Improving Study Techniques
    - Taking Lecture Notes
    - Improving Listening and Concentration
    - Reducing Test-Taking Panic
    - Managing Test Anxiety
    - Taking Tests
    - Writing Term Papers
    - Speed Reading
    - Preparing for Tests
    - Establishing Study Groups
  - Faculty Workshops
    - Improving Academic Advising
    - Student Needs
    - Working With Angry People
    - Understanding Multicultural Differences
    - Recognizing and Referring the Student in Distress
  - Interpersonal Programs
    - Initiating and Building Relationships
    - Parenting Skills
    - Strengthening Family Relationships
    - Assertiveness
    - Goal Setting
    - Time Management
    - Feeling Good or Overcoming Depression
    - Alcohol Awareness
    - Human Sexuality
    - Eating Disorders

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**Testing Services**

The Testing Center administers entrance exams such as I-ACT and Michigan Test of English Language Proficiency. Several graduate exams, certification exams and validation exams are also given. These include PRAXIS, MCAT,
and the MAT. The CLEP (College Level Exam Program) is available on a computerized system. This exam permits a student to receive college credit for a course by passing the exam. Faculty test scoring service and student evaluations of faculty are available through the Testing Center.
The Department of Student Life staff strives to provide a variety of quality services and programs to enhance the university experience and complements Cleveland State University's academic mission. A highly trained staff of professionals is available to support students from their first day on campus to the completion of their academic goals. Services include new student orientation, mentoring program, leadership training, support of recognized CSU student organizations, judicial affairs, campus activities, and many other programs and services that support the successful matriculation of all students. Our door is open for your issues, concerns and ideas! Visit us in University Center Room 102, call (216) 687-2048, email at student.life@csuohio.edu, or surf online at http://www.csuohio.edu/student-life.

Campus Activities and Educational Programs

The entire campus community, including students, faculty and staff, are provided with an array of campus-wide programs to attend throughout the year. These activities, sponsored by the Department of Student Life, the Campus Activities Board, and other sponsoring groups throughout campus include social events, lectures, dances, holiday celebrations, and food and music activities. Events include Welcome to CSU Week, Springfest, Homecoming, and many more. If you are interested in volunteering to help plan these events, or if you want more information about attending them, contact the Student Life staff at (216) 687-2048 or email at student.life@csuohio.edu. Most events are free and open to the entire campus.

Volunteer Programs

The Department of Student Life Volunteer Program has been designed to serve as a campus-wide clearinghouse for volunteerism, community service, and service learning opportunities available to all Cleveland State University students, faculty and staff. Our primary goal is to assist members of the CSU community to develop or strengthen interest in serving others. To learn about short-term and long-term volunteer opportunities, review the Volunteer Binder in University Center 102, see the Volunteer bulletin board (UC first floor by elevators) or visit the Volunteer Programs website at http://www.csuohio.edu/student-life/volunteer.
The City is Our Campus...your ticket to the arts

- Go to City is Our Campus website

The city is your campus. So, take advantage of it and have some fun! Through developing partnerships with a variety of organizations, the Department of Student Life Offers opportunities for CSU students to experience all that Cleveland has to offer -- often at a discounted (sometimes free) price. To get the latest information about The City is Our Campus program, visit the bulletin board located in the University Center, sign-up to receive email updates by emailing activities@csuohio.edu, or visit the website at http://www.csuohio.edu/student-life/activities/citycampus.html.

Judicial Affairs

- Go to Judicial Affairs website

The Judicial Affairs office exists to provide a safe campus environment for the entire university community. Through the trustee-approved policies called the Student Conduct Code, students involved in misunderstandings with other students, faculty, staff or administration can discuss informal and formal resolution options. The Student Conduct Code thoroughly explains the due process procedures for incidents that violate university policies. A copy of the code is available in the Department of Student Life located in UC 102 or on the web at http://www.csuohio.edu/student-life/SCC.

Leadership Programs

- Go to Leadership Programs website

Leadership programs help students explore various leadership competencies. Events range from hour-long roundtables to daylong retreats. Program topics include leadership styles, communication, group dynamics, delegation, and creativity. Students attending at least 16 roundtables over the course of the year can receive Leadership Certification. There is also a free Leadership Consultation Service for student groups and a wide variety of leadership resources available including leadership portfolio, free leadership assessment, and developmental plan. For information, including a listing of upcoming programs, call (216) 687-2048, stop by Student Life in University Center 102 or visit the Leadership website at http://www.csuohio.edu/student-life/leadership.

Orientation Programs

- Mandatory New Student Orientation
- Transfer Orientation
- Family Orientation
- Go to Orientation website

Through the Department of Student Life, Cleveland State University offers a comprehensive orientation program called "Viking Quest" for new students, transfer students and family members during the summer and over winter break to connect them to campus, to create lasting relationships, and to introduce them to the traditions and opportunities that make Cleveland State a great place to learn and succeed! The goal of Viking Quest Orientation is to introduce new students to the campus programs and services, procedures and staff, encourage student networking and socialization, provide an understanding of what college life is all about, and help new students understand the many challenges they'll expect to confront as a CSU student. We want you to thrive at CSU and Viking Quest is the perfect way to begin your journey to success! For more information about our Orientation Programs, visit our website at http://www.csuohio.edu/student-life/orientation.

Mandatory New Student Orientation

For first time college students attending Cleveland State, Viking Quest offers a full day of activities and opportunities to prepare you for the semester. The schedule includes individualized advising, web registration, opportunities to get your I.D. card, parking pass and see the campus. With our well-trained energetic staff of peer Orientation Leaders, you'll learn about student organizations and out-of-classroom involvement, student services and academic programs, PLUS you'll meet new
Transfer Student Orientation

Cleveland State University may be very different from the institution you attended. So students transferring into Cleveland State need to become acquainted with the many services and programs available to them. After you receive individualized advising, and any needed placement testing, you'll be encouraged to attend Transfer Student Orientation where you will learn about success strategies, college finances, campus involvement, and CSU technology services. You'll also meet with your college representatives for general advising information, and you'll have the opportunity to see the campus and purchase your textbooks.

Family Orientation

Family members of our new students play a vital role in their academic success. During the summer Viking Quest Orientation, family members are encouraged to attend a concurrent Family Orientation program where you'll talk to University professors and parents of college students about success strategies, learn about financial aid matters, campus safety and student conduct expectations, mentoring, and career services. We'll acquaint you with the CSU campus and the wonderful opportunities in the Cleveland downtown area. By the end of the program, our goal is that your questions and concerns will be answered.

Gay, Lesbian, Bisexual and Transgender Student Services

- Go to Gay, Lesbian, Bisexual and Transgender Student Services website

GLBT Student Services provides innovative and select programming to the CSU community and serves as a resource and information center for gay, lesbian, bisexual, transgender, and questioning students and their allies. The Safe Space program allows faculty and staff to show support for GLBT students by displaying a Safe Space card. There is also a Student Safe Space program for students who wish to show their support. A student listserv keeps students informed and connected. For more information on GLBT Student Services or any of its programs contact us at 687-2048 or email glbt@csuohio.edu or visit the website at http://www.csuohio.edu/student-life/GLBT.

Student Organizations

- Campus Activities Board
- Fraternities & Sororities
- Student Bar Association
- Student Government
- Student Media
- List of Recognized Organizations

More than 100 recognized student organizations exist on the Cleveland State campus to provide students with opportunities for involvement, campus decision-making, leadership experience and networking. These organizations invite students to join and participate in academic, social, professional, and recreational activities through their many events on campus. Organizations are open to all students, and the Department of Student Life will assist you in establishing new organizations. Other exciting developmental opportunities for involvement include the Student Government Association, Campus Activities Board, Student Bar Association, fraternities and sororities, and student media organizations (newspapers, literary magazine and radio station). Pick up a Student Organization Directory in the Department of Student Life and become active in a student group that provides you with experiences that complement your academic and career goals!

Campus Activities Board

- Go to the Campus Activities Board website
The Campus Activities Board (CAB) is a student organization whose primary function is to plan and facilitate cultural, social, recreational, and educational events. CAB is responsive to student interests, with a primary goal of fostering campus community and unity. CAB offers leadership opportunities in event planning, promotions, budget management, and team development. CAB features five student officer positions (Director, Assistant Director, Office Manager, Events Coordinator, and Promotions Coordinator), and a variety of intern volunteer, and committee opportunities for those interested in campus event planning.

Fraternities & Sororities

- Go to the Greek Organization website

Cleveland State is home to seven nationally recognized fraternities and seven sororities as well as local fraternities and sororities. These Greek-letter organizations are advised by faculty and chapter advisers. The Coordinator of Greek Affairs also provides assistance with Fall recruitment for the sororities, Greek Games, Greek Council, Greek Alumni Council and Homecoming activities in which the members participate. Greek-letter organizations provide opportunities for brotherhood/sisterhood, philanthropic events, social activities, scholarship and leadership. Joining a Greek-letter organization provides you, the student, with a wide array of transferable skills useful in your life and future career.

Student Bar Association

The Student Bar Association represents and advocates the interests of the student body in matters pertaining to the Cleveland-Marshall College of Law by allocating funds to duly recognized student organizations of the College of Law and coordinating and promoting programs and activities for students of the College of Law. SBA consists of a Senate of five executive officers and Student Senators from each of the law divisions. Student Bar organizes activities such as the annual Barrister's Ball, fundraisers such as the T-shirt Sale and Book Sale, and various educational and social opportunities for the Law Student Body. Elections are held annually at the end of the spring semester. The Student Bar Association is located in the Law Building room 28. Their phone number is 216-687-2339.

Student Government

- Go to the Student Government Association website

The Cleveland State University Student Government provides an open forum for students to formulate their beliefs and voice their concerns to the University Board of Trustees, administration and faculty. Student Government exists as two branches: the executive and the legislative branches. The Senate (legislative branch) is composed of 28 elected student delegates, each enrolled in eight or more credit hours, who represent each class and each college at CSU. The Executive Branch consists of the president, vice president, treasurer, and secretary. Elections are held annually in the spring term. Student Government offices are located in the University Center room 160A. Phone (216) 687-2262.

Student Media Organizations

- Go to the Student Media website

Student publications provide students with excellent opportunities for experience in writing and editing a literary magazine or newspaper. These publications are financed in part by general fees and are edited by students who are selected by the publication staff members. Publications include:

The Cauldron

is a semiweekly student newspaper pledged to serve the entire student community with information and opinion about the campus, the Cleveland community, and beyond. Phone: (216) 687-2270.

The Vindicator
is a semimonthly newspaper with special interest in presenting the news as it affects African-American people and others of
different backgrounds and cultures. Phone: (216) 687-2118.

Whiskey Island Magazine
is a student literary magazine which features selected prose, poetry, graphic arts, and photography. Phone: (216) 687-2056.

The Gavel
is a student publication printed by and for the interest of students enrolled in the Cleveland-Marshall College of Law. Phone:
(216) 687-4533.

WCSB 89.3 FM
is a University-owned, 1000-watt non-commercial FM station operated by Cleveland State University students. The station
can be found at 89.3 on the radio dial, and offers a wide variety of programming. Phone: (216) 687-3515 or (216) 687-3523.

Mentoring Program

- Go to Mentoring Program website

Since 1986, the Cleveland State University Mentoring Program has been helping new students experience a successful transition to college life. The program's success depends on a caring faculty and staff who commit their time and effort to the mentoring process.

The guiding principle of the Mentoring Program is that students who are connected with the university will perform better academically and socially, and persist in enrollment longer than those who do not become mentees. Mentoring is a structured one-to-one voluntary relationship over an academic year between a student (mentee) and a faculty or staff member (mentor). Both parties voluntarily participate and are matched primarily by academic backgrounds. Mentors and mentees meet at least four times during a semester to discuss social, academic, and career-related issues. Benefits to new students include:

- Ongoing assistance with academic issues and financial aid as well as bursar's, registration, and advising concerns
- Access to free tutoring
- Updates on important campus-wide activities, opportunities, procedures, and deadline dates

For more information about the Mentoring Program, visit the website: http://www.csuohio.edu/student-life/mentoring or call (216) 523-7367.
Health & Wellness Services

Health & Wellness Services offers confidential health-care service to all students, faculty, and staff of the Cleveland State University community. The clinic is staffed by nurse practitioners and a physician who will discuss your health history with you, perform physical examinations and provide for your care. We provide care for most problems for which you would see your family physician, including blood tests, immunizations, allergy shots, and other laboratory tests. Health-care needs such as sore throats, upper respiratory infections and bladder and gynecological problems can be evaluated and treated. If problems are outside our area of expertise, referrals will be made.

Counseling regarding health concerns such as diet, exercise, activities of daily living and smoking cessation are also addressed. Contraceptive services are available and sexually transmitted infections are evaluated and treated. The staff will be glad to discuss your health concerns and are available for consultation.

Services are available by appointment. We have a same-day system for individuals who are acutely ill. Appointments may be scheduled for that day by calling (216) 687-3649 at 8 a.m. Health & Wellness Services is located in SR 153. Hours during the academic year are 8:00 a.m. - 5:30 p.m. Monday and Tuesday and 8:00 a.m. - 5:00 p.m. Wednesday through Friday. Summer hours are 8 a.m. - 5 p.m. Monday through Friday.

Health & Wellness Services coordinates the Student Health Insurance program. Our goal is to offer the best possible health insurance coverage from an outside provider for the best price. We serve as the gatekeeper for students who purchase the student health insurance. In order for non-emergency visits to be covered, a referral from Health & Wellness Services is required. This helps keep the premium low for students. For more information about the student health insurance program or to schedule an appointment, call (216) 687-3649.

Emergency and infirmary care is provided by area hospitals.
**Introduction to the Career Services Center**

Central to the university experience is career exploration and planning in relationship to academics. In order to complete this introduction to personal and professional development, a student will also develop knowledge of job-search strategies, marketplace realities, and skills specific to his/her field. A full range of student-focused programs and confidential services are available to all Cleveland State University students from the first year through graduation and into alumni status. We hope you visit the Career Services Center often at Rhodes West 280, or call us at 216/687-2233 to make an appointment with a career professional. Other information can be obtained by visiting our website at: www.csuohio.edu/career.

**Career Coordinators**

Students have the option to begin meeting with a Career Coordinator as early as their first semester. In this way students can familiarize themselves with ways in which to explore how their interests, abilities, experiences and values relate to their academic studies and career preparation. Our Career Coordinators are assigned to assist students in specific majors for which they have developed competencies. Call the Career Services Center to make an appointment with a Career Coordinator who specializes in your major. Undecided about what major you would like to pursue? We have a Coordinator who specializes in working with you, too.

**eChoices**

- Go to the eChoices information website

  eChoices is a computer-based program that allows students to explore and assess their interests, skills, aptitudes, and values. By using this system along with a follow up meeting with your Career Coordinator, students learn how their choices relate and how understanding their personal characteristics will help them begin to make an informed career decision.

**Sloan Career Cornerstone Series**

The Sloan Career Cornerstone Series is a program designed to assist students interested in engineering and other technical programs in their career decision making process. By using the Sloan program, students learn more about the differences in various technical careers, along with the skills and specializations they may need to develop.

**Career Conversations and The Greater Cleveland Connection**

- Go to Career Conversations website

  To complement eChoices and Sloan, as well as the career courses, students have the opportunity to meet individually with alumni and other professionals to learn how academic studies and career development work hand-in-hand. Please see your Career Coordinator for more information.

**The Greater Cleveland Connection**

The Greater Cleveland Connection enables students to volunteer or to intern in areas of career interest. Students should see their Career Coordinator for more information.

**LINK Program**
The Career Services Center's LINK Program is a collaborative effort between the University and the corporate community seeking to recruit students of color at Cleveland State University. The LINK Program partnership with the corporate community helps minority students clarify personal and professional goals, while fostering career exploration and academic achievement. Newly admitted CSU students begin the program during the summer before their freshman classes begin. LINK's comprehensive support intensifies during the first year with professional mentoring, personal development, career preparation, and scholarships.

Students are recruited primarily from Greater Cleveland-area high schools. Selection of LINK participants is based on admission to the University, a written essay, submission of written recommendations, and an interview with the LINK Program staff.

LINK's comprehensive and ongoing academic and career support provides the foundation for student success. Students who participate in the LINK Program will be acclimated to the University and will be prepared for career opportunities in business and industry.

Career Services Center's Additive Career Preparation Courses

**CSC 121**

This course takes students on a guided exploration of academic majors and career choices. It is recommended that students enroll in CSC 121, Career Orientation, in their second semester. This course fulfills the course requirement for undergraduate participation in the Cooperative Education Program and is recommended for students who wish to explore career options or validate their career choice. This is a one credit hour course.

**CSC 224**

This course is a three credit hour course designed to help students explore the world of work, their skills and interests, job-search strategies, and the relationship between various college majors and careers. This course is highly recommended for undeclared/undecided students. This course fulfills the course requirement for undergraduate participation in the Cooperative Education Program.

**CSC 321**

This course provides for maximum graduation preparation with minimum anxiety. It is recommended that students register for CSC 321, Employment Orientation, in their junior or senior year or during their graduate program. CSC 321 helps students develop effective job-search strategies. This course fulfills the course requirement for undergraduate participation in the Cooperative Education Program. This is a one credit hour course.

Student Employment

**On Campus**

- [Go to Campus job postings](#)

Nearly 2,000 excellent on-campus student employment opportunities exist throughout campus. Students employed on campus can develop valuable career skills and have the added convenience of working flexible hours without additional travel time. Both federal work-study and non-work study positions are available. Jobs are posted on the Career Services Center web site ([http://www.csuohio.edu/career/jobpostings.htm](http://www.csuohio.edu/career/jobpostings.htm)) and on bulletin boards located across campus. Students should consult the web site or job boards for current openings and contact the employing department directly.

**Off Campus**

**Community Service Learning**

- [Go to Community Service Learning job postings](#)
This is an off-campus service learning program for students who have received a federal work study award. Eligible CSU students may be placed in positions located at community service agencies throughout Greater Cleveland. Check with the Student Employment staff for more information.

America Reads

- Go to America Reads postings

CSU students can be placed as reading tutors in Cleveland elementary schools. Those students with a federal work study award are eligible to apply. Many America Reads tutors also qualify as cooperative education program participants.

Cooperative Education Program

- Introduction
- Eligibility
- Academic Credit
- Administration
- Co-Op Job Placement and Scheduling
- Return to top
- Go to Cooperative Education Program website

Introduction

Through the Cooperative Education Program, students can explore career and academic options, pretest career choices, put academic theories to work with professionals in their field, polish personal and professional skills, and earn money to contribute to their educational costs. Cleveland State University offers a Cooperative Education Program in all undergraduate fields of study and most graduate programs. Co-op students work in positions that are closely related to their academic areas of study and career interests. Work experiences are typically scheduled during alternate semesters beginning in the sophomore year. In some cases a parallel schedule of part-time work is available.

Co-Op Eligibility

There are three basic requirements for admission to the Cooperative Education Program: Students must have earned at least 30 semester hours, be in good academic standing prior to the first assignment, and have completed the one-credit hour CSC 121 Career Orientation course. Transfer students are also eligible to participate in Co-Op.

Application for admission usually is made in the freshman year or, in the case of a transfer student, during the first semester on campus. Application requirements are satisfied when the student completes CSC 121, which presents detailed regulations and procedures for obtaining the greatest value from the co-op program and aids students in clarifying their career goals and sharpening their job-search skills.

Co-Op Credit

All co-op students are required to register their co-op experience with the University. CSC 300 provides for academic credit in recognition of the educational value of the cooperative education experience. In this way, one credit is given for each co-op experience completed. This credit is not counted toward the number of hours needed for graduation, but it will add academic hours to a student's credit total. The academic credit maintains a student's full-time status while on a co-op job. CSC 400, a non-credit option, is also available. However, CSC 400 does not maintain a student's full-time status.

Co-Op Administration
The Cooperative Education Program is administered by the Career Services Center. During the Career Orientation course, students are assigned to a Career Coordinator. The Coordinator acts as a liaison between the University and the working community, developing co-op opportunities and maintaining an effective rapport with all program participants.

Co-Op Job Placement and Scheduling

Co-op employers include a wide range of businesses and industries, governmental, social service agencies, and school systems. Jobs are developed with employers who will provide a meaningful work experience, the standard rate of pay for the work being performed, and a careful evaluation of the student at the completion of the work semester.

Coordinators help students in the entire placement process, providing counseling and contacts. Students then apply directly to the employer and are hired on their own merits. Students must register for CSC 300 or CSC 400 (Co-Op Field Experience) during each semester in which they have a work assignment.

The co-op schedule, showing the semesters the student will be in school and when the student will be at work, is prepared by the Coordinator in consultation with the student and the appropriate academic advisor. The co-op student typically alternates periods of being at work and at school from the end of the freshman year to the beginning of the senior year. Two students are often paired with the same employer, thereby keeping a designated co-op position filled at all times. Variations in length and pattern of co-op schedules are considered on an individual basis with many factors being considered.

Students enrolled in the Cooperative Education Program are expected to comply with the all of the policies, rules, and procedures governing the program, which are explained further in the Career Orientation course.

Biotechnology

- Go to Biotechnology Certificate website

The Career Services Center has a special program targeted for students interested in entering the biotechnology industry. Co-ops and placements are actively sought by the many biotechnology companies in the Cleveland area. Additionally, the center coordinates the academic Biotechnology Certificate programs offered through the colleges of Arts and Sciences, Business Administration, and Engineering. For more information, call Career Services or visit www.csuohio.edu/career/Biotech.htm.

Project Springboard

- Go to Project Springboard website

Project Springboard offers career counseling with a specific focus on cooperative education to Cleveland State University students who have a disability. The goal of this program is to aid in defining career goals and help students gain degree-related work experience while earning their degree. Contact at (216) 687-2233 for more information.

Senior and Alumni Services

For students approaching graduation, the Career Services Center provides Senior and Alumni Services. Senior and Alumni Services are available to all undergraduate students with more than 143 academic hours. Graduate students are eligible for these services throughout their entire graduate program. Eligibility continues after graduation and the services continue to be free of charge for the first year after graduation. Services to seniors and alumni include VikingNet, our internet-based system that provides access to hundreds of full-time degreed positions available at local and national employers. Seniors and alumni are also eligible to participate in the On-Campus Recruiting Program, career fairs, and
other various events held throughout the year. The Center's Career Resource Library provides graduating students with directories, videotapes on career opportunities, career-path resources, connection to the internet, and information on hundreds of companies.

For additional information on any of these programs and services, call or visit the

Career Services Center
Rhodes West 280
(216) 687-2233
www.csuohio.edu/career

Office of Minority Affairs & Community Relations

- Go to Office of Minority Affairs & Community Relations Web Site

CSU is a leader in the state in enrolling and graduating minorities and has been recognized nationally in the Top 100. In 2001, 25 percent of students, 20 percent of graduates and 21 percent of faculty were minorities. In addition, CSU is noted locally for its multicultural initiatives, including more than 100 courses with a cultural/ethnic focus.

The Office of Minority Affairs and Community Relations has university-wide responsibility to advance diversity, equal opportunity and positive race and community relations. This includes: ensuring the retention of underrepresented racial and ethnic minorities among students, faculty, staff, and administrators; changing the campus environment through educational experiences that achieve and maintain positive race and human relations; and enriching the urban community environment through outreach and service to minority communities. Program initiatives focus on retention of minority students, faculty, and staff; faculty, staff, and student development activities; development, implementation, monitoring, and support of academic and nonacademic diversity initiatives; working with faculty, students, and staff to identify and respond to issues and concerns related to minority groups; development and implementation of policies, procedures, priorities, and programs to better serve the diverse university community; outreach to and collaboration with the public and private sectors and other educational institutions; and service to the urban and multicultural communities.

Regular activities include campus climate and retention research, diversity training and multicultural programming such as Hispanic Awareness Week, the annual Diversity Conference, Models for Unity Conference, Urban Community Forum and Hispanic Community Forum. The office is administratively responsible for the STARS and Upward Bound programs and the CLASS Program, which includes the Black Male Initiative, Hispanic Retention Initiative, Black Women Initiative and the Native American Initiative.

The Office of Minority Affairs and Community Relations is located in Rhodes Tower 1227 and may be reached by calling (216) 687-9394 (V/TDD).

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Introduction

The Division of University Studies is the entry point for all newly admitted undergraduate students and continues to provide academic and career support to students throughout their collegiate experience. All students have access to a wide range of services and programs that focus on academic support and career planning and exploration, as well as personal and professional development. The departments comprising the Division of University Studies include: Collegiate Studies, the Freshman Year Experience Advising Office, the Sophomore and General Studies Advising Office.

Mission

The mission of the Division of University Studies is to: 1) provide every first year student who has attained up to 30 credit hours with the academic support and advising to help establish a foundation for success and build momentum for graduation; 2) provide academic support and advising to sophomore students in the College of Arts & Sciences, and work to connect students to their academic program within their college; and 3) provide general advising to juniors and seniors, and serve as a centralized office for student related administrative procedures.

The Division of University Studies will provide every first-year undergraduate student with the academic and ongoing career support needed to form the foundation for success and build momentum for graduation. This will be accomplished by providing:

- A common and comprehensive entry experience for all new students
- Advising services and course instruction
- A central resource for academic and career information
- A transition into the university and into the college of their choice
- Ongoing support for students throughout their academic experience
- An experience that culminates in graduation

Central to the mission of University Studies is the Freshman Year Experience. Included in this experience are academic advising, services for students with disabilities, instruction, and tutoring.
The Freshman Year Experience Advising Office

- Go to Freshman Year Experience website

The Freshman Year Experience (FYE) is designed for all freshmen and transfer students with fewer than 30 semester hours of college-level credit. As part of the FYE, students have access to a host of services and programs designed to enhance their collegiate experience and academic success. These include:

- Individual student advising with an assigned advisor
- Introduction to University Life orientation course
- Tutoring services
- Placement testing
- Career Services career exploration courses
- Services to persons with disabilities
- English as a Second Language
- FOCUS (Freshman Opportunity Center of University Studies)

As part of its mission, the Division of University Studies is committed to the continued support of students throughout their academic and career pursuits.

The Freshman Year Experience (FYE) provides comprehensive academic advising services for all new freshmen and continuing students with less than 30 semester hours and all Collegiate Studies students. The Freshman Year Experience Advising Office’s team of professional advisors work individually with students throughout the first year in a variety of ways to help them achieve their academic and career goals. Each student’s advisor will work closely with him or her, providing follow-up contacts and assistance, while monitoring academic progress. The FYE is an opportunity for students to develop a connection to the University through their advisors. The year-long advising process includes:

- Guidance in planning a program of study according to the student’s academic and career goals
- Ongoing support and assistance in the areas of career and major exploration, study skills, and assimilation to University life.
- Educating students about university and college requirements, and assistance in the course selection process
- Close monitoring of academic progress and providing appropriate contact and intervention with students in academic distress
- Ongoing referrals to appropriate university resources and opportunities

Students who are admitted to Collegiate Studies will be provided with a comprehensive academic enhancement program of instruction and advising which will enable them to achieve their academic and career goals. Students will work with their assigned advisor until they meet the transfer requirements of the college of their choice. Through an intense and individualized process of advising, monitoring progress, intervention, and referral, advisors help those students who may need additional collegiate preparation realize their fullest potential and academic objectives.

For more information about the Freshman Year Experience Advising Office, contact (216) 687-2402 or email usadvising@csuohio.edu.

Sophomore & General Studies Advising Office

- Go to University Studies Advising Center Web Site

Mission Statement:

The Sophomore & General Studies Advising Office serves as an important link between the student, administrative offices and support services across the university and academic programs within the College of Arts and Sciences. Its mission is to: 1) provide academic support and advising to sophomore students in the college through the Sophomore Year Experience program, and work to connect students to their academic program within the college; 2) provide general advising to juniors and seniors, and serve as a centralized office for student related administrative procedures; and 3) operate as an important vehicle for student recruitment and retention efforts that are self or institutionally initiated. The Sophomore & General Studies Advising Office strives to be easily accessible and immediately responsive to students,
faculty, and staff.

**Services Provided:**

1. **Sophomore Year Experience:** Promotes academic success and retention among sophomore students through the Sophomore Year Experience Program. This includes conducting ongoing reviews of sophomore students’ academic progress, providing counseling and direction to sophomores in their selection of a major appropriate to their academic and professional goals, and ensuring that students have declared a major by the end of their sophomore year. The SYE program also intervenes with sophomore students who are in academic jeopardy through the Achieving Success & Academic Progress (ASAP) program.

2. **General Studies:** Provides general advising to students in the College of Arts & Sciences, and serves as a resource center for faculty advisors by reviewing student academic progress when requested by major field department for juniors and seniors. The department also provides an initial orientation and credit evaluation for transfer students, and processes a final graduation check for college requirements of graduating seniors.

**Athletic Advising Program**

- Go to Athletic Advising website

This program is designed to supplement the course work of all student-athletes by providing study sessions, tutoring, and academic advising. All student-athletes are under the auspices of the Athletic Academic Advising Program to ensure compliance with NCAA standards. For more information, contact (216) 687-4824.

**University Studies Outreach Programs**

- Post-Secondary Enrollment Options Program (PSEOP)
- Senior Year Acceleration Program (SYAP)
- Project 60 Program
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**Post-Secondary Enrollment Options Program (PSEOP)**

- Go to PSEOP information

The PSEOP Program is a state-funded program which offers qualified high school juniors and seniors the opportunity to gain valuable college life experience and earn credit while supplementing their high-school college-preparatory curriculum. Cleveland State University believes that motivated and dedicated high-school students who participate in this program will profit immensely from the opportunity to interact with college students, faculty, and staff, and experience firsthand the benefits and advantages of an urban university.

Admission to the PSEOP program is based on the student's high-school grade performance, passing marks on the high-school proficiency exam, and the SAT and/or ACT exam scores. Students who are admitted to the PSEOP Program are eligible to enroll in courses for both high-school and college credit. Once enrolled at Cleveland State, PSEOP students are held to the same standards as regular undergraduate students.

For more information about the PSEOP Program, contact the Office of Admissions at (216) 687-2100, or the University Studies Advising Center at (216) 687-2279.

**Senior Year Acceleration Program (SYAP)**

The SYAP Program offers qualified high-school seniors the opportunity to take two college courses per semester while completing high-school graduation requirements. It is also possible for a student to take a course or two during the summer between the junior and senior year. Applications and information concerning the SYAP Program can be obtained by calling the University Studies Advising Center at (216) 687-2279.
Project 60 Program

- Go to Project 60 information

This program provides educational opportunities at Cleveland State University for residents of the state of Ohio over the age of 60. Students may register for classes on a space-available basis. Classes are taken on an audit basis. Tuition is free; however, students must pay for applicable program fees, their textbooks, transportation, and parking. In order to participate in this program, students must complete the Project 60 application. For more information contact the University Studies Advising Center at (216) 687-2279.

Student Support Services

- Go to Student Support Services website

Student Support Services (SSS) is a federally funded program (TRIO) that provides opportunities for academic development and assistance with basic college requirements, and offers the motivation and support needed to complete an undergraduate degree.

For more than 30 years, SSS participants have benefited from services such as:

- Academic advising
- Career planning
- Financial-aid workshops
- Academic skills sessions
- Tutorial services
- Computer application workshops
- Cultural events and off-campus activities
- Mentoring
- Assistance in enrolling in graduate and professional schools.

Eligible participants must be accepted or enrolled at CSU and meet at least one of the following criteria:

1. **First Generation**: Neither parent received a bachelor's degree before the participant was 18 years old
2. **Income**: Receive financial aid such as a Pell Grant or Voc-Rehab OR the student's taxable income meets SSS federal guidelines
3. **Disability**: Student has a documented learning or physical disability

Interested students should call (216) 687-3659 or visit the Division of University Studies at 2121 Euclid Avenue, University Center 304.

Academic Services Center

The Academic Services Center provides various forms of academic support including: placement testing for math, English and reading for new students, and tutoring services.

Placement testing is required of all new freshmen. Testing hours vary during the semester. Consult the current schedule book for dates and times.

Tutoring is available in many subjects taught at Cleveland State University. Students may sign up for as many sessions as they need to master the material.

For more information about the Academic Services Center call (216) 687-2566.
A central part of the Freshman Year Experience is the freshman orientation course, Introduction to University Life (ASC 101, BUS 101, ESC 100, FST 100). To provide a successful transition into the university community, this one-credit course must be taken in the first semester of attendance at the university. In addition, the class is a requirement for graduation for all newly admitted full-time students and is graded on a Satisfactory/Unsatisfactory basis.

The goal of the course is to facilitate success at the university by providing a forum to answer questions students may have about college and by presenting strategies to understand such issues as critical thinking, writing, test skills, faculty, classroom expectations, learning, teaching styles, time management, academic support, diversity, university policies and procedures, and career exploration.

Students who take the orientation course are advised to follow the next semester with a Career Services class, CSC 121, which explores the in-depth, long-term planning which is introduced in Introduction to University Life. For more information contact (216) 687-3734.

Instructional Course Work

All students may take course work offered by Collegiate Studies. Collegiate Studies offers courses in the areas of reading (EDB 101); English (ENG 085); and Mathematics (MTH 087, MTH 088). All courses except EDB 101 are graded on a pass/fail basis, but students receive parenthetical letter grades: S(A), S(B), S(C), U(D), U(F). The letter grades in parentheses are not computed in the student's grade-point averages. These courses are not applied toward a degree with the exception of EDB 101, yet may be prerequisites for some students to achieve academic success. These courses provide students with a foundation for further learning within the university. For more information, call (216) 687-2010 or (216) 687-3562.

Services to Students with Disabilities

Cleveland State University is committed to providing an equal opportunity to all students. Services are available to those who might need extra help because of a physical disability, communication impairment, or learning disability. This program is designed to address the personal and academic issues of students with disabilities as they become oriented to campus.

A full range of services, including Braille writers, sign language interpreters, and specialized test administration, is offered. Students receive assistance until they graduate. The CSU campus is significantly barrier-free. For information, call (216) 687-2015 or (216) 687-3633. (V/TTY)

The university also assists students with disabilities in making career decisions through the Career Services Center's Project Springboard.

FOCUS (Freshman Opportunity Center of University Studies)

FOCUS, in conjunction with the Freshman Year Experience Advising Office, is a unique center designed specifically to assist first-year undergraduate freshmen with the adjustment period that all students face. FOCUS offers a host of ongoing programs and workshops in the areas of academic support skills, first year issues, and career and major development and exploration. These programs and workshops are offered throughout the fall and spring semesters. Contact the Freshman Year Experience at (216) 687-9376 for more information.

Summer Services

University Studies encourages students to attend summer courses. The same services that are available throughout the academic year are also offered in summer, but with an advantage: students can get a head start on their education. They can receive more attention in smaller classes and avoid the fall rush. The division’s summer semester is an eight-week session (compared to the 15-week sessions during the fall and spring semesters), so students can plan to have at least a month’s break between the end of their summer course work and the start of fall classes.
Introduction

Enrollment classifications, determined individually for each student, are:

- **First Year Student.** A graduate of an accredited secondary school or alternative school option without college or university experience
- **Transfer Student.** A student previously enrolled at another college or university
- **Non-Degree Student.** A student eligible to take courses for credit but not admitted to a degree program
- **Dual Admission Student.** A student admitted to a two-year college with deferred admission to a four-year college
- **Visiting Student.** A student from another college or university

First Year

Cleveland State University's first-year admissions policy provides university access to all graduates of accredited Ohio high schools or G.E.D. recipients. Admission is on a first-come, first-served basis up to the limit of available facilities.

Depending on academic qualifications, an Ohio resident will be offered admission to one of Cleveland State University's degree-granting colleges (Arts and Sciences, Business Administration, Education, Engineering, First College, Urban Affairs) or to the Division of University Studies. Admission to the Engineering Technology program is open to junior-year transfer students only.

Your application for admission will be considered individually using the academic credentials you submit. Consideration will be given to the courses you have taken in high school, the grades you have earned, your test scores, and any other relevant information you provide.

Freshman applicants from Ohio who do not meet our minimum requirements for admission into one of the colleges of Cleveland State may be offered admission into Cleveland State University's Collegiate Studies program. This is a program of individualized supportive services — tutorial help, academic and personal counseling, and skill development — which supplements the usual freshman-year classes.

"A resident of Ohio..." shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.
Transfers

Transfer applicants are those who have attended another post-secondary institution, regardless of the number of credits earned. All previous academic records will be considered relevant to the admissions process. Transfer applicants must have official copies of transcripts for all courses completed at other colleges and universities sent directly from the registrar's offices at those institutions to the Office of Undergraduate Admissions at Cleveland State University.

Application Procedures

1. Return a completed application form to the Admissions Office, enclosing a $30 check or money order to cover the nonrefundable application fee.

2. Forward your official student transcripts. (Freshmen, send your official high school transcripts. Transfer applicants, have your former college(s) send official transcripts directly to the Cleveland State University Office of Undergraduate Admissions.)

3. Submit appropriate test scores. (Freshmen or transfer students with less than 24 semester hours should submit SAT or ACT scores. International students should refer to appropriate section for special requirements.) Freshman applicants who graduated from high school five or more years prior to enrolling at CSU are not required to submit ACT or SAT scores. Transfer students with 25 semester credits of transferable credits are not required to submit ACT or SAT results.

   Note: All documents submitted to the Office of Undergraduate Admissions become the property of CSU and will not be returned. Records submitted by applicants are not available for inspection until the student is admitted and registers for the first time.

4. When to apply. The university operates on a "rolling admissions" basis. When all the space in a program is taken, the Office of Undergraduate Admissions stops considering applications for that program. Because many programs can admit only limited numbers of new students, we urge you to apply early. In any case, you should apply by the following priority dates:

   Fall Semester Admission: July 15.
   Spring Semester Admission: November 1.

   Your application form, application fee and all required credentials must reach the university by the appropriate priority date. Applications received after the priority date cannot be guaranteed to be processed in time for that semester.

   The Office of Undergraduate Admissions is located in Rhodes Tower West 204, 1860 E. 22nd Street. Call (216) 687-2100 or toll-free 1-888-CSUOHIO if you have questions.

Foreign Language Requirement

CSU requires all students who graduated from high school in 1987 or later to have completed two years of a foreign language in high school. Students who did not complete the courses in high school must finish a first-year foreign language sequence, or take two semesters of American Sign Language and one approved foreign culture course. The deficiency must be corrected prior to the completion of 60 credits at CSU.

Students majoring in the College of Arts and Sciences should refer to this bulletin for additional information on the Arts and Sciences foreign language requirement.

The Foreign Language Requirement applies to all undergraduate students, including those who are not native speakers of English and students for whom English is a second language (unless specifically exempted in the policy on Foreign
Language Requirement: for example, post-baccalaureate students). Such students, if deficient in foreign language studies credits upon admission to Cleveland State University, may remove the deficiency by completion of appropriate courses at CSU or by verification of appropriate knowledge of language and culture through the Department of Modern Languages at CSU.

Advanced Placement Program

The Advanced Placement Program (APP) is offered under the auspices of the College Board to high-school students who have completed an official advanced-placement course. Arrangements for testing are made through the high school in which the student is enrolled. CSU grants freshman-year credit for each examination score of 3, 4, or 5. Credit is available in art history, biology, chemistry, computer science, economics, English, French, German, history, mathematics, music theory, physics, political science, and Spanish. The granting of credit for this program is administered by the Undergraduate Admissions Office.

A transfer student who received AP credit at another institution should have the official score report forwarded to the CSU Admissions Office.

Admission to Collegiate Studies

Collegiate Studies provides individualized support services, such as tutorial help, academic and personal counseling, and skill development. In Collegiate Studies, students enroll in courses that are tailored to fit their needs. The objective is to lay a proper foundation for future course work. By the end of the first year, students in the program should make a successful transfer to a CSU college. They may, however, continue to use the program's services.

A special talent category provides for the admission of out-of-state students with special athletic or artistic talent who do not qualify for direct admission to a degree-granting college. This category is limited to 30 students per year, of which no more than 15 may be athletes.
The Ohio Board of Regents, following the directive of the Ohio General Assembly, developed a statewide policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements.

Institutional Transfer

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a subset or entire set of a college or university's general education program. Transfer Module consists of 54 to 60 quarter hours (or 36 to 40 semester hours) of courses in the following areas: English, Mathematics, Arts and Humanities, Social and Behavioral Sciences, Natural and Physical Sciences, and Interdisciplinary Study.

A Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Transfer Module portion of Institution R's general education program. Institution R, however, may require...
additional general education courses beyond the Transfer Module.

Since many degree programs require specific courses that may be taken as a part of the general education or Transfer Module program at an institution, students are encouraged to meet with an academic advisor at the institution to which they plan to transfer early in their academic career. For example, students who will be majoring in any of the majors in the College of Business and Administration at the receiving institution should take Economics 201, 202, and 203 (or equivalent course at another institution) rather than the Economics 200 course listed as a part of the Transfer Module. Because of specific major requirements such as these, early identification of a student's intended major is encouraged. Advisors at the institution to which a student wishes to transfer should be consulted regarding Transfer Module and general education courses and any specific program requirements that can be completed before transfer.

### Conditions for Transfer Admission

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Associate of Arts or Associate of Science degree with a cumulative grade point of 2.0 or better for all previous college level courses.
2. The policy encourages receiving institutions to give preferential treatment to students who have not earned an Associate of Arts or Associate of Science degree but have earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses.
3. The policy further encourages that students who have not earned an Associate of Arts or Associate of Science degree or who have not earned 60 semester hours or 90 quarter hours with a cumulative grade point of 2.0 or better for all previous college level courses are eligible for admission as transfer students on a competitive basis.

### Acceptance of Transfer Credit

1. Students who have completed the Associate of Arts or Associate of Science degree with a cumulative grade point of 2.0 or better will receive transfer credit for all college level courses in which a grade of D or better has been earned.
2. Students who have not earned an Associate of Arts or Associate of Science degree will receive transfer credit for all college level courses in which a grade of C- or better has been earned.

Admission to a given institution, however, does not
guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at the institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

Appeals Process

A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and of the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolutions of individual cases of appeal from transfer students who have exhausted all local appeal mechanism concerning applicability of transfer credits at receiving institutions.
### Re-Enrollment

Former students who have not been enrolled for two semesters or more, have not graduated, have not attended another college, and left in good academic standing may re-enroll for additional coursework by completing paperwork in the Registrar's Office.

- Go to online Re-Enrollment Application Form

### Re-Admission

Former students who left Cleveland State University voluntarily (not dismissed or suspended) and attended another college must apply for re-admission as transfer students.

#### Re-Admission of Academically Dismissed Students

A student dismissed from the university who wishes to return may petition for re-admission after remaining out of Cleveland State University for at least two semesters. A student dismissed for a second time must remain out for at least four semesters. Students should not assume that all petitions will be approved.

In exceptional cases, academic deans will act on a petition for waiver of the mandatory waiting period.

A dismissed student may file only one petition for re-admission during any semester. Completed petitions for re-admission or early re-admission must be submitted at least 15 working days before the start of the semester for which re-admission is requested.

A dismissed student who has not attended another college or university in the intervening period of time need file only the petition for re-admission, which is available from the Admissions Office. The petition will be reviewed by the appropriate college's committee, which will notify the student of its decision. If the student has attended other institutions following dismissal from Cleveland State, a complete re-admission request includes: the petition for re-admission, an application for admission as a transfer student, and final official college transcripts from the other institutions. (If all work was taken at a local community college, there is no fee; however, if the course work was taken at a school other than a local community college, a $10 nonrefundable fee is required.)

If the student is eligible for admission to CSU as a transfer student, the petition will be sent to the appropriate college for a decision on re-admission.
Registration

- Registration Changes
- Administrative Withdrawal
- Maximum Registrations

Registration dates and procedures are published in the Course Schedule and posted on the Registrar's website at www.csuohio.edu/registrar.

Registration Changes

Registered students may add courses until the end of the first week of classes. Under extenuating circumstances, registered students may add courses after the first week of classes if they obtain permission from:

1. Instructor of the course to be added. Instructor must also verify that the student will be able to complete all assigned work in the time remaining.
2. Dean of the college in which the course is taught.

With the approval of the advisor, a student may withdraw from a course or from the university in accordance with the following regulations:

<table>
<thead>
<tr>
<th>Week</th>
<th>Signatures Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Withdrawals during the first two weeks are not recorded.</td>
</tr>
<tr>
<td>3-10</td>
<td>A grade of &quot;W&quot; is required</td>
</tr>
<tr>
<td>After 10</td>
<td>College petitions committee approval needed</td>
</tr>
</tbody>
</table>

As the above table indicates, after the tenth week of the semester a student may officially withdraw only by means of a petition approved by the Faculty Committee on Petitions of the appropriate college.

In order to receive approval, a student must demonstrate that the request is occasioned by circumstances clearly beyond his or her control, such as illness or job transfer to another city. A grade of F is given when a student fails to complete a course without receiving approval for official withdrawal.

An approved course change is official when the form is presented to the Registrar's Office.

- Online Course Withdrawal Form
  - NOTE: online forms processed the next business day
  - Some students ineligible to use online forms; see information on the online form page

Administrative Withdrawal

The university has the administrative prerogative to withdraw students from classes. Such withdrawals are enforced upon recommendation of instructors for a variety of reasons including lack of appropriate prerequisite course work and inadequate placement results.

Maximum Registrations

The programs printed in this catalog are considered maximum student loads. A student wishing to carry more credits than are listed in the programs may do so only with the written consent of the advisor. This written consent must be submitted at the time of registration.

The privilege of carrying a maximum load of as high as 18 semester credits per term without petition is granted to any student below the rank of senior who has a grade point average of 3.25 and to any senior who has a GPA of 3.00.
Undergraduate Students Taking Graduate Courses

An undergraduate student who is pursuing a baccalaureate degree at Cleveland State University may be granted permission to take one or more (maximum of nine credit-hours) graduate courses at the 500 level if the student meets all the following conditions:

1. The student must be within 30 hours of graduation.
2. The student must have an overall grade point of 2.75 or better through the preceding semester.
3. The student must have a 3.00 or better grade point average in the major field.
4. The student must obtain permission from his or her advisor, the instructor of the course, and the department chair, via signature on the Undergraduate Request for Graduate Course form.

An undergraduate student who is deficient in any of the above respects may not take a graduate course without the approval of the academic dean of the college where the course is offered and the graduate dean. Undergraduate students may not register for 600- to 800-level graduate courses.

Credit for these courses, up to a maximum of nine credits for courses where the grade received is B or above, may be applied at a later point to a graduate degree program provided that the credit was not used to satisfy baccalaureate degree requirements. Internal transfer of credit is subject to Graduate College transfer credit regulations.

Postbaccalaureate students enrolled at the undergraduate level may not register for graduate-level classes.

Inter-College Transfer

A student wishing to transfer from one college of the university to another may do so with the written consent of both deans. The transfer request is initiated with the dean of the college in which the student is currently enrolled.

Transient Status for Current CSU Students at Other Schools

Transient status is approved for eligible students in good standing who request it, via a form available from the Registrar, to the limit of eight semester credits over the course of their career at CSU. This is regardless of the reason for the request, provided that the course or courses the students wish to take are approved.

Students who are in their last 30 credits of work at Cleveland State University — as mandated by the university's residence requirements — and those with junior standing wishing to attend a two-year college, must seek approval of transient status by petition to the University Petitions Committee.

Prior approval must be obtained by the student to ensure acceptance of transient credit, as follows:

1. Undeclared majors must gain approval of the assistant dean and dean
2. Declared majors must gain approval of the faculty advisor and dean

Students will not be approved for transient status beyond the overall limit of eight semester credits, except when the course or courses to be taken are not offered at Cleveland State and can be justified in terms of their program.

Cross Registration

Full-time CSU students, in good academic standing, can cross-register for a course each semester on a no-fee basis at 14 local colleges and universities. This status is designed to enhance the educational programs of students by allowing them to register for courses not offered at their home school. Cross registration forms can be obtained in the Registrar's Office, University Center, Room 400. Prior approval of the student's dean is required, and students should be aware of the scheduling differences at each institution.

Students must remain at full-time status to be eligible for this program.
Credit for Study Abroad

A student who seeks credit for study abroad should consult in advance with the study abroad coordinator, who will assist the student in obtaining approval for plans.

To be eligible for foreign study, a student must have a university GPA of at least 2.00. Graded credit is awarded only for academic work completed in CSU programs, at Ohio state universities, and at other institutions with which CSU has academic agreements. A student who wishes to earn graded credit in a study-abroad program must request graded credit as part of his or her plan for study-abroad, prior to departure. Final authorization of transfer credit is given after the student presents to the study-abroad coordinator documentation showing fulfillment of approved written plans for credit and after review by appropriate academic departments.
Introduction

The CSU Credit by Examination Program permits a student to begin college work at a level consistent with academic background, thus avoiding the repetition of material already mastered. It also allows a student to pursue a more flexible schedule and reduce time required for graduation. Students may be granted credit by examination upon first enrollment or after matriculation.

The four types of examination for credit recognized by CSU are the Advanced Placement Program, with no limit on the number of credits which can be obtained; departmental examinations, with a 30 semester-hour limit; College Level Examination Program/General Examinations, 30 semester-hour limit; and College Level Examination Program/Subject Examinations, also a 30 semester-hour limit.

The following regulations apply to the Credit by Examination Program:

1. Credit is available only to matriculated, degree-seeking students.
2. Credit granted for successful completion of an examination will be entered on the student's permanent record as hours earned. A grade is not assigned.
3. If a student does not receive a score high enough for credit, no entry is made on his or her permanent record.
4. Credit for the College Level Examination Program (CLEP)/General Examinations or Subject Examination will not be granted for areas of study or for particular courses in which the student has already earned or been granted equivalent CSU credit.
5. Generally, CSU does not approve for credit the score made when an examination has been repeated.
6. Credit will not be granted for a course in a learning sequence if the student has previously earned or been granted credit for a more advanced course in that sequence.
7. Credit for CLEP may not be a part of a student's residence requirement. On the other hand, credit for departmental examinations may be granted as part of the residence requirement.

All students are urged to discuss their plans with their academic advisors before taking any examinations for credit.

College Level Examination Program

The College Level Examination Program (CLEP) is offered under the auspices of the College Entrance Examination Board. The
Examination Program is divided into two parts: General Examinations and Subject Examinations. Both types of examinations are administered at CSU's Testing Center, Room 253B, University Center, as well as at other testing centers across the country.

Those who seek credit through CLEP after completing CSU course work are cautioned to determine in advance from their advisor whether such credit will duplicate credit already earned. Transfer students who have received credit for the CLEP examinations at another institution should have the official score report sent to the CSU Admissions Office along with their college transcript.

Registration forms for the CLEP/ General or Subject Examinations are available at the CSU Testing Center in University Center.

General Examinations

The General Examinations are a series of five comprehensive examinations in the fields of English, Humanities, Mathematics, Natural Science, and Social Science/History.

The CSU policy for granting credit for these examinations is as follows:

- English - 500 minimum score, 3 hours. A department essay is required
- Humanities - 500 minimum score, 8 hours
- Mathematics - 500 minimum score, 3 hours
- Natural Science - 500 minimum score, 8 hours
- Social Science/History - 500 minimum score, 8 hours

Subject Examinations

The Subject Examinations are end-of-course examinations in 35 widely taught undergraduate courses. Examinations are available for courses taught in the departments of accounting, biology, chemistry, computer and information science, economics, English, French, German, history, management, marketing, mathematics, political science, psychology, sociology, and Spanish. CSU grants 3 to 8 semester hours for each examination completed with a score of 52, depending on whether the course covers one or two semesters of work. For certain examinations, the student is required to write an essay section as well as complete an objective section.

Departmental Examinations

End-of-course examinations are administered by various CSU departments. Each participating department chairperson decides the grading and level of achievement required for credit from the exams. A special note: the Modern Languages Department provides examinations in foreign languages not taught by the department, contingent upon the availability of a qualified examiner. Questions about this and other departmental tests for credit should be directed to the appropriate office. A fee of $20 is charged for each exam.

Assessment and Accreditation of Prior Learning Experience (AAPLE)

- Go to the AAPLE Handbook

The Assessment and Accreditation of Prior Learning Experience (AAPLE) is a credit for life experience program offered by the Maxine Goodman Levin College of Urban Affairs at Cleveland State University.

The program is designed to award undergraduate academic credit to majors in urban studies for previous substantial learning experience in settings other than the classroom. Students may earn from four to 24 credit hours; fees are approximately one-half the current tuition per-credit-hour rate.
### Attendance Requirements

A student's responsibility for class attendance is determined by the individual instructor. If a student expects to be absent for an extended period of time, notification should be given to the instructor or the college dean.

### Conduct Code

Cleveland State University has adopted certain policies which govern student conduct. A basic document detailing these policies has been written with the help of students, faculty, and staff, and adopted by the Cleveland State University Board of Trustees. The document's intent is to establish the role of students as participating members of the university community, defining their responsibilities while protecting their right to pursue legitimate educational goals.

A copy of the Student Conduct Code is available on reserve at CSU's main library and the law school library. It is also contained in the "Student Handbook," which is available from the Department of Student Life, UC 102.

- Go to Student Handbook online

### Veterans' Benefits

The Office of Admissions certifies the enrollment of a veteran to the Veterans' Administration upon the written request of the student. Veterans who change the number of hours of registration must notify the Office of Admissions immediately. Any overpayments in veterans' benefits for failure to notify the Office of Admissions will make the veteran liable for repayment.

### Student Records

- Introduction
- Right to Review Records
- Return to top

University policy, in accordance with federal law, permits students to inspect their own academic records. Students wishing to see their records may do so in the Registrar's Office, University Center, Room 400.

The university is forbidden to share student record information with third parties unless the student grants permission through a signed release.

The following is a statement of the university policy on a student's right to review personally identifiable records and the right to a hearing to challenge the content of those records. The policy has been reviewed and approved by the Administrative Council.

#### Right to Review Records

Students attending Cleveland State University have the right to review educational records which consist of official records, files, and data directly related to themselves which are maintained by department, college, or university offices. Personal files maintained by faculty or staff are excluded from coverage under this policy.

Medical and counseling records maintained by professional or paraprofessional physicians or counselors which are used in treatment or counseling with a student are deemed confidential and need not be shared with a student. Such records may be reviewed by a physician or other appropriate professional of the student's choice.

- Admissions Office
  - Admission File
  - Veteran Certification File
- Dean's Office — Graduate
  - Academic Record (Dean's Copy)
  - Admission File
- Dean's Office — Law
Academic Record (Dean's Copy)
Admission File
Placement File
Student File
Student Schedule

Dean's Office — Undergraduate
Academic Record (Dean's Copy)
Student File
Student Schedules

Department Offices
Academic Information and Student Schedule

Division of University Studies
Academic Record (Dean's Copy)
Admission Information
Diagnostic Test Information
Student Schedule

Graduation Office
Graduation Application File

Placement Office
Student Placement File
Credential File for Teaching Candidates

Police Office
Incident Reports

Registrar's Office
The following 8 records are kept by the Registrar:
Academic Record
Add/Drop Form
Change of Name Record
Grade Report
Residency Petition
Student Schedule
Transcript Request File
Transient Record

University Conduct Officer
University Judiciary Reports

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Credit Hour

The university is conducted on the semester plan, the school year being divided into two semesters, each lasting 15 weeks. Each semester credit represents approximately 15 hours of classroom instruction or the equivalent.

Grades with Quality Point Value

The following grades for undergraduate courses have quality point value and figure in the computation of the grade point average.

- A — 4.0 quality points
- A- — 3.7 quality points
- B+ — 3.3 quality points
- B — 3.0 quality points
- B- — 2.7 quality points
- C+ — 2.3 quality points
- C — 2.0 quality points
- D — 1.0 quality points
- F — 0.0 quality points

Grades Without Quality Point Value

Audit of Courses
Change of Grade

Grade Point Average
Satisfactory Unsatisfactory (S/U) Grading
Repeat Course Policy
Freshman Forgiveness
The following grades for undergraduate courses do not figure in the computation of the grade point average:

- ** - No Recorded Grade. This notation results when instructors have not turned in a grade for the student within the designated grading period. The student is directed by the Registrar's Office to see the instructor about the grade. It is recommended that instructors submit grades within 48 hours of the final examination period.

# - This notation is used to signify a course that has been repeated and for which a higher grade has replaced this grade.

I - Incomplete Grade. An "I" grade can be assigned by the instructor when all three of the following conditions are met:

1. Student is regularly attending/participating in the class and has the potential to pass the course;
2. Student has not completed all assignments and has stopped attending/participating for reasons deemed justified by the instructor;
3. The student has notified the instructor prior to the end of the grading period.

If all three conditions listed above are not met, the instructor has the option of assigning an "X" or of assigning a letter grade based on completed work. Please note that an "I" automatically becomes an "F" if not resolved by the last day of instruction of the following semester.

NA - Never Attended Grade. A grade of "NA" can be assigned when the student’s name appears on the course roster, but the instructor has no record of the student ever attending class. This neutral "Never Attended" grade does not impact term or cumulative GPA, but appears on the permanent record.

NC - No Credit. (Audit. See explanation below.)

S - Satisfactory includes SA, SB, SC grades. Equivalent to a C or better.

T - Temporary. A designation given at the end of the term when a course is scheduled to be continued beyond one term.

U - Unsatisfactory includes UD, UF grades. Equivalent to a D or F.

W - Authorized Withdrawal.

X - X Grade. The grade of "X" can be assigned by the instructor when an attending/participating student has stopped attending/participating without notification and has not completed all assignments for reasons that cannot be determined by the end of the grading period. An "X" automatically becomes an F if not resolved by the last day of instruction of the following semester.

The grade of Incomplete (I) is given when the work in a course has been generally passing, but when some specifically required task has not been completed through no fault of the student.

The date assigned by the faculty member for completion of the work for undergraduate courses cannot be later than the last day of classes of the next term following the term in which the Incomplete grade was received. (The time limit may extend up to four weeks into the fall semester for Incomplete grades received during the spring semester.) For all cases, the time limit applies whether the student is enrolled or not. If a grade change is not submitted by the end of the time limit, the Incomplete becomes an F.

Return to Grading menu | Return to top
Audit of Courses

The grade of "No Credit" is given when a student is auditing a course. Before registering for a course on an audit basis a student must obtain authorization from the dean's office. Students who audit a course pay full tuition but do not receive a grade or credit for the course. A course taken as an audit does not count toward full-time student certification.

Only students who have been admitted to the university may audit a course. Students may not change their status in a course from audit to regular grade basis, or vice-versa, after the last day to register without permission.

Change of Grade

Once a grade with quality point value has been submitted to the Registrar's Office, a faculty member may change it only because of an error in computation. A change of grade requires the permission of the dean.

Grade Change Appeal

A student who feels that she or he has received an improper grade should make the first appeals to the instructor and to the department chair.

If an agreement cannot be reached at these levels, the student is to submit the dispute to the appropriate committee within the college for review and recommendation to the University Admissions and Standards Committee, which will determine whether or not due process has been followed and will then render a final decision on the grade dispute. Students should refer to the University Grade Appeals Policy, a copy of which is available from college deans’ offices.

Grade Point Average

A student's academic standing at Cleveland State University is expressed in terms of the grade point average (GPA). This is determined by dividing the total quality points earned during a semester by the total credit hours attempted. All grade point averages are carried to two decimal places unrounded.

Satisfactory Unsatisfactory (S/U) Grading

A student who has earned at least 30 semester credits may take one course each term on an S/U basis to the limit of four courses. A student on probation is not eligible to take courses on an S/U basis during the term of the probation.

Students may select any course on an S/U basis except those in their major field and those which are specified in their curriculum by course number and/or course title. No more than one course may be used for electives in a minor field. Students may not change their status in a course from S/U to a regular grade basis, or vice versa, after the last day to register without permission.

The S grade is defined as C or better, and neither the S nor the U will have any bearing on the student's term G.P.A. or cumulative G.P.A.

Repeat Course Policy

A student may repeat a course in which a grade of C, D, or F was earned. (C+ grades are not included in this policy.) No more than two repetitions of any course will be allowed under this policy. Only the highest grade earned for the course will be considered in calculation of Hours Earned, Quality Points and GPA. Other grades for the same course will be indicated with a "Repeat" notation. This policy applies to all undergraduate courses that do not have an individual repeat course policy as indicated in the course description.
Students are required to submit a "Repeat Course Form" to the Registrar's Office (UC 400) in order to be considered for this policy. Students are urged to seek advice concerning the appropriateness of this option; therefore an advisor's signature is required. This form must be submitted prior to the last day to register without permission for any term.

This policy is applicable to courses taken earlier but NOT repeated. IT is NOT retroactive to courses already repeated.

**Freshman Forgiveness**

**Conditions:**
1. Open only to new freshmen who were admitted summer 1993 or later. All other students, including transfer students, may petition the University Petitions Committee for inclusion in the Freshman Forgiveness Option.
2. Courses taken within the first 30 credit hours in which a grade of F or D was earned may be repeated.
3. Up to a maximum of 12 credit hours of course work may be repeated.
4. The repeated grade will appear on the semester grade report (be it higher or lower). Each course may be repeated only once.
5. The original course, grade, and — where applicable — credit hours earned, will be deleted from the transcript.
6. The course(s) must be repeated prior to earning 60 credit hours.

**Process:**
1. To apply for Freshman Forgiveness, the student must complete a Freshman Forgiveness Form, available from the student's department or the college dean's office, and submit this form to the Registrar's Office at the same time that the student is registering to repeat the course.
2. If the student has already repeated the course without submitting the Freshman Forgiveness Form at the time of registration, the student may apply for Freshman Forgiveness by way of a petition to the University Petitions Committee.

**Academic Dishonesty**

The university policy on undergraduate academic misconduct is outlined in a statement available in the college offices. Initially, a faculty member is expected to deal with academic misconduct by assessing the appropriate penalty as recommended in the Academic Regulations section.

If students disagree with either the charge or the penalty, they may seek redress through the department chair and the dean. If academic misconduct is determined to have taken place, the student is informed of the decision, the penalty is imposed, and the misconduct recorded in the college and in the Registrar's Office. The entry remains on the student's record for a period of three years or until the student graduates, whichever comes earlier. It is removed thereafter unless the student has been found guilty of a second offense.

The academic misconduct procedure provides for an appeal through the University Academic Misconduct Review Committee. If the committee determines that no violation has occurred, it will authorize the removal of the notation from the record. Otherwise, an appropriate penalty will be assessed.

**Transcript Requests**

A student transcript cannot be processed without written authorization from the student. Transcript Request Forms may be submitted in person in the Registrar's Office or downloaded from the Registrar's website at [www.csuohio.edu/registrar](http://www.csuohio.edu/registrar) and mailed with payment to the Registrar's Office.

Transcripts may not be released for students who have an outstanding financial obligation to the university or if a "hold" has been placed on the student's record by a university official for another authorized reason.

One should allow two to three days for processing; longer during peak times such as the end of a term.

Current charges and processing instructions are available at [www.csuohio.edu/registrar](http://www.csuohio.edu/registrar)
Amended Academic Standing Rules For Undergraduate Students (effective the end of the 2003 Fall Semester)

The standard for maintaining good academic standing as an undergraduate student at Cleveland State University will change effective the end of the 2003 Fall Semester.

All undergraduate students will need to maintain a minimum cumulative grade point average (GPA) of 2.0 to remain in good standing. Students will be placed on probation the first time they fall below a cumulative GPA of 2.0 or receive a GPA below 1.0 for any given semester.

Students with 60 hours of earned credit or less who fail to achieve a 2.0 after a semester on probation will be reviewed by their college for probation/dismissal actions. Evidence of substantial academic improvement will be required for continued probationary standing.

Students with more than 60 hours of earned credit who fail to achieve a 2.0 after a semester on probation will be automatically dismissed. Petitions requesting a reversal of the dismissal action will be acted upon by the dean of the student's college.

Academic Standing Rules through the 2003 Fall Semester

Good Standing (through Fall Semester 2003 only)

To be in good academic standing, students must maintain the minimum cumulative average required for the number of credits completed. Academic action is taken if the cumulative average falls below the minimum required for the number of credits completed, if a term average is below 1.00, or if a second consecutive term average below 2.00 is earned when a student has completed over 60 credits.

Academic standing shall be determined, and appropriate academic action shall be taken, at the completion of each term for each student. Grades of I (Incomplete) shall be omitted from this determination.

<table>
<thead>
<tr>
<th>Credits (Higher of Earned or Attempted)</th>
<th>Minimum Cumulative Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-15</td>
<td>1.50</td>
</tr>
<tr>
<td>16-30</td>
<td>1.60</td>
</tr>
<tr>
<td>31-45</td>
<td>1.75</td>
</tr>
<tr>
<td>46-60</td>
<td>1.90</td>
</tr>
<tr>
<td>Above 60</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Academic Warning

Students with a term or cumulative average of less than 2.00, but not subject to probation, will have the notation "academic warning" on their grade form. This notation is not an academic action and will not appear on the permanent record.

Probation

Academic action will be taken on the basis of a student's performance at the completion of each semester. Students will be placed on probation by the Registrar the first time they fail to maintain the appropriate minimum average as listed in the box above.

However, students who earn a term average below 1.00 are subject immediately to probation/dismissal review rather than being placed on probation. Students will be removed from probation if they earn the required grade point average.

Probation/Subject to Dismissal Review

Students who do not meet the requirements for good standing the second time will be subject to probation/dismissal review by the Faculty Committee on Academic Standards of their college. This committee authorizes the Registrar to assign continued probation or dismissal.

If the average earned in any term is below 1.00, regardless of whether the student has had a previous probation, a student is subject to probation/dismissal review.

Special Probation for Re-Admitted Students

CSU students who are re-admitted after dismissal are on special probation for at least one term or until their GPA reaches 2.00.

To avoid being subject to dismissal again during the probationary period, students must achieve a term average of at least 2.00 until a GPA of at least 2.00 is reached.

During a student's probationary period when the GPA is below 2.00, a higher term average may be set by the Committee on Petitions as a condition of re-admission. After the GPA of a special-probation student reaches the level of 2.00, it must be maintained at this level until graduation.
The Academic Reassessment Policy of the university is designed to facilitate the return to good academic standing of students who have accumulated poor grades in the early stages of their career at the university.

1. If, after an absence of at least two semesters, the student has a university GPA below 2.00 and has applied for and received readmission and re-enrollment.

OR

2. If the student is currently enrolled and has completed at least 50 semester-hour credits with a GPA below 2.00, and if the student, in the most recent 16 or more credits, has earned a GPA of 2.00 or better.

A student approved for reassessment candidacy starts at that point with a credit total representing the credits earned in all courses with a grade of C or better. For this adjusted credit total, a GPA of 2.00 is assigned with appropriate quality points. All credit previously earned with a grade of D no longer is applicable toward graduation.
Academic reassessment becomes official when the student has completed 16 additional credits with a grade point average of 2.00 or better (called the "candidacy period"). An appropriate entry on the record indicates at what point the GPA was adjusted because of academic reassessment. If a student fails to earn a GPA of 2.00 during the candidacy period, or is dismissed during the candidacy period, academic reassessment is canceled and academic standing is determined by whatever action is called for by the actual unadjusted GPA.

A student may also apply for academic reassessment retroactively, by submitting a petition to the College Petition Committee. For retroactive reassessment, the student must meet the requirements for reassessment eligibility described above and have completed the candidacy period successfully. If approved, the GPA is adjusted to a 2.00 for the term just prior to the start of the 16-credits candidacy period in which a GPA of 2.00 or better was earned.

Academic reassessment does not entail any removal of courses or grades from the record.

A student granted reassessment may petition for waiver of a required or prerequisite course in which a grade of D was received before being a reassessment candidate. Under no circumstances, however, can a student receive credit for such a course. Waiver of a course does not reduce the number of hours required for graduation, and a waiver can not be granted during the period of reassessment candidacy.

Dean's List
A full-time student (12 credits or more per semester) or a part-time student, completing a 12-hour step who has earned a grade point average of 3.25 or better, is placed on the Dean's List for excellent academic performance. The Dean's List is calculated on credits earned in course work for which grades of A through F are given. Credit earned in a course for which the grade of Satisfactory is achieved will not be counted as part of the 12 semester credits minimum for full-time status.

Graduation Honors
Students who have earned cumulative grade point averages, calculated to two decimal places unrounded, between 3.30 and 4.00, graduate with the following honors:

- 3.30-3.59 Cum Laude
- 3.60-3.79 Magna Cum Laude
- 3.80-4.00 Summa Cum Laude

Graduation Honors for Transfer Students
If a student has transferred to Cleveland State University, graduation honors will be based on the average for Cleveland State University work or the average for all college work, whichever is lower. In determining the grade average for graduation honors, the Cleveland State University method of computing grade point averages will be used.
The faculty of each college determines the minimum credit hours a student in that college must complete in order to graduate. In no case shall this be fewer than 120 semester credit hours.

Degree candidates must attain a GPA of at least 2.00 for all work, and in order to graduate, a student must complete the last 30 credits of work at Cleveland State.

If you receive an Incomplete (I) or incomplete for reasons undetermined (X) grade during your final semester, your date of graduation will be the end of the semester in which the instructor submits the grade change to the Registrar's Office.

Residence Requirements

A minimum of 24 credits of upper-division course work must be earned in residence at Cleveland State. The smaller of 16 credits or 50 percent of the departmental credits comprising a major must be earned in residence at Cleveland State. The smaller of nine credits or 50 percent of the departmental credits comprising a minor must be earned in residence at Cleveland State University.

Residency is defined as credit earned at CSU or through an approved program such as exchange programs.

Application for Graduation

Degree candidates are encouraged to apply for graduation two semesters before their expected graduation date. Graduation applications can be obtained from the Graduation Office, University Center, Room 400, (216) 687-3870 or (216) 687-5135.

Second Degree

A student may earn two different baccalaureate degrees in the same college or one degree from each of two colleges. In either case, the student must complete all the requirements for both degrees. The student may receive each degree by applying and paying the fee for each.

A student who has received a bachelor's degree from another accredited college or university may earn a bachelor’s degree at Cleveland State University by fulfilling all the degree requirements and the 30-credit residence requirement.

Presence at Commencement

Students will be expected and encouraged to attend commencement. However, those choosing not to attend may absent themselves simply by notifying the university.

Exceptions and Petitions

Degree candidates are responsible for meeting all university graduation requirements. No university official may relieve a student of applicable academic requirements. Exceptions to university requirements are considered only after a formal petition is presented to the Petitions Committee of the University Admissions and Standards Committee.

Exceptions to college and departmental requirements are considered only after presentation of a formal petition to the appropriate college or departmental committee. Students should consult with their advisors before submitting such a petition and should be aware that petitions are not automatically approved.
Graduation Requirements

- Catalog Rights
- Special Exceptions
- Return to top
- Go to Graduation Office Web Site

Catalog Rights

Degree candidates are responsible for meeting university graduation requirements stated in the Cleveland State University Catalog for the academic year in which they are admitted to Cleveland State University. The 1996-'98 CSU Catalog describes the old curriculum. Colleges reserve the right to alter the content of courses, add and delete courses, and change required curricula. It is the student's responsibility to remain informed about such changes. No university official can relieve students of this responsibility; however, a student may petition the appropriate committee for an exception to be made. The date of graduation is determined by the completion of requirements.

Return to Graduation Requirements | Return to top

Special Exceptions

Students who interrupt their enrollment in the university for one full academic year or longer, consecutively, including summer, must meet the university graduation requirements of the Catalog in effect when they re-enroll. However, returning CSU students who, at the time they left CSU, had completed the Freshman English and the Group 1 - IV requirements, could return under the old university graduation requirements.

If students have completed no course work within the one-academic year period, they are considered to have interrupted their enrollment, even if they registered during the one-academic year period.

If the students return earlier than the one-academic year period, the university graduation requirements of the Catalog in effect at the time of original admission to Cleveland State must be followed.

However, re-admitted students who dropped out of the university, enrolled at another collegiate institution, and subsequently returned to CSU must follow the university graduation requirements of the Catalog in effect at the time of their re-admission.

Students transferring from Cuyahoga Community College, Lakeland Community College, or Lorain County Community College have special catalog rights. (See Catalog Rights.)

Return to special exceptions | Return to top

Academic Assessment

In order to monitor the effectiveness of academic programs and improve instruction and learning, the university assesses the academic achievement of students in undergraduate general education and in major programs of study. After satisfactory completion of general education or major-field course requirements, students will be examined and/or have class papers or projects evaluated to determine whether the university's expectations and goals for learning in general education and major fields of study are being achieved.

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General Education Requirements

See the description on the General Education Requirements website for the university's General Education Requirements (GenEd) for undergraduate students.

Students may obtain the GenEd brochure that lists the "approved" courses by contacting collegiate academic advising offices or the Undergraduate Admissions Office.

Students must keep up with changes in the GenEd course listing by referring to the latest semester course
schedule book and also by visiting the CSU Homepage.
http://www.csuohio.edu/acaffairs/gened.htm

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**Note:** Please see the current Course Schedule Book for additional information.

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### Bursar's Information

- **Fee Information**
- **Refund Schedule**
- **Miscellaneous Fees**
- **Federal Refund Policy**
- **Student Financial Responsibility**
- **University Minimum Refund Policy**
- **Payment Methods**
- **Unpaid University Student Accounts**
- **Refund of Fees**
- **Go to Bursar's Office website**
- **Return to top**

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### Fee Information

- [See Bursar's Office Fees page](#)

**Tuition/Fees for Undergraduate students as of Spring Semester, 2002:**

#### Ohio Resident

<table>
<thead>
<tr>
<th>Hours</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-11</td>
<td>$197.00 per credit hour</td>
</tr>
<tr>
<td>12-18</td>
<td>$2,364.00 per semester</td>
</tr>
<tr>
<td>18+</td>
<td>$2,364.00 + 197.00 per credit hour over 18</td>
</tr>
</tbody>
</table>

#### Out-of-State Resident

<table>
<thead>
<tr>
<th>Hours</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-11</td>
<td>$388.00 per credit hour</td>
</tr>
<tr>
<td>12-18</td>
<td>$4,659.00 per semester</td>
</tr>
<tr>
<td>18+</td>
<td>$4,659.00 + 388.00 per credit hour over 18</td>
</tr>
</tbody>
</table>

**College of Engineering Technology Fee:** $5.25 per credit hour

### Tuition Allocation

<table>
<thead>
<tr>
<th>Component</th>
<th>1 Credit Hour</th>
<th>12-18 Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hour</td>
<td>$175.93</td>
<td>$2,111.16</td>
</tr>
<tr>
<td>Inst. Fee</td>
<td>$15.37</td>
<td>$184.44</td>
</tr>
<tr>
<td>Gen. Fee</td>
<td>$5.70</td>
<td>$68.40</td>
</tr>
</tbody>
</table>

**Please note:** Fees are subject to change without notice by action of the Board of Trustees.

For updated fee information you may reach us by email at: [bursars.office@csuohio.edu](mailto:bursars.office@csuohio.edu) or call the Bursar's Office at (216) 687-3615.
Students are expected to register several weeks prior to the beginning of the term. The Bursar’s Office mails the Registration Invoice about three to four weeks prior to the beginning of the term and the payment due date is about two weeks prior to the beginning of the term (please see the invoice for the exact Payment Due Date).

If registration takes place after the Registration Invoices have been mailed, students will not receive an Invoice. Fees may be determined as indicated above and the Payment Due Date is Thursday, prior to the beginning of the term and the same day of registration or add/drop thereafter.

Courses added after the initial registration period will require additional credit-hour fees and must also be paid as indicated above.

Students may determine their fees in the following way:

1. Students registering prior to the Registration Invoice mailing date will have their fees listed on the invoice.
2. Use the Fee Schedule to determine your fees. Include the Engineering Technology Fees as shown on the Fee Schedule and add any laboratory or other miscellaneous fees as stated in the Course Schedule Bulletin.
3. Ask the Bursar’s Office staff to calculate your fees.

All fees assessed are subject to final audit and payment in full is a prerequisite to official enrollment. Fees not paid by the Payment Due Date will be subject to Late Fees, Collection Fees, and cancellation of classes.

Miscellaneous Fees

- See Bursar's Office Fees page

<table>
<thead>
<tr>
<th>Per Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate Application Fee</td>
<td>$30</td>
</tr>
<tr>
<td>International Undergraduate Application Fee</td>
<td>$30</td>
</tr>
<tr>
<td>Proficiency Examination Fee</td>
<td>$20</td>
</tr>
<tr>
<td>Graduation Fee (final year)</td>
<td>$20</td>
</tr>
<tr>
<td>Processing Fee for dishonored checks and credit cards</td>
<td>$15</td>
</tr>
<tr>
<td>Collection Fee</td>
<td>$15</td>
</tr>
<tr>
<td>Late Registration Fee</td>
<td>$25/$75</td>
</tr>
<tr>
<td>Re-Registration Fee</td>
<td>$75</td>
</tr>
<tr>
<td>Late Payment Fee</td>
<td>$25/$50/$75</td>
</tr>
</tbody>
</table>

Miscellaneous fees are not refundable and are subject to change without notice by action of the Board of Trustees.

Student Financial Responsibility

Students are responsible for meeting their financial obligations to the university. Students with outstanding debts to CSU are not in good financial standing with the university, and may be denied all university services, including registration and transcripts.
The CSU Budget Payment Plan allows students the flexibility of spreading current fees over the semester instead of making a single full payment. The first payment of 25 percent of the total fees, $22.50 service fee and the BPP application are due by the Payment Due Date indicated on the University Invoice. The remaining balance is broken down to three additional equal payments. You will receive a University Invoice before each payment is due.

A new BPP application must be submitted each term.

For the Summer Semester the Budget Payment Plan is broken down to only three installments.

Fees for the Budget Payment Plan per term are:

- Service Fee: $22.50
- Late Fee: $10.00

Complete descriptions and applications are available at the Express Payment Center outside the University Center Room 460 Lobby or by calling (216) 687-3615. This program and the fees listed herein are subject to change.

Budget Payment Plan for Students with Bank Loans

This plan is available to students whose bank loan applications have been processed by the Office of Student Financial Assistance and forwarded to the lender for approval. This modified plan covers fees up to the amount of the anticipated loan disbursement. The student will be required to pay the amount of fees in excess of the loan. Students may obtain a Bank Loan Edition of the Budget Payment Plan Application from University Center Room 460. This program and the fees listed herein are subject to change.

Cash Payments

are accepted at the Bursar's Office, University Center, Room 460. To avoid lines, payments by check can be deposited at the Express Payment Center, outside the University Center 460 lobby.

Check Payments

should be made payable to "Cleveland State University" and returned to the Bursar's Office by your Payment Due Date along with the remittance portion of the University Invoice. Include your Student ID number on your check. Postdated checks will not be accepted. The fee for a dishonored check is $15 plus late fees. A returned check does not cancel your registration.

Credit Cards. MasterCard, Visa, and Discover are the credit cards accepted by CSU. The charge form, which appears at the bottom of your University Invoice, must be completed and deposited into the Express Payment depository or mailed to the Bursar's Office. Credit card payments may also be faxed to (216) 687-3619. Your credit card number, expiration date, signature and I.D. number must be included. The fee for a dishonored charge is $15 plus late fees. A returned charge does not cancel your registration.

Fee Authorization Program

forms may be obtained from Human Resources, Room 201, Fenn Tower. The completed form must be returned by the Payment Due Date as full or partial payment. Other fees must also be paid by the Payment Due Date.

- Download Fee Authorization Form from this page: http://www.csuohio.edu/HRD/page3.html

Fee /Tuition Reimbursement: Tuition Reimbursement Deferred Payment Plan is a deferred payment plan for students who have a tuition reimbursement benefit from their employer. This plan is available to any student who is in good financial standing with the university. The completed application, employer verification, and initial payment must be submitted to the Bursar's Office by the Payment Due Date on the University invoice.

Financial Aid

requires that all processing be completed and eligibility requirements met before the Payment Due Date for funds to transfer into your account in order to avoid late fees.

If the financial aid posted to your account is more than the amount owed CSU, fees will be paid in full and the credit balance will be refunded to you.

If the financial aid posted to your account is less than the amount owed CSU, you must submit payment for the balance by the Payment Due Date.
If your financial aid is not available by the Payment Due Date, you must pay fees by another method. Two weeks after financial aid is applied to your account, any credit balance will be refunded to you by check.

- Go to Financial Aid Office website

**Perkins Loan**

Students are required to complete a loan packet and promissory note with the CSU Financial Aid Office. Funds will be credited to your account by your Payment Due Date. If the loan is less than the required payment, the balance must be paid by another method by the Payment Due Date.

**Staff Development**

Is available to faculty and staff. Staff Development covers 6 undergraduate credit hours or the dollar equivalent up to 6 undergraduate credit hours for continuing education courses. The form may be obtained from the Human Resources Department, Room 201, Fenn Tower. Faculty and staff must return the completed form by the Payment Due Date as full or partial payment. Other fees must be paid by the Payment Due Date by another method.

- Download Staff Development Form from this page: [http://www.csuohio.edu/HRD/page3.html](http://www.csuohio.edu/HRD/page3.html)

**Third Party Sponsors.**

A letter of authorization (on company letterhead), purchase order, or agreement, must be submitted to the Bursar's Office by the Payment Due Date.

The document must include the student's name; Social Security number; or CSU ID number, and conditions of payment, such as maximum credit hours or dollars to be billed. If the document is for more than one term, a copy must be submitted to the Bursar's Office each term by the student. The student is responsible for any charges not paid by the sponsor by the Payment Due Date. Submit payment with the bottom portion of the University Invoice. Should the sponsor fail to honor CSU's invoice in full, the student will be billed for the amount due and charged late fees.

**Tuition Grant Recipients and Graduate Assistants**

Must pay any additional fees (technology fees, lab fees, student health insurance, applied music fees, etc.), not covered by the Tuition Grant or Graduate Assistantship. Payment must be submitted with the bottom portion of the University Invoice by the Payment Due Date.

Return to Payment Method menu | Return to top

**Refund of Fees**

Credit-hour fees will be refunded based on the Official Date of Withdrawal. Registration does not automatically carry with it the right to a refund. The failure to attend classes due to business or personal reasons does not change the refund schedule. The Official Date of Withdrawal is the date the course change is presented to the Registrar's Office and will be the basis for computation of the refund. Canceled courses are dropped by individual departments at 100 percent refund. Refunds will be issued approximately two weeks from the department processing date.

Refunds for courses, which do not fall into the regular session, are refunded on the basis of the course length and based on the Official Date of Withdrawal. After dropping a workshop or intensive course, students must complete the required forms, which are available in the Bursar's Office, University Center, Room 460, to obtain a refund.

Students who drop Saturday classes need to notify the Bursar's Office during weekday business hours at (216) 687-3615 to assure the proper refund. Additional information about how to determine refunds may be obtained from the Bursar's Office.

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**Refund Schedule**

- Go to Refund Schedule on Bursar's website

For refund information, please see the current Course Schedule Bulletin or contact the Bursar's Office by email at bursars.office@csuohio.edu, or call (216) 687-3615.

Return to Bursar's menu | Return to top

**Federal Refund Policy**
University Minimum Refund Policy

The university does not issue refund checks for less than $1, unless requested by the student. Requests should be made to the Bursar’s Office, University Center, Room 460, by the 10th week of the semester.

Unpaid University Student Accounts

The University Collections Office will contact all students with unpaid accounts. If payment in full is not received, the debt will be reported to national credit bureaus.
Introduction

Cleveland State University provides quality education at moderate cost. Through various financial-aid programs, CSU seeks to help meet the direct educational expenses (tuition, books, and transportation) of students.

Need, as measured by analysis of the Free Application for Federal Student Aid, determines the student's eligibility for aid. Aid is available on a continuing basis depending on need and maintenance of the financial-aid standards of satisfactory academic progress. Students must apply each year for financial assistance. Students are awarded aid based on full-time attendance of 12 or more credit hours. Students who enroll for less than 12 hours will have their aid adjusted accordingly.

The major sources of financial assistance are university scholarships and grants, federal aid programs, state-supported programs, and a number of sponsored scholarships described in this section.

The mission of the Financial Aid Office is to maximize the use of all federal, state, university, and private funds. This philosophy is designed to obtain parity among all students, but subject to available funding.

The Financial Aid Office is located in University Center, Room 560. Call (216) 687-3764 or visit our homepage at www.csuohio.edu/fao.

Financial Assistance Application Procedure

Students need to complete the Free Application for Federal Student Aid (FAFSA) or the Renewal Application for Federal Aid to determine eligibility for all forms of federal, state, and campus-based aid programs. The FAFSA is available each January in the Financial Aid Office, as well as in high-school guidance offices and public libraries. Applications should be completed as soon as possible after January 1 to assure timely processing.

Applicants are encouraged to file their FAFSA or Renewal FAFSA online using the web. The address is: http://www.fafsa.ed.gov. A link is provided on the CSU Financial Aid home page: www.csuohio.edu/fao.

Complete the FAFSA or the Renewal FAFSA no later than the CSU priority filing date of March 1. Funding for the
Supplemental Educational Opportunity Grant (SEOG), the Federal Perkins Loan Program, The Federal Work Study Program and the University Grant and Viking Hall Grant is limited and students filing after the priority filing date may not be considered for these programs.

Students and parents may be required to submit documentation of information reported on the FAFSA if their record is selected by the Department of Education for a process called verification. The Financial Aid Office will notify students in writing if additional information is required.

The FAFSA should be completed by all students who wish to be considered for federal, state, and university financial assistance.

The CSU code number is **003032**.

To receive a determination of eligibility for financial assistance, students must be admitted into a degree-granting program at CSU.

Self-Help Opportunities

- [Cooperative Education](#)
- [Student Employment at CSU](#)
- Return to Financial Assistance menu
- Return to top

Cooperative Education

- [Go to Career Services’ Cooperative Education page](#)

The Cooperative Education Program provides a good opportunity for financing an education at Cleveland State. After the freshman year, a student in this program spends several semesters at work earning a salary. Thus the Cooperative Education Program provides a source for financial support while it emphasizes work in a field related to the student’s major. [Refer to the Special Programs section](#) for details about cooperative education.

Student Employment at CSU

- [Go to Career Services website](#)

Cleveland State University employs students in part-time jobs on campus. Campus jobs that do not require work-study eligibility are referred to as non-work-study jobs.

There is no financial aid application for non-work-study jobs. Students should consult the two job boards on campus for information about job openings and contact the campus employers directly. The job boards are located in the Rhodes Tower lobby and in University Center, ground floor. The Student Employment office is located in Rhodes Tower West, Room 280.

Types of Financial Aid

**Scholarships/Grants**: A monetary award that does not require either repayment or any specific service to be performed by the student

**Loan**: A sum of money offered with the requirement that it be repaid

**Employment**: A sum of money with the requirement that you must earn the dollars through employment
University Scholarships and Grants

University scholarships and grants are awarded to students in amounts of $100 to $6,000. These funds may be offered singularly or in combination with other types of aid.

University Grants

This program is funded by Cleveland State University to help students meet their direct educational costs. Grants are available to undergraduates who are enrolled at least on a half-time basis. Eligibility is determined by the Financial Aid Office on the basis of need.

Programs of Federal Assistance

- Federal Pell Grants
- Federal Supplemental Educational Opportunity Grants
- Federal Perkins Loan Program
- Federal Work-Study Program
- Federal Stafford Student Loan
- Unsubsidized Federal Stafford Student Loan
- Federal PLUS Loan
- Loan Disbursements
- Return to Financial Assistance menu

Federal Pell Grants

This program is the foundation of all financial aid. These grants are subject to funding by the Congress of the United States. The projected amounts ranged from $200 to $3,750 for the 2001-2002 year.

Federal Supplemental Educational Opportunity Grants

This grant is available to undergraduate students who demonstrate exceptional financial need. The grant amounts range from $100 to $4,000. The amount a student will receive depends upon need. Grants may be renewed depending upon continuing need and meeting the standards of satisfactory academic progress.

Federal Perkins Loan Program

This program is federally funded to help students meet the cost of their education. Eligibility is determined on the basis of need. Awards average from $1,000 to $3,000 per year. Undergraduates may borrow up to $3,000 for each year of undergraduate study and a maximum of $20,000 for the undergraduate degree. A student may borrow up to $40,000 for combined undergraduate/graduate study.

Perkins Loan borrowers are required to complete a Loan Information Packet that outlines a borrower's rights and responsibilities. This information packet is sent with the award letter. The student must sign a promissory note before the loan funds can be used.

Semester amounts cannot be used for registration or disbursed until the promissory note is signed.

Repayment at five percent interest begins nine months after the student graduates, leaves school or enrollment drops below 6 credit hours. Students have a maximum repayment period of 10 years. Minimum repayment is $120 per quarter.

If students enter certain fields of education or nursing, medical technology, or law enforcement, they may have all or a portion of the loan cancelled.

Federal Work-Study Program
This program helps students with financial need pay their college expenses by enabling them to work and earn money. The jobs are available on campus. A limited number of positions are available with local nonprofit governmental and community-based organizations.

Students are limited to 20 hours of work per week when classes are in session and 40 hours of work per week during vacation times. Hourly pay rates vary with the position.

Federal work-study funds are usually awarded in combination with grant and/or loan funds. The university promotes the idea that a part-time job should complement the student's program of study whenever possible.

Federal work-study job opportunities are posted in two campus locations: Rhodes Tower lobby and the ground floor of University Center.

- Go to Career Services’ On-Campus Job Postings

Federal Stafford Student Loan (Formerly Guaranteed Student Loan)

The Federal Subsidized Stafford Loan program is a need-based program whereby the federal government defers the principal and subsidizes the interest while the student is enrolled for at least 6 credit hours. Students must complete a Free Application for Federal Student Aid and a master promissory note.

The Financial Aid Office certifies a student's eligibility for the loan based on the student maintaining satisfactory academic progress and the student's willingness to repay the loan. The amount a student may borrow is determined by the student's grade level, the cost of education minus the expected family contribution from the FAFSA, and minus estimated aid.

The loan limits are $2,625 the first year, $3,500 the second year, and $5,500 years three through five with an undergraduate cumulative maximum of $23,000. Variable interest rate is adjustable July 1 with an 8.25 percent cap. Students have a six-month grace period and a minimum $50 per month repayment with 10 years to repay the loan. All first-time borrowers at Cleveland State University must complete debt management counseling prior to the release of loan funds.

Unsubsidized Federal Stafford Student Loan

This loan program is available to families who may not qualify for the Federal Subsidized Stafford loans.

Interest is charged from the time the loan is disbursed until it is paid in full. Students may pay the interest while enrolled in school or allow it to accumulate and be added to the principal amount of the loan.

Independent (based on Federal Financial Aid definition) undergraduates may borrow up to $4,000 the first and second years and a maximum of $5,000 a year if the student has completed two years of study.

The loan amounts listed are the maximum loan limits under the Federal Family Loan Program. However, students cannot borrow in excess of the cost of education at CSU minus any eligible financial assistance. The interest rate is variable, not to exceed 8.25 percent.

Federal PLUS Loan

Current interest rate is variable not to exceed 9 percent. Federal PLUS is for parents of undergraduate students only. Repayment begins on the day the loan is disbursed. Borrowers may contact their lender to see if they qualify for deferment of principal payment. Parent may borrow up to the cost of education minus estimated financial aid.

Federal PLUS proceeds are co-payable and will be mailed to Cleveland State University. PLUS loan applicants are subject to a credit check.
Loan Disbursements

Federal subsidized, unsubsidized, and Federal PLUS loan proceeds are forwarded directly to the Cleveland State University's Bursar's Office.

Programs of State Assistance

- Ohio Instructional Grant
- Part-Time Ohio Grant
- Ohio Academic Scholarship Program
- Ohio War Orphans Scholarships

Ohio Instructional Grants

The Ohio Instructional Grant Program is a state-sponsored financial aid program for undergraduate students. Ohio residents attending public institutions who qualify on the basis of need will receive between $168 and $2,070 per academic year. The program is designed to aid students from low- and middle-income families.

All students receiving this grant must be enrolled for at least 12 credit hours unless the student is enrolled in the last semester of attendance prior to graduation.

If a student would be denied OIG assistance solely on the basis of an inability to carry 12 hours because of a physical or mental handicap, the student should appeal to the Ohio Board of Regents Student Assistance Office for an exception to the 12-credit-hour requirement. This process will require appropriate documentation from the student.

Part-Time Ohio Grant

Students who enroll less than 12 credit hours per semester may be eligible for this program. The FAFSA is the only application required. Award amounts cannot exceed the tuition cost.

Ohio Academic Scholarship Program

The state funds this program to assist undergraduate students who exhibit exceptional academic ability. High school seniors who are residents of Ohio and who plan to attend an approved Ohio institution of higher learning on a full-time basis may apply.

Recipients are chosen by the Ohio Board of Regents on the basis of grade point average and performance on a competitive examination. The scholarships are awarded in the amount of $2,000 per academic year for four years of undergraduate education.

Ohio War Orphans Scholarships

This undergraduate tuition scholarship is awarded on a renewable basis to children of members of the U.S. Armed Services who incurred disability or died while in service. This program is sponsored through the Ohio Board of Regents.

Each recipient must have a cumulative grade point average of at least 2.0 by the end of the freshman year and must maintain no less than a 2.0 cumulative grade point average for each subsequent academic term. The student must also be enrolled for at least 12 credit hours.
National Guard Scholarship Program

The state of Ohio funds this program to assist persons who enlist in the Ohio National Guard after September 1, 1977, for at least six years. Awards cover the cost of instructional and general fees.

Eligible guardsmen should contact the Adjutant General's Office to apply for this program.

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### Student Enrollment Changes that Can Reduce Financial Aid Eligibility

- **Dropped Courses**
  - Federal Pell Grants
  - Ohio Instructional Grants (OIG)
  - Federal Stafford and PLUS loans
  - SEOG, Perkins Loans, Federal Work Study

- **Official Withdrawal from the University**
- **Unofficial Withdrawal from the University**
- **Retroactive official withdrawals**

There are three types of enrollment changes after aid has been disbursed that can reduce a student's financial aid eligibility. They are:

- **dropped courses** (the course will not appear on the transcript),
- **official withdrawal** (W grade) from ALL courses in a term,
- **unofficial withdrawal** from ALL courses within a term; student does NOT RECEIVE ANY earned grades (A, B, C, D, F, I, T, SA, SB, SC, UD and UF). Student has not withdrawn officially.

**NOTE:**
If a student withdraws (receives a W) from some, but not all of his/her courses, aid adjustments are not required. However, students must be actively enrolled in at least 6 hours at the time a Stafford or PLUS loan is disbursed. For example, if a student originally enrolls for 6 hours, but withdraws (W grade) in one of her/his 3-hour courses, before the Stafford is posted to the student account, the loan cannot be disbursed. If the loan was disbursed prior to the student's withdrawal from the 3-hour class, we are not required to return the funds to the lender.

**Dropped Courses:**

When a course is dropped, it will not appear on the student's academic transcript. On the transcript, it will appear as if the student was never enrolled for the course. Drops normally occur during the stated "drop period", but can occur retroactively as in the case of some medical withdrawals.

**Federal Pell Grants:**
Pell grants are based on the student's enrollment status: full-time awards (12 or more hours), 3/4-time awards (9-11 hours), half-time awards (6-8 hours) and less-than-half-time awards (1-5 hours). If the course drop results in a student no longer...
being enrolled in sufficient hours for the Federal Pell Grant that he or she received, the Pell Grant must be reduced to match the new enrollment status.

Ohio Instructional Grants (OIG):
Students must be enrolled full-time (12 or more hours) to receive OIG. If the course drop results in a student no longer being enrolled full-time, the OIG must be returned to the state. Depending on the availability of funds, the student may be able to receive a part-time OIG, which is a separate and distinct fund. Some other state funds may require full-time enrollment.

Federal Stafford and PLUS loans:
Students must be enrolled at least half-time (6 or more hours) to be eligible for a Stafford or PLUS loan. If the course drop results in a student being enrolled for less than 6 hours, all Stafford and PLUS loan funds must be returned to the lender.

SEOG, Perkins Loans, Federal Work Study:
University regulations require that students be enrolled at least half-time (6 or more hours). If the course drop results in a student being enrolled for less than 6 hours, all SEOG and Perkins funds must be returned. All FWS earnings must be transferred to university employment.

Official Withdrawal from the University:
When a student requests and receives a "W" in ALL courses, she or he is considered to have officially withdrawn from the university. Students who withdraw prior to completing 60 percent of the term have not "earned" all of their federal financial aid and a Return of Title IV Funds calculation must be performed. The unearned portion (based on the percentage of the term remaining) of the aid is returned to the lender or aid program. For example, if a student completes only 20 percent of the term, then he or she has failed to earn 80 percent of the federal financial aid that was disbursed, or could have been disbursed, prior to the withdrawal. If the return of the funds creates a balance due on the student account, the student will receive a bill from the university.

Unofficial Withdrawal from the University:
Students who do not receive ANY "earned" grades (A, B, C, D, F, I, T, SA, SB, SC, UD and UF) are considered to be unofficial withdrawals who stopped attending ALL of their courses prior to the end of the term. 50 percent of the aid used to pay direct educational costs (tuition, fees, room and board) must be returned to the lender or aid program. If the return of the funds creates a balance due on the student account, the student will receive a bill from the university.

Retroactive official withdrawals
If funds have been returned for a student based on his or her unofficial withdrawal, those funds cannot be reinstated if the student petitions for, and receives, a retroactive official withdrawal (all W grades).
Introduction

The U.S. Department of Education mandates that institutions of higher education establish standards of "Satisfactory Academic Progress" for all students receiving financial aid. Cleveland State University makes these standards applicable to all Title IV federal student financial aid, including Federal Pell Grant, Federal Family Education Loan Programs (Stafford and PLUS), Federal Work-Study, Federal Supplemental Educational Opportunity Grant, and the Federal Perkins Loan Program. These standards also apply to the Ohio Instructional Grant and the part time Ohio Grant programs.

Satisfactory academic progress evaluation measures the cumulative grade point average (qualitative measure), the total number of hours attempted by the students (maximum time frame measure), and the percentage of the academic year credit hours attempted that were successfully completed (quantitative measure). In addition to the specific measurements above, students must be eligible to continue in their program of study in order to receive federal financial aid. With the exception of students on probation and certain other students, satisfactory academic progress will be evaluated annually at the end of the summer term, which is the final term of the fall, spring, summer academic year.

Qualitative Measure:

Cumulative grade point average requirement

The minimum required undergraduate cumulative GPA is dependent upon the total number of earned credit hours according to the following schedule:

<table>
<thead>
<tr>
<th>Earned Credit Hours</th>
<th>Minimum Cumulative GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-15</td>
<td>1.50</td>
</tr>
<tr>
<td>16-30</td>
<td>1.60</td>
</tr>
<tr>
<td>31-45</td>
<td>1.75</td>
</tr>
<tr>
<td>46-60</td>
<td>1.90</td>
</tr>
<tr>
<td>Above 60</td>
<td>2.00</td>
</tr>
</tbody>
</table>

The minimum required cumulative GPA for graduate and law students is 3.0. Students must remain eligible to continue in their program of study. Students who are dismissed by the university or by their graduate college are
ineligible for federal financial aid for the program from which they were dismissed.

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**Maximum Time Frame:**

*The maximum number of hours students may attempt for their program of study*

- Students are ineligible for federal financial aid once they have attempted credit hours that equal or exceed 150 percent of the credit hours required for their program of study. (See below regarding the treatment of incomplete grades, withdrawals, the absence of letter grades and the treatment of transfer credits in the measurement of Maximum Time Frame.)

<table>
<thead>
<tr>
<th>Maximum Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Degree</td>
</tr>
<tr>
<td>Graduate and Law Degrees</td>
</tr>
</tbody>
</table>

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**Quantitative Measure:**

*Completion rate requirement*

- Students must successfully complete at least two-thirds (67 percent) of their total cumulative credit hours attempted each academic year. Successful completion is defined as receiving a grade of A, B, C, D or S. Multiterm courses, in which a "T" grade is assigned pending completion of the final term, are treated as successfully completed during the initial term(s).

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**Treatment of selected grades**

The Financial Aid Office has specific policies defining the effect of incompletes, withdrawals, absence of assigned letter grades, and transfer credits in the measurement of attempted and successfully completed hours.

**Incompletes:**
Credit hours in which a student receives an "I" (incomplete) are included in the number of attempted hours, but do not count as successfully completed hours.

**Withdrawals:**
Credit hours in which a student receives a grade of "W" are included in the number of attempted hours, but do not count as successfully completed hours.

**Absence of an assigned letter grade:**
Credit hours in which a student receives a grade of **, I, NA, U, W, or X are included in the number of attempted hours, but do not count as successfully completed hours. Multiterm courses, in which a "T" grade is assigned pending completion of the final term, are treated as successfully completed during the initial term(s).

**Transfer credits:**
Transfer credits are included in the total number of attempted hours for the measurement of maximum time frame.

**Repeated hours:**
Hours for repeated courses as well as the initial hours for those courses are all included as attempted hours.

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**Probation**

At the end of the academic year, students (who are not currently on probation) who do not have the required GPA and/or who have not successfully completed at least 67 percent of their attempted credit hours will be placed on probation for the
following academic year. Their progress will be measured again at the end of their probationary year.

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Loss of eligibility

- Students become ineligible for federal financial aid once they have attempted the maximum allowable credit hours for their program of study. If a student reaches the maximum time frame during an award year, he or she becomes ineligible to receive additional federal financial aid, and any aid that has been awarded for future terms will be cancelled.
- Students on financial aid probation who fail to earn 67 percent of their attempted hours during their probationary year, or whose cumulative GPA is less than that required for the cumulative number of which they have earned at the end of their probationary year, are ineligible to receive additional federal financial aid.
- Students who are dismissed by the University or their Graduate College, are ineligible for federal financial aid.

Regaining eligibility

- Students who attend school (without federal financial aid) and increase their GPA to equal or exceed the required minimum for their credit hours and successfully complete more than 67 percent of their attempted hours for the semester can request a review of their eligibility status.
- Students who are ineligible for federal financial aid due to failure to make satisfactory academic progress during their probationary period may submit a petition for reinstatement of financial aid eligibility. If the petition is approved the student's probationary period will be extended for one semester and the student will be eligible to receive federal financial aid during the extended probationary period.
- Students who regain eligibility, through either meeting the satisfactory academic progress standards or an approval of their petition for reinstatement may be eligible for Federal Pell Grants, Supplemental Educational Opportunity Grants, Perkins Loans and Federal Work Study beginning with the term in which they are determined to be eligible. They may be eligible for Federal Stafford Loans for the entire award year.

Petition for Reinstatement of Financial Aid Eligibility

Students who wish to petition for reinstatement of financial aid eligibility due to failure to maintain satisfactory academic progress may submit a written petition to the Financial Aid Office. In order to submit a petition, you must:

2. Explain the mitigating circumstances that contributed to your academic and resulting satisfactory academic progress problems. If your difficulties spanned multiple academic semesters, you must explain the factors that contributed to the deficiencies over the entire period, not just the most recent semester.
3. You are encouraged to schedule an appointment to meet with your academic advisor or dean's office representative to discuss your academic progress and identify ways in which you can improve your academic performance.
4. ALL petitioners will receive a written response as soon as possible, but no later than four weeks after submitting the necessary information.
5. If your petition is denied, you will be responsible for all charges incurred as a result of the loss of federal financial assistance.
A Message from President Michael Schwartz

Cleveland State University welcomes you to the heart of the City of Cleveland. Our students are fond of claiming that the entire city is our campus as both classroom and laboratory for study, practical experience, and recreation. We mean it when we pledge to you an education in the real world for the real world among a diverse and engaged student body.

Our goal at Cleveland State University is to create a student-focused center of scholarly excellence. We expect to be known as a place of opportunity for those who wish to know the truth of things, who are willing to strive for it, and who seek a better life for themselves and their fellow citizens. Within this student-centered supportive environment, we are committed to developing the minds and talents of all who enroll in our courses.

Part of our commitment demands that we help students to meet the challenges of living and learning in a knowledge-based, ever-changing world. Added to this challenge are the obligations to learn about and know one another. The tragic events that took place in the first year of the new millennium have forced us out of our isolation as a people and made us painfully aware that we must educate one another to be responsible members of a democratic society and citizens of the world. Our curriculum is designed for these goals. Among our 75 undergraduate programs you will find opportunities to study international trade as well as medieval society, expert systems and the environment, including opportunities for study abroad.

The university insists on creating an atmosphere that promotes intellectual growth and the creation of new knowledge. Working beside you in these discoveries will be a first class faculty. Ninety-eight percent of our full time faculty hold the highest degrees in their fields. Four out of five hold the Ph.D., a figure unmatched by any other Ohio university. You will meet these professors, not graduate students, in our classrooms and laboratories. And all of our accepted students are admitted onto the main campus, not to a branch or a two-year program within the institution. You will find that, even as undergraduates, you will be welcomed into research teams by our faculty.

We believe that a first-class education benefits not only the graduate of Cleveland State but the rest of society as well. Public and private institutions, corporations, and businesses have joined as our partners in a dynamic learning experience. With their help, the university creates an environment where the individual, the curriculum, and the community interact to achieve the highest levels of learning. The knowledge you gain during your course of studies on our campus will be invaluably augmented by your experience in the community, whether as a participant in our outstanding cooperative education opportunities, through service learning, or as an intern or
member of a ground-breaking research team. We hope that you will, in turn, employ your knowledge to solve problems, stimulate economic activity, and increase opportunity in these same communities.

This, then, is the educational philosophy of Cleveland State University. If you have been intrigued by what you have read so far, I invite you to read through the pages of this catalog, investigate our academic programs, and come visit our campus to meet our faculty.

I look forward to meeting you.

Michael Schwartz
President

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Nondiscrimination Policy and Procedure

A. Cleveland State University is an Affirmative Action/Equal Opportunity institution. No person will be denied opportunity for employment or education or be subject to discrimination in any project, program or activity because of race, color, religion, sex, sexual orientation, national origin, age, handicap or disability, disabled veteran or Vietnam-era veteran status.

B. Inquiries concerning implementation of the above policy and compliance with relevant statutory requirements, including, inter alia, Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 may be directed to the Director, Affirmative Action Office, Fenn Tower, Room 811, (216) 687-2223.

C. Students who wish to seek accommodations under Section 504 of the Rehabilitation Act of 1973 and/or the Americans with Disabilities Act of 1990 must request such accommodations and should contact either the Director of Admissions or the Office of Services to Persons with Disabilities (216) 687-2015 for information or the request accommodations.

D. Complaints of discrimination may be addressed through the Affirmative Action Office and the Student Grievance Procedure outlined in the CSU Student Handbook, copies of which are available through the CSU Department of Student Life, University Center 102, (216) 687-2048.

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Overview

The Air Force ROTC program provides professional preparation for students considering service as officers in the U.S. Air Force. The program also offers information on Air Force career opportunities and the role of the military in the American society. Courses in AFROTC are offered to Cleveland State students through a cross-town agreement with Kent State University. Students enrolled in AFROTC receive CSU credit for the courses; however, the courses are taken at KSU.

Curriculum

Registering

Courses are normally taken for academic credit as part of the students’ electives. Entering freshmen and sophomores may register for aerospace studies courses at the same time and in the same manner as they enroll in their other college courses. Junior and Seniors wishing to enroll in AFROTC should call the AFROTC Unit Admissions Officer prior to enrollment to discuss the particular requirements.

The curriculum in Aerospace Studies is divided into two parts: the General Military Course, usually taken during the freshman and sophomore years, and the Professional Officer Course, normally taken during the junior and senior years. Students who qualify will attend a four (or five) week Field Training Encampment, usually between their sophomore and junior year. Air Force officers are assigned as full-time faculty members and teach all aerospace studies courses.

Students register for an aerospace studies course and leadership laboratory. Freshmen may register for AF 101 and 103 for the fall term and AF 102 and 104 for the spring term. Sophomores may register for AF 201 and 203 for the fall term and AF 202 and 204 for the spring term. Juniors will register for AF 301 and 303 for the fall term and AF 302 and 304 for the spring term. Seniors in the AFROTC program will register for AF 401 and 403 for the fall term and AF 402 and 404 for the spring term.

Miscellaneous

Uniforms and textbooks are provided at no charge to all students enrolled in AFROTC. Textbooks are returned upon completion of each academic year or upon withdrawal from the course.

Veterans with previous honorable, active, U.S. military service who wish to enroll in the POC may receive a waiver of either the GMC or its equivalent as an entrance requirement. Veterans who meet all other requirements will be enrolled at the beginning of the junior year.

Financial Assistance

Students who demonstrate academic and leadership potential may be selected by the professor of aerospace studies to
compete for scholarships. These scholarships are for three or two years, and are awarded in all majors. The scholarship award includes tuition, laboratory fees, textbook allowance and a monthly grant of $300, tax-free.

**Incentive Scholarship Program**

Air Force ROTC students in the Professional Officer Course (juniors and seniors) who are not already on scholarship are eligible for $1,500 per semester cash scholarships, $225 per semester for books, plus $350 to $400 per month, tax free. This award is limited to four total and cadets must be in good academic standing.

**Scholarship Statement of Understanding**

Air Force ROTC scholarship recipients must meet and maintain certain academic and military retention standards and serve in the active duty Air Force after graduation.

**Contact Information**

For further information, contact the Department of Aerospace Studies, AFROTC DET 630, 104 Terrace Hall, Kent State University, Kent, Ohio 44242 at (330) 672-2182, or email afrotc@kent.edu.

**ARMY ROTC (Military Science)**

Courses in military science are offered at Cleveland State University for those who are interested in gaining general military information or who want to obtain a commission as a second lieutenant upon graduation. Army ROTC is open to both men and women and is strictly voluntary.

Military science instruction is divided into a basic course, normally taken by students during their freshman and sophomore years. No permission is required to enroll in the 100- and 200-level classes. The advanced-course classes are taken only by students in their junior and senior years.

Acceptance into the advanced (300-400 level) course must be approved by the professor of military science and is based on certain prerequisites established by the U.S. Army.

Up to 14 hours of elective credit may be earned through both the basic and advanced courses.

Military science courses include instruction in rappelling, water survival training techniques, squad tactical training, military history, officer training, leadership counseling, decision-making techniques, the military's role in a democratic society, ethics, physical training, land navigation training, and logistical aspects in the military. Other voluntary instructional activities include paintball competitions, winter skiing, white-water rafting, weekend field training exercises, Ranger Club training and the Pershing Rifles Color Guard. Qualified students can attend airborne or air assault school, mountain warfare school and northern warfare school.

During the fall semester, freshmen and sophomores have an opportunity to apply for Army ROTC scholarships, regardless of whether they have taken a military science course. The two- and three-year Army ROTC scholarships pay up to $18,000 per year for books and fees and a $250 per month stipend during the entire school year. In return, the student can request to serve either a four-year active duty tour or an Army Reserve tour upon graduation and commissioning.

A ROTC nonscholarship student in the advanced course receives $300-$400 per month throughout the school year. The student's commitment following graduation and commissioning is either a three-year active duty tour or an Army Reserve tour upon graduation and commissioning. Veterans and current members of the Army Reserve and National Guard are encouraged to participate and are generally eligible for the advanced course upon enrollment at Cleveland State University.

For further information, contact the Department of Military Science, Fenn Tower, Room 301 at (216) 687-3801 or (216) 397-4421.
Introduction

The broad mission of the Cleveland State University Black Studies Program is to provide the university community and the Greater Cleveland community with opportunities to acquire greater knowledge and a broader understanding and appreciation of the history, life, arts, culture, and experiences of African peoples and peoples of African descent on the African continent, in the United States of America, and throughout the African Diaspora. The time-span that encompasses this study of Africa, Africans, and peoples of African descent extends from the beginnings of ancient African civilization to the present.

The Black Studies Program seeks to provide information, dialogue, and experiences that contribute knowledge that serves to shape attitudes and behaviors necessary for living and working effectively and harmoniously in a multiracial, multiethnic, and multicultural society.

The Black Studies Program is under the auspices of the Office of the Provost and Vice President for Academic Affairs. The Director of Black Studies reports to the Vice Provost for Academic Affairs. The Black Studies staff consists of the director who oversees all operations, programs and activities of the Black Studies Program; the coordinator of the African American Cultural Center, who is also the assistant to the director; the coordinator of administrative services; and a secretary. The Black Studies Program provides activities and services for the enrichment, education, and enjoyment of all Cleveland State University students, faculty, and staff as well as the Greater Cleveland community.

The Black Studies Program seeks to carry out its mission through the five following instruments: The Black Studies Academic Program; The African American Cultural Center; The Black Studies Lecture, Arts and Media Series; the Jazz Heritage Orchestra; and IMAGES, a weekly Black Studies radio forum.

Black Studies Academic Program

The Cleveland State University Black Studies Program offers an interdisciplinary minor in Black Studies through approximately 87 Black Studies courses taught in 20 different departments that are housed in the College of Arts and Science, the College of Education, the College of Urban Affairs and First College. These courses include the contributions of Africans and persons of African descent throughout the Diaspora to literature, arts, culture, religion, music, drama, science, technology, education, health, communication, and dance. The courses focus on information about African and African American experiences in slavery, emancipation, segregation, desegregation, protests, and revolts, as well as, the study of black institutions, organizations, businesses and the urban experience. These courses explore the politics, philosophy, psychology, and sociology of the black experience.

The director of Black Studies, with the assistance of Black Studies professional staff members, is responsible for the administration of the minor in Black Studies. Administration responsibilities include advising students who elect a minor in Black Studies. This is done in conjunction with a member of the interdisciplinary Black Studies faculty. The director of Black Studies also serves as advisor to students pursuing a Personally Designed Major (PDM) in Black Studies through First College. The director of Black Studies is responsible for communicating with the faculty who teach the Black Studies courses and with chairpersons of departments in which Black Studies courses are taught in order to encourage the establishment of additional courses and to facilitate the smooth functioning of the Black Studies Academic Program. For more information, contact the director of Black Studies at (216) 523-7211.
The Black Studies Program operates an African American Cultural Center located in Room 103 of University Center. The center features periodic revolving exhibits about African, African American, and African Diaspora history, life, and culture. Formal and informal colloquia, films, video recordings, and programs designed for student retention are presented in the Cultural Center. The African American Cultural Center is a place where students are cordially invited to relax, engage in formal or informal discussions, study and receive tutoring. The Cultural Center is available for meetings by students, faculty staff groups and organizations, as well as community organizations and groups. The African American Cultural Center is open to students, faculty, staff and the general public Monday through Friday from 8 a.m. to 8 p.m. The coordinator of the African American Cultural Center should be contacted for scheduling events during regular hours or for use of the center on special occasions. For more information, contact the Coordinator of the African American Cultural Center at (216) 687-3656.

The Black Studies Lecture, Arts and Media Series

Lecture, Arts and Media Series. The director of the Black Studies Program and other members of the Black Studies staff are responsible for bringing to the university and the Greater Cleveland community outstanding speakers, the creative work of visual and performing artists, videos, and film. The director—in conjunction with the Black Studies staff, a student advisory council, a community advisory council, and members of the interdisciplinary Black Studies faculty—is responsible for presenting this annual series, which is an extension of the Black Studies Academic Program. One purpose of the Lecture, Arts and Media Series is to preserve and perpetuate vital aspects of African, African American, and the African Diaspora cultural experiences, especially those artists and programs of high quality, which are often neglected. Cleveland State University students are especially encouraged to take advantage of these culturally enriching and highly educational activities and events which are designed to be an extremely vital part of their total college experience. Special efforts are also made to make these events of the Lecture, Arts and Media Series available to all segments of the general public. For more information, contact the secretary of the Black Studies Program at (216) 687-3655.

"Images"

"Images" is a weekly Black Studies Program radio forum. The office of the Black Studies Program is responsible for producing the program, which is hosted by the director of the Black Studies Program. The director serves as executive producer. Engineering services are provided by CSU Instructional Media Services in the IMS studio where the forums are recorded for future broadcast. "Images" is heard each week on four different Cleveland area stations: WZAK-FM (93.1) Sunday at 5:30 a.m.; WNCX-FM (98.5) Sunday at 6 a.m.; WJMO-AM (1490) Sunday at 2:30 p.m. and 11:30 p.m.; and WCSB-FM (89.3) Wednesday at noon. In addition to discussions and conversations with local, national and international guests, "Images" is used to promote activities and events of the Black Studies Program as well as activities of other departments and units of the university. For more information, call (216) 687-3655.

Jazz Heritage Orchestra

Howard A. Mims, Ph.D., Founder; Dennis Bradley Reynolds, Artistic Director. The Jazz Heritage Orchestra (JHO) is a 16-piece professional jazz orchestra officially in residence in the Cleveland State University Black Studies Program. The artistic director, Dennis Reynolds, is former lead trumpeter with the Count Basie Orchestra and the Clark Terry Big Band. He has selected orchestra members who are some of the nation's finest jazz performers and music educators. A major mission of the orchestra is to preserve and perpetuate the musical heritage of the great African American jazz masters who were the primary creators and innovators of the art of jazz. A special aspect of the orchestra's mission is to seek out and educate young African Americans about this music which is a vital part of their heritage. Young African Americans, in particular, have few opportunities to hear great jazz and to learn about it; therefore, these outstanding musicians and educators are committed to taking their music into the schools and other venues. The orchestra seeks to develop and
expand the jazz audience locally, nationally, and internationally as it shares the music and jazz education with all peoples of all ages. The Jazz Heritage Orchestra also seeks to create a valuable legacy of its own. The orchestra is available for performances and educational residencies both nationally and internationally through the office of the CSU Black Studies Program. For information, call (216) 687-5461.
The CLASS Program

The CLASS (Cooperative Learning and Academic Success System) Program is a university retention effort designed to assist students at the critical point of entry to the university to adjust to the demands of college-level course work. The CLASS Program provides a concerted effort to support students in the critical first semester and throughout their matriculation at the university. This includes facilitating adjustment to university life; fostering broad understanding of university support services; and providing support networks of committed staff, faculty, administrators and peer mentors to guide the students successfully toward graduation from Cleveland State University.

Four peer mentoring programs focused on under-represented groups in higher education reach out to incoming freshmen to assist in their transition to college: Black Male Initiative, Black Women Initiative, Hispanic Retention Initiative and Native American Retention Initiative. The programs operate similarly under the umbrella of the CLASS Program.

Examples of the mentoring programs include the Hispanic Retention Initiative (HRI), which reaches out to all incoming Hispanic students to introduce them to strategies for success at CSU. A HRI graduate assistant maintains close contact with students to ensure use of peer mentoring, social and academic support services, and the career exploration process. HRI facilitates interaction among Hispanic students with others of similar cultures to form networks of support. The HRI coordinator organizes student participation in OMACR’s Hispanic Awareness Week and Hispanic Community Forum to further enhance involvement on campus, and monitors academic progress. The Black Male Initiative (BMI) was established by OMACR in 1991 to address the low rate of retention and graduation of African American males at CSU. BMI strives to increase the retention, achievements, graduation, and leadership skills of African American males. Participants attend workshops, lectures, off-campus retreats, intramural sports, and local and national conferences. The Kikundi (“small band of men” in Swahili) Program provides upper-class mentors to incoming African American male students. Through peer mentoring, Kikundi leaders assist African American male freshmen in their social and academic adjustment to the university, link them with services that support their success, and motivate achievement.

For more information, call (216) 687-9233.

Continuing Education

Over 15,000 adults enroll in more than 800 seminars, workshops, short courses, and conferences offered by the Division of Continuing Education each year. The division offers noncredit programs in seven major areas: business and management, community services, computers and data processing, engineering and applied technologies, hazardous materials education, continuing legal education, and nursing and allied health. Programs enable adults to keep up-to-date in their professions, acquire new knowledge, develop new skills, and enter new careers. Classes are offered at times and places convenient to adults, including off-campus sites. The division also offers custom-designed programs for business, industry, government, health, and community organizations.

Continuing Education Units of credit (CEU's) are awarded for continuing education programs. Certificates are awarded for a series of courses in specific specialty areas, such as employee benefits.

The division sends program catalogs and brochures to interested persons throughout the year. To receive free materials, write or call the Division of Continuing Education, (216) 687-4850.
Introduction

Cleveland State University offers a Cooperative Education (Co-op) Program in all undergraduate fields of study and most graduate programs. Co-op students work off-campus and on campus in capacities that are closely related to their study and career interests. Work experiences are typically scheduled during alternate semesters between the sophomore and senior years. In some cases a parallel schedule of part-time work is available.

Students benefit from participation in the Cooperative Education Program because they can pretest a career choice, work with professionals in their field, reinforce recently learned theory, obtain professional experience, refine interpersonal skills, and earn a significant portion of their college expenses.

Eligibility

There are three basic requirements for admission to the Cooperative Education Program: completion of all freshman-year requirements for a specific college, good academic standing prior to the first assignment, and completion of a one-hour, one-credit course, CSC 121 (Career Orientation). Transfer students are also eligible to participate in Co-op.

Application for admission usually is made in the freshman year or, in the case of a transfer student, during the first semester on campus.

Application requirements are satisfied when the student completes CSC 121, which presents detailed regulations and procedures for obtaining the greatest value from the co-op program, and aids students in clarifying their career goals and sharpening their job-search skills.

Academic Credit

Additive academic credit is given in recognition of the educational value of the Cooperative Education experience. One credit is given for each experience completed (CSC 300). A student entering as a freshman may earn as many as 8 co-op credits, in addition to the 1 credit earned in CSC 121. This credit is not counted toward the number of hours needed for graduation, but it will add academic hours to a student's credit total.

The academic credit maintains a student's full-time status while on a co-op job.

Administration

The Cooperative Education Program is administered by the Career Services Center. Students are assigned, during the Career Orientation course, to a center coordinator. The coordinator acts as a liaison between the university and the working community, developing co-op opportunities and maintaining an effective rapport between program participants.

Co-Op Job Placement and Scheduling

Co-op employers include businesses, industries, government and social service agencies, and school systems. Jobs are
developed with employers who will provide meaningful work experience, the standard rate of pay for the work being done, and a careful evaluation of the student at the completion of the work quarter.

Coordinators help students in the entire placement process, providing counseling and contacts. A student then applies directly and is hired on his or her own merit. Students must register for CSC 300 or CSC 400 (Co-Op Field Experience) during each semester in which they have a work assignment.

The co-op schedule, showing the semesters a student will be in school and at work, is prepared by the coordinator in consultation with the student and the appropriate academic advisor.

The co-op student typically alternates periods at work and at school from the end of the freshman year to the beginning of the senior year. Two students are often paired with the same employer, thereby keeping an opening filled at all times. Variations in length and pattern of co-op schedules are considered on an individual basis, and many factors are taken into account.

Students enrolled in the Cooperative Education Program are expected to comply with the policies, rules, and procedures governing the program which are explained in the Career Orientation course.

Honors Programs

The CSU Faculty Senate is considering the establishment of a university-wide honors program that would offer enriched academic experiences to high-achieving students. The Division of University Studies is preparing a freshman-oriented honors experience. Students with high grade point averages and a desire for academic challenge should be aware that the following departments offer honors programs for their students: Art; Biological, Geological, and Environmental Sciences; Chemistry; Economics; History; Modern Languages; and Psychology. Details can be found in the program descriptions for these departments.
International Student Services (CISP)

International student services can be obtained in the Center for International Services and Programs located at 2121 Euclid Avenue, UC 302. The center provides specifically designed services to meet the needs of over 700 international students from 82 different nations who are enrolled in an academic program at the undergraduate, graduate, or doctoral level.

CISP strives to provide the international student and international visitor with appropriate support services to bring about a positive learning experience. A variety of services are available to international students which provide academic and personal growth.

Arrival.
CISP provides an airport pickup service for first semester international students. Students are encouraged to notify CISP by mail, fax, email, or telephone of their arrival time and date. Arrangements will be made to meet the student at the airport, train or bus. Temporary housing is available at Viking Hall for a period of five days. Long-term housing at Viking Hall is also available.

Orientation.
CISP conducts an orientation at the beginning of each academic term. The orientation takes place approximately 10 days before the term begins. These programs address important issues which new international students face, such as adjustment, language difficulties, safety, housing, immigration regulations, and university academic policies and procedures.

Individual Advising.
The international student advisor provides personal, academic, and cross-cultural advising. The advising is available on a walk-in and appointment basis for short term assistance.

Immigration Advising.
CISP provides immigration advising for students on F-I and J-I visas. Questions concerning student visas, duration of status, practical training, and on-campus and off-campus work permission are among the topics covered. The center conducts weekly work permission seminars.

Academic Advising.
For students who face academic difficulty, academic advising is available. This advising is meant to assist students with difficulties not addressed by academic departments on campus. Students who face academic dismissal are advised about strategic ways to approach the remaining course work which must be completed.

Social Programming.
International students at CSU have many opportunities for social interaction with American students, fellow nationals, and individuals from over 60 countries. Two of the best ways to interact are through the Ambassador Program and the LINK program in conjunction with the Cleveland Council on World Affairs.

International Day.
Each spring, the international students on campus unite to celebrate International Day, planned by CISP. Different nationality groups create displays featuring dance, food, music and clothing, which represent their cultures.

International Student Organizations.
There are approximately 10 international student groups on the campus. They represent China, Taiwan, Thailand, Indonesia, Europe, Africa, Ethiopia, India, and Venezuela. New groups are formed every year. Each nationality group on campus is encouraged to establish its own group.
The LINK Program is a recruitment and retention effort by the Career Services Center to increase minority student participation in Cleveland State University's Cooperative Education Program. Students are recruited primarily from Greater Cleveland-area high schools and are offered a wide range of support services while pursuing their degrees at Cleveland State University.

To be eligible for the LINK Program, students must be admitted to the university and submit a written essay, written recommendations, and an oral presentation.

Mentoring and financial support are the dual purposes of the LINK Program. Each student has a peer advisor and LINK Program staff mentor as well as a corporate mentor who provides the student with direct exposure to the professional world of work. Financial support in the freshman year is a combination of financial aid and LINK scholarship support. The student's co-op wages also provide financial support. Upon completion of the freshman year, LINK students gain career-related work experience through the Cooperative Education Program.

Interested students should call (216) 687-2233 or stop by the Career Services Center located in Rhodes Tower West, Room 280.

The National Student Exchange (NSE) offers Cleveland State University students the opportunity to take course work at approximately 150 participating colleges and universities throughout 47 states including Puerto Rico, the Virgin Islands, and Guam without losing progress toward a CSU degree.

The program allows students an opportunity to experience and learn from different regional and cultural perspectives and to broaden their backgrounds, frequently through courses not available at their home campus.

Students may participate for up to one academic year without paying out-of-state tuition fees. NSE students take pre-approved courses which will transfer back to CSU.

A qualified student must have:
- Full-time status
- Minimum 2.5 GPA
- Good academic standing
- Sophomore status

Interested students should consult with the NSE coordinator, Elaine Vincent, Rhodes West 204, about costs, course selection, choice of host university and planning the best time for exchange. Call (216) 687-3711.

STARS is a faculty-driven, incentive-based mentoring program for high-ability socially and economically disadvantaged students who are preparing for graduate school and ultimately for academic careers. Administratively, STARS is a consortium of 16 Ohio universities and two community colleges, each with a campus coordinator and faculty mentors whose work with students includes:
- academic advising, guidance in the conduct of a research project, and guidance in the student's preparation for participation in at least one academic or professional conference. Now in its eighth year of operation, STARS is governed by a statewide committee consisting of the STARS coordinators from each participating campus, plus an administrator representing the Ohio Board of Regents (OBOR).

The mission of STARS is to increase the pool of individuals from traditionally under-represented groups who hold doctoral degrees and will be eligible for faculty positions in Ohio's colleges and universities. STARS Program objectives are: to develop a statewide mentoring system for high-ability undergraduate students from traditionally under-represented groups in
order to encourage their interest in academic careers and to prepare them for graduate college; and to develop a statewide system to recruit STARS students into doctoral programs in Ohio by providing them with assurance of financial assistance, typically in the form of a graduate assistantship.

Students interested in participating in the STARS Program are encouraged to contact Serreta Archer at (216) 687-5561.

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**Study Abroad Program (CISP)**

- Go to CISP's Study Abroad information

Cleveland State University offers a number of international educational activities for CSU students. These activities include the following:

**One to One Exchange/ Year-Long Programs:**
A CSU student can study in either France, Taiwan, Russia, or England as a part of a direct exchange program.

**Summer/Short-Term Study Abroad Programs:**
Every summer, or every other summer, several CSU academic departments offer summer study abroad in several areas of the world, facilitated by CISP. Examples of these are study in India (Social Work), Belize and Guatemala (Health Science), Anguilla (Anthropology), France, Germany, Spain, Mexico (Modern Languages), and China (both Modern Languages and Political Science), England (Business), and Germany (Business). Contact the department or CISP's Study Abroad coordinator for more information.

**International Internships:**
CISP, in conjunction with Career Services, offers internships in Germany for social work, business and engineering majors and in the Netherlands for computer science majors.

**Scholarships:**
Students can apply through CISP for Study Abroad scholarships. There is a general scholarship for CSU students only. Awards range from $200 to $1,000. There is also a special minority study-abroad scholarship for up to $500.

**Individual Programs:**
The Study Abroad coordinator can assist students wishing to take part in one of the CSU-sponsored programs or will assist them in locating a program which will fit academic areas.

For further information and to apply to the programs, contact the Study Abroad coordinator at the Center for International Services and Programs (CISP) at 2121 Euclid Avenue, UC 302. Call (216) 687-3910, Fax (216) 687-3965, or visit www.csuohio.edu/internat.

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**The Upward Bound Program**

- Go to Upward Bound website

The Upward Bound Program, funded by the U.S. Department of Education, offers a year-round program of educational support for high school students who wish to attend college. Upward Bound is divided into two components: the academic year and the summer residential program. During the academic year students receive a minimum of two hours individual tutoring each week as well as academic support, career counseling, and academic advising. During the summer, Upward Bound conducts a six-week residential summer program on the Cleveland State University campus that includes six hours of daily classroom instruction and off-campus cultural, educational, and recreational activities.

Eligibility of the program includes:

- Enrollment in the Cleveland Municipal Schools
- Possession of a GPA 2.0+
- Meeting the definition of a First Generation (neither parent has earned a bachelor's degree) college student
- Meeting the U.S. Department of Education income guidelines
- Enrollment in the 9th, 10th or 11th grade.

For more information call Miguel Sanders, (216) 687-2016
Cleveland State University recognizes that changes in the economy and in society require that more women must have higher education. The Women's Comprehensive Program is the university unit established to promote Women's Studies courses for all students, and to increase enrollment and address concerns of female students. It serves to systematically provide an equitable higher education experience, from recruitment and course development through exit counseling, for CSU's present and potential female students. The program is comprehensive. It focuses on academic courses, services to students, and outreach to under-represented categories of women including the woman who, after a few or many years away, must now return to school. This program seeks to integrate the concerns of and for female students into all aspects of university life. Women are particularly encouraged to make career choices with care, since career sequences in our current economy require transferable skills, and critical and analytical thinking. Students are assisted by program personnel in gaining exposure to a wide range of disciplines and professions.

The Women's Comprehensive Program administers the major and minor in Women's Studies, coordinates course offerings, and assists in the development of new courses. Women's Studies courses, listed in the Course Descriptions section of this book, are open to all. Women's Studies courses may also apply to many major fields and can also fulfill some university distribution requirements. Requirements for the major and minor in Women's Studies are listed under College of Arts and Sciences.

The Re-Entry Women's Project addresses the needs of the increasing number of adult female students whose educational goals have been deferred or delayed. They frequently must return to school amid a range of continuing commitments and claims upon their time and resources. The Outreach Program held each semester provides an informal setting to help facilitate the re-entry process. Advanced re-entry students, program and support staff, sensitive to the special concerns of women returning to school, are aides to retention.

The Women's Comprehensive Program helps to advance the university's mission of providing all students with an accurate, balanced view of the contemporary urban society in which they will serve. For further information, contact the Women's Comprehensive Program, (216) 687-4674, University Center 363.
CSU Course Abbreviations

- (ACT) Accounting
- (AF) Aerospace Studies
- (ANT) Anthropology
- (ART) Art
- (ASC) Arts & Sciences Introduction to Student Life
- (BIO) Biology
- (BLW) Business Law
- (BUS) Business
- (CHE) Chemical Engineering
- (CHM) Chemistry
- (CIS) Computer and Information Science
- (CLM) Classical and Medieval Studies
- (COM) Communication
- (CSC) Career Services
- (CVE) Civil and Environmental Engineering
- (DAN) Dance Program
- (DBA) Doctor of Business Administration
- (DRA) Dramatic Arts
- (ECE) Early Childhood Education
- (ECN) Economics
- (EDB) Education Curriculum and Foundations
- (EDC) Multi-Age Instruction
- (EDL) Literacy Development and Instruction
- (EDM) Middle Childhood Education
- (EDS) Secondary Education
- (EDU) Doctoral Education
- (EEC) Electrical and Computer Engineering
- (EET) Electronic Engineering Technology
- (ENF) English Translations of Foreign literatures
- (ENG) English
- (ENV) Environmental Studies
- (ESC) Engineering Science
- (ESE) Special Education
- (EST) Specialized Study and Field Experiences
- (EVS) Environmental Science
- (FIN) Finance
- (FRN) French
- (FST) First College
- (GAD) General Administration
- (GEO) Geological Sciences
- (GER) German
- (GET) General Engineering Technology
- (GRK) Greek
- (HCA) Health Care Administration
- (HED) Health (HPER)
- (HIS) History
- (HPR) Core Curriculum (HPER)
Course Numbering System

100- and 200-Level: Lower Division
300- and 400-Level: Upper Division
500-Level and Over: Graduate

General Course Information

Course descriptions in this section are coded as follows:

1. Course abbreviation and number
2. Course title
3. Parenthesized numerals, e.g., (4-0-4), indicate, in order, the classroom hours, the laboratory hours, and the semester credit value of each course

Prerequisites, if any, are indicated in italics at the beginning of the course description. These have been established to assure an adequate and uniform background for students in advanced classes.

Occasionally students may feel they already have the appropriate background for an advanced course because of previous training, transfer credits, or credit by examination. In such cases they must consult the chairperson of the particular department about the advisability of omitting the prerequisite.

The 300- and 400-level courses in the College of Arts and Sciences may not be taken by freshmen except with the written permission of the instructor.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 221</td>
<td>Introductory Accounting I (3-0-3).</td>
<td>Sophomore standing.</td>
<td>Prerequisite: Sophomore standing. Fundamentals of accounting theory, concepts, and practice; includes the basic structure of accounting and accounting as it is used as a basis for business using the recording of changes in financial conditions, measuring business income; introduces the concept of accounting systems and control.</td>
</tr>
<tr>
<td>ACT 222</td>
<td>Introductory Accounting II (3-0-3).</td>
<td>ACT 221</td>
<td>Prerequisite: ACT 221. A continuation of the fundamentals of accounting theory, concepts, and practice pertaining to various forms of business organizations, such as partnerships and corporations; measurement and control of costs as viewed in a departmental operation and interpretation of financial data and statements.</td>
</tr>
<tr>
<td>ACT 321</td>
<td>Cost Accounting I (3-0-3).</td>
<td>ACT 222, junior standing.</td>
<td>Prerequisites: ACT 222, junior standing. Accounting principles governing material, labor, and manufacturing overhead cost; job order; and process cost and standard cost systems.</td>
</tr>
<tr>
<td>ACT 331</td>
<td>Intermediate Accounting I (4-0-4).</td>
<td>ACT 222, junior standing.</td>
<td>Prerequisites: ACT 222, junior standing. Emphasis on accounting concepts and theory; analysis of various classes of assets and liabilities; preparation of various types of financial reports for management; introduction to alternatives in accounting theory.</td>
</tr>
<tr>
<td>ACT 332</td>
<td>Intermediate Accounting II (4-0-4).</td>
<td>ACT 331</td>
<td>Prerequisite: ACT 331. Continuation of financial accounting concepts and theory pertaining to assets, liabilities, stockholder’s equity, and various analytical processes.</td>
</tr>
<tr>
<td>ACT 361</td>
<td>Tax I (3-0-3).</td>
<td>ACT 222, junior standing.</td>
<td>Prerequisites: ACT 222, junior standing. Comprehensive examination of federal income taxation of individuals; emphasis on tax planning and recognition of tax problems.</td>
</tr>
<tr>
<td>ACT 388</td>
<td>Accounting Systems (3-0-3).</td>
<td>IST 203, ACT 331.</td>
<td>Prerequisites: IST 203, ACT 331. Business systems as viewed by the profession of accounting: system analysis, flow-charting, and system design from a range of firms with a minimum of electronic and mechanical devices to firms employing the most sophisticated types of electronic data-processing equipment; emphasis on business system design to accumulate and communicate information to officials controlling the activities of the enterprise.</td>
</tr>
<tr>
<td>ACT 422</td>
<td>Cost Accounting II (3-0-3).</td>
<td>ACT 321</td>
<td>Prerequisite: ACT 321. Managerial applications of cost-volume-profit analysis, direct and variable costing, profit planning, and distribution costs. Involves use of computer games and simulation.</td>
</tr>
<tr>
<td>ACT 441</td>
<td>Advanced Accounting (4-0-4).</td>
<td>ACT 332</td>
<td>Prerequisite: ACT 332. Parent and subsidiary accounting; accounting aspects of consolidation and mergers; accounting for estates, trusts, and insolvency; multinational accounting; and governmental and nonprofit accounting.</td>
</tr>
<tr>
<td>ACT 451</td>
<td>Auditing (3-0-3).</td>
<td>ACT 332, ACT 388.</td>
<td>Prerequisites: ACT 332, ACT 388. Audit approach; planning and procedure; treatment of adjustments and irregularities; preparing worksheets and final statements.</td>
</tr>
<tr>
<td>ACT 453</td>
<td>Information Systems Auditing (3-0-3).</td>
<td>IST 203, ACT 451.</td>
<td>Prerequisites: IST 203, ACT 451. Problems of accuracy and control in computer-oriented applications; changing audit techniques, especially loss of traditional audit trail opportunities; control problems of direct access and real-time systems.</td>
</tr>
<tr>
<td>ACT 455</td>
<td>Internal Auditing (3-0-3).</td>
<td>ACT 222</td>
<td>Prerequisite: ACT 222. The philosophy and practice of modern internal auditing techniques with emphasis on providing managers with definitive information about situations which might interfere with the accomplishment of the organization’s goals and with feedback concerning extraordinary accomplishments.</td>
</tr>
<tr>
<td>ACT 456</td>
<td>Advanced Auditing Topics (3-0-3).</td>
<td>ACT 451 or ACT 455 or equivalent.</td>
<td>Prerequisite: ACT 451 or ACT 455 or equivalent. The advanced topics in auditing include, but are not limited to, the use of quantitative methods, sampling methods, statistical sampling, analytical procedures, operational auditing, employee and management fraud, and audit administrative issues.</td>
</tr>
<tr>
<td>ACT 460</td>
<td>International Accounting (3-0-3).</td>
<td>ACT 332.</td>
<td>Prerequisite: ACT 332. A broad-based course that provides an understanding of the international dimensions of accounting. The course will include topics in financial and managerial accounting, auditing and, to a lesser extent, taxation and transfer pricing issues. In addition to the mechanics, comparative accounting systems and the process of the harmonization of accounting standards will be discussed. An examination of current international accounting literature will augment specific topic discussions.</td>
</tr>
</tbody>
</table>
ACT 462 Tax II (3-0-3). Prerequisite: ACT 361. Income taxation of corporations, partnerships, estates, and trusts; federal, estate and gift taxes; state and local taxes; methodology of researching complex tax problems. Return to top

ACT 484 Governmental and Institutional Accounting (3-0-3). Prerequisites: ACT 222, junior standing. Accounting principles, standards, and procedures applicable to enterprises operated not-for-profit; covers governmental units, institutions such as universities and hospitals, charitable organizations, fraternal organizations, religious groups, and clubs. Return to top

ACT 490 Internship (3-0-3). Prerequisites: ACT 331, junior standing, permission of chairperson. Three months of supervised practical experience with a public accounting firm or the accounting department of an industrial firm. Term report required. Return to top

ACT 491 Independent Study (1 to 3 credits).
Prerequisites: Senior standing, approval of sponsoring faculty and department chairperson. Flexible content/structure course to enable qualified students to pursue special areas of interest and competency; opportunity for independent study, field research, or other special assignments. Return to top
AF 101 The Foundation of the US Air Force I (1 hour). Survey course providing an introduction to the US Air Force and ROTC. Officership and military customs and courtesies are discussed. Foundations of Air Force communications are covered. Return to top

AF 102 The Foundation of the US Air Force II (1 hour). Survey course looking at the origin and organization of the Air Force. Selected topics contributing to an understanding of the Air Force are covered. Return to top

AF 201 Evolution of US Air Force Air and Space Power I (1 hour). Survey course to examine air and space power from a historical perspective. Course covers early flight and World War I to the Korean War and ICBMs. Return to top

AF 202 Evolution of US Air Force Air and Space Power II (1 hour). Survey course to examine air and space power from a historical perspective. Course covers period from the Vietnam War to the events in Kosovo plus a look at the Air Force today. Return to top

AF 301 Leadership Studies I (3 hours). Prerequisite: Permission. Study of leadership, professional knowledge, and communication skills required for an Air Force officer. The role of a leader as supervisor and counselor is discussed. Return to top

AF 302 Leadership Studies II (3 hours). Prerequisite: Permission. Study of quality management fundamentals and communication skills for the Air Force officer. The Air Force personnel evaluation system is discussed along with military ethics. Return to top

AF 401 Defense Studies/Preparation for Active Duty I (3 hours). Prerequisite: Permission. A look at political, economic, and social constraints upon national security and defense structure. The role of the military including joint operations is discussed. Regional defense issues studied. Return to top

AF 402 Defense Studies/Preparation for Active Duty II (3 hours). Prerequisite: Permission. The role of the military and regional defense issues are studied. Current Air Force issues and other topics relevant to preparing an Air Force officer for active duty are covered. Return to top

AF 103, 104, 203, 204, 303, 304, 403, 404 Leadership Laboratory (1 hour each). An instruction program that prepares an individual to undertake the broad range of technical tasks associated with military leadership and defense management. Return to top

Classes to Register for Each Term

Freshman Fall Term: AF 101 (1), AF 103 (1)
Freshman Spring Term: AF 102 (1), AF 104 (1)

Sophomore Fall Term: AF 201 (1), AF 203 (1)
Sophomore Spring Term: AF 202 (1), AF 204 (1)

Junior Fall Term: AF 301 (3), AF 303 (1)
Junior Spring Term: AF 302 (3), AF 304 (1)

Senior Fall Term: AF 401 (3), AF 403 (1)
Senior Spring Term: AF 402 (3), AF 404 (1)

Freshmen and Sophomores take 2 hours of ROTC courses each semester and Juniors and Seniors take 4 hours of ROTC courses each semester.
Professors: John E. Blank, Laura Martin; Professor Emeritus: Willis E. Sibley; Associate Professors: Paul L. Aspelin, Peter S. Dunham, Barbara G. Hoffman, John W. Lallo, Robert P. Mensforth, Ronald A. Reminick, Jeffrey P. Williams (Chairperson); Associate Professor Emerita: Lauren A. Corwin.

Note: With regard to course prerequisites, the word equivalent designates transfer credits deemed acceptable by the Anthropology Department Curriculum Committee.

**ANT 100 Introduction to Anthropology (4-0-4).** Exploration of broad-ranging issues common to all human beings and the contributions of anthropology to understanding those issues from a cross-cultural perspective. Each topic is explored in depth from the perspectives of all four subfields of anthropology: archaeology, physical anthropology, cultural anthropology, and linguistic anthropology. Social Science. Return to top

**ANT 101 Human Biocultural Evolution (4-0-4).** Formerly ANT 201. Outline of evolutionary theory and human evolution from the earliest primates to modern humans; the development of culture from the beginning of tool use and tool manufacture up to the agricultural revolution and the rise of civilization; consideration of human biological and cultural diversity. Social Science. Return to top

**ANT 102 Study of Culture (4-0-4).** Formerly ANT 202. Introduction to the ways in which anthropologists study living cultures and languages and the foundation for further study in cultural and linguistic anthropology. Materials from a number of the world’s cultures and languages are presented through lectures, demonstrations, videos, and films. Social Science. Return to top

**ANT 103 Ancient Civilizations (4-0-4).** Introduction to the prehistoric archaeology of Old World civilizations, with a focus on Mesopotamia, the Indus Valley, Egypt, and the British Isles; course includes an examination of current research methods in archaeology as well as contemporary interpretations and theories in the field. Social Science. Return to top

**ANT 150 World Slavery (3-0-3).** Survey of the institutions of slavery in the world’s societies, with an anthropological approach to the comparative analysis of slavery and its congeneres across cultural, historical, and social backgrounds. Topics include the role of status and power in human societies, the definition of slavery and servitude, the philosophy of slavery, ideologies of abolition, society after slavery, indigenous concepts of social classification, etc. Societies surveyed include those of the northwest coast of native North America, the Caribbean, the Middle East, the South Pacific, Korea, India, Southeast Asia, etc. Social Science. Return to top

**ANT 171 Native Civilizations of the Americas (3-0-3).** Introduction to how archaeologists excavate, analyze, and interpret past cultures, with an examination and comparison of cultural development in four separate geographical areas: the American Great Lakes-Ohio Valley Region, the American Southwest, the Mesoamerican Lowlands and Highlands (Belize and Guatemala), and the South American Highland (Peru and Equador). Non-Western Culture and Civilization, Social Science. Return to top

**ANT 221 Culture and Human Sexuality (3-0-3).** An examination of the importance of culture for understanding human sexuality, especially as it affects health. Topics covered include biological, social, emotional, cognitive, and spiritual issues related to sexuality. Contemporary political, legal, and health issues are discussed critically. Cross-listed with HSC 201. Social Science. Return to top

**ANT 227 Power, Authority & Society in Non-Western Cultures (3-0-3).** Examination of the ways selected groups of Asian, African, and Latin American societies organize themselves with respect to power and authority to cope with common social problems. Attention given to how change in political organization takes place. Cross-listed with HIS/PSC 227. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top

**ANT 260 Language, Society and Culture (3-0-3).** Introduction to the study of linguistics and language in its social and cultural contexts. Cross-listed with ENG/LIN/MLA 260. Social Science, Writing. Return to top

**ANT 270 African-American Culture (4-0-4).**
Focus on the social and cultural ecology of contemporary black communities in America; includes an examination of how cultural history shapes present activities, attitudes, and beliefs. Specific topics include family organization, sex roles, child development, and social and religious movements. Black Studies course. African-American Experience, Human Diversity. Return to top

ANT 280 Anthropology of Adulthood and Aging (4-0-4).
The nature and processes of adulthood and aging are examined in a cross-cultural perspective. Examination of differences in culture, ethnicity, environment, and ecology as they influence the experience of growing old in selected modern and traditional societies around the world. Elective course for Gerontological Studies. Human Diversity. Return to top

ANT 293 Topics in Anthropology (1-4 credits).
Topics reflect material of special or timely interest, such as food and culture, multimedia software, Mesoamerican art, expressive culture, the anthropology of music, forensics, and human anatomy. May be repeated when topics vary. Return to top

ANT 301 Biological Anthropology (4-0-4). Prerequisite: ANT 101 Human Biocultural Evolution (formerly ANT 201) or equivalent. Emphasis on two fundamental areas of human biological evolution: human population genetics and reproductive fitness and the adaptive significance of contemporary human biological variation. Topics explore the extent to which environmental factors such as geographic location, climate, attitude, diet and disease influence the growth, development, nutritional status, and demographic characteristics of extant human groups. Return to top

ANT 302 Archaeology (4-0-4). Prerequisite: ANT 101 Human Biocultural Evolution (formerly ANT 201). Detailed consideration of field and laboratory methods, theoretical models, and their applications in archaeology. Return to top

ANT 303 Cultural Anthropology (4-0-4). Prerequisite: ANT 102 Study of Culture (formerly ANT 202). Overview of the developmental history of method and theory in social and cultural anthropology. Topics include structural-functionalism, symbolic anthropology, cultural materialism, structuralism, and post-modernism. The methodology of ethnographic fieldwork is also addressed in detail. Return to top

ANT 304 Linguistic Anthropology (4-0-4). Prerequisite: ANT 102 Study of Culture (formerly ANT 202). Introduction to the study of language, culture, and society. Topics include principles of linguistic analysis (phonetics, phonology, morphology, syntax, and semantics), the ethnography of speaking, quantitative sociolinguistics, language contact and change, language and expressive culture, and language and gender. Return to top

ANT 305 Quantitative Anthropology (3-2-4). Sampling, research methods, and practical applications of parametric and non-parametric statistical procedures to anthropological analysis. Return to top

ANT 310 Human Osteology (4-0-4).
Introduction to the structure and function of the human musculoskeletal system. Familiarization with methods used in the excavation, identification, analysis, and preservation of prehistoric human skeletal remains. Includes consideration of anthropological vs. forensic perspectives, goals, and applications. Lecture content and lab exercises focus on quantitative and qualitative methods used to analyze growth and development of the skeleton, age and sex estimation, stature reconstruction, race determination, paleodemography, paleopathology, and the methods of assessing nutritional status of earlier human groups. Return to top

ANT 311 Medical Anthropology (4-0-4). Prerequisite: ANT 101 Human Biocultural Evolution (formerly ANT 201) or equivalent. Anthropological approaches to the study of disease in Western and Non-Western societies. Emphasis on beliefs in the supernatural, folk medicine, scientific vs. non-scientific medicine, and modern approaches to epidemiology. Return to top

ANT 312 Primate Behavior (4-0-4). Prerequisite: ANT 101 Human Biocultural Evolution (formerly ANT 201). Focus on the marked diversity and adaptive significance of primate behavior in nature. Dietary patterns and feeding strategies, locomotor adaptations, reproductive behaviors, territoriality, social organization, predator pressure, interspecific competition, parental investment, play behavior and learning, and primate intelligence are explored within the framework of evolutionary ecology, zoology, and geographic distribution. The extent to which primate behavior studies shed light on the evolution of human behavior is also examined. Return to top

ANT 313 Human Paleontology (4-0-4). Prerequisite: ANT 101 Human Biocultural Evolution (formerly ANT 201) or ANT 310 Human Osteology. Fossil evidence of hominid evolution and the development of contemporary human origin theories are explored in an historical, ecological, and geochronological framework. Lectures consider benefits and liabilities of analogistic, deterministic, and gender-oriented models posited to explain the evolution of behavioral and anatomical characteristics unique to humans. Laboratory exercises acquaint students with methods used to identify, analyze, and
interpret key morphological and behavioral trail complexes which serve as the basis for reconstructing the phylogeny of the Hominidae. Return to top

**ANT 320 Anthropology of Religion (4-0-4).** Prerequisite: ANT 102 Study of Culture (formerly ANT 202) OR junior or senior standing. Study of the universal components and structures of the institutions of religion and religious experience. Comparison of the diversity of religions in the traditional and modern milieux. Return to top

**ANT 321 Psychological Anthropology (4-0-4).** Prerequisite: ANT 102 Study of Culture (formerly ANT 202) or equivalent OR junior or senior standing. Anthropological approach to the study of personality, emphasizing comparison of social and cultural factors that produce culturally variable attitudes and beliefs about the nature of the social, environmental, and supernatural worlds of the individual. Topics include the structure and dynamics of symbolic expression, ecologies of stability and stress, and types of adaptive and maladaptive coping processes in the contexts of social change and modernization. Return to top

**ANT 322 Writing About Culture (4-0-4).** Prerequisites: Completion of ENG 101 and 102 and one course in anthropology. Reading and analysis of first-person accounts, scientific narratives, ethnographies, ethnologies, and anthropological fiction. Examination of how various writing styles affect communication among and between social scientists. Writing course. Return to top

**ANT 323 Visual Anthropology (4-0-4).** Students are urged to take ANT 100 Introduction to Anthropology or ANT 102 Study of Culture (formerly ANT 202) before taking this course. Introduction to the production and use of ethnographic videos and films in anthropological research and teaching. Course explores both theory and application: theory topics include ethics of production, issues of perspective, adequacy of representation, authorship and authority. Theoretical knowledge is applied in the editing of an ethnographic video from the instructor's field footage. Return to top

**ANT 324 Anthropology of Gender (4-0-4).** Students are urged to take ANT 100 Introduction to Anthropology or ANT 102 Study of Culture (formerly ANT 202) before taking this course. Exploration of the cultural construction of gender in a variety of human societies from an anthropological perspective. Includes an examination of the different ways in which males and females are thought of, treated, and expected to behave in different cultural settings, taking into account aspects of gender systems such as division of labor, stratification, gender roles, and their variation throughout the life cycle. Women's Studies course. Human Diversity. Return to top

**ANT 331 North American Prehistory (4-0-4).** Overview of the archaeology of North America, i.e., the United States and Canada. Topics include the peopling of the New World, hunter-gatherers, human settlement of the Arctic, agriculturalists, historic period aboriginal sites, burial sites, and regional developments from New England, the Midwest, the Southeast, Plains, Plateau and Northwest Coast, and California. Return to top

**ANT 332 World Prehistory (4-0-4).** Overview of the major human achievements around the world, from early humans to the development of agriculture and the rise of the state. Topics covered in this "muddle in the middle" include early humans, hunter-gatherers, Neanderthals, the Mousterian problem, Upper Paleolithic art, horticulturalists, and the peopling of remote areas of the world. Examples are derived from Africa, Asia, Europe, Mesoamerica, North America, South America, and Oceania. Return to top

**ANT 336 Lab Methods in Archaeology (4-0-4).** Introduction to laboratory methods used in archaeological research. Return to top

**ANT 337 Field Methods in Archaeology (4-0-4).** Hands-on introduction to archaeological field techniques. Topics include surveying and excavation methods, including transit contour mapping, establishing a site grid and elevation datum, shovel and auger testing, hand excavation of squares, remote sensing, and data recording. Return to top

**ANT 340 Phonology (4-0-4).** Introduction to the scientific study of the sound systems of the world's living languages. Includes discussion of the basics of phonetic transcription and phonemic analysis and the development of formal models in phonology. Topics include articulatory and acoustic phonetics, the phoneme, phonological rules and representations, non-linear models, harmony processes, prosodic morphology, and sound symbolism. Cross-listed with LIN 340. Return to top

**ANT 341 Morphology and Syntax (4-0-4).** Introduction to the description and analysis of word formation processes and sentence structure from a cross-linguistic perspective. Instruction in basic morphemic analysis and constituent testing using data drawn from languages outside the Indo-European family. Also includes an introduction to typological analysis in the study of morpho-syntax. Cross-listed with LIN 341. Return to top
ANT 342 Languages in Contact (4-0-4). Introduction to the study of linguistic responses to culture contact in a variety of socio-historical contexts. Topics include language and trade, language and colonialism, pidgins and pidginization, creoles and creolization, dialect contact and the formation of koines. Cross-listed with LIN 342. Return to top

ANT 343 Language and Gender (4-0-4). Students are urged to take ANT 100 Introduction to Anthropology or ANT 102 Study of Culture (formerly ANT 202) before taking this course. Exploration of the connections between language and gender systems through a variety of theoretical perspectives, methodologies, and findings in recent research drawn from anthropological, linguistic, and psychological studies. Women's Studies course. Human Diversity. Return to top

ANT 344 Sociolinguistics (4-0-4). Prerequisite: ANT 304. Linguistic Anthropology. An introduction to theory and method in sociolinguistics with examination of both the quantitative and the qualitative paradigms. Quantitative sociolinguistics, also known as variation theory, correlates linguistic variation with social structure relying on the statistical treatment of data. The qualitative paradigm also examines language variation in relation to social structure but has been more traditionally concerned with language use in social context in non-Western societies. Return to top

ANT 351 Native North Americans (4-0-4). Overview of the native North American peoples, their past and present conditions, origins, cultural variety, and their interaction with European, American, and Canadian cultures. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top

ANT 352 Native South Americans (4-0-4). Overview of the indigenous cultures of South America using case studies to represent major culture areas, traditions, and questions of anthropological concern. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top

ANT 353 Cultures of Africa (4-0-4). Introduction to the multiple cultures of contemporary Africa from the perspectives of African intellectuals, Africanist scholars, and ordinary Africans. Mazrui's video series on the history, lifestyles, religions, politics, environment, and multicultural conflicts of the continent is balanced against the perspectives of other Africans and Africanists on similar topics through texts, lectures, class discussions, and ethnographic films. Black Studies course. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top

ANT 354 Cultures of Oceania (4-0-4). Introduction to the extremely diverse cultural areas of Polynesia, Micronesia, Melanesia, and Australia. Topics include trade and exchange; gender relations and sexuality; culture contact and change; indigenous land rights; totemism; political authority, language distribution and use; warfare and headhunting; expressive arts, and socialization. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top

ANT 355 Cultures of Southeast Asia (4-0-4). Introductory survey of the peoples and cultures of both mainland and insular Southeast Asia. Examines both historical and contemporary societies. Topics include kinship systems, religion and possession, warfare and headhunting, the effects of the Vietnam war on the people and culture. Asian Studies course. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top


ANT 358 Caribbean Societies (4-0-4). Survey of the historical and contemporary societies of the Caribbean socio-cultural region, with primary focus on the non-Hispanic regions of the Caribbean (those areas whose colonial history is with England, France, Sweden and the Netherlands). Assumes no prior knowledge of anthropology. A&S Foreign Culture course. Non-Western Culture and Civilization. Return to top

ANT 359 The Asian American Experience (4-0-4). This course deals with developing a better understanding of the evolution and settlement patterns, religious and social institutions, and help-seeking patterns of Asian Americans, one of the fastest growing visible minority groups in our society. The course will focus on Indian Americans and Chinese Americans, the two largest Asian American groups in Northeast Ohio. Other Asian groups, such as Filipinos, Japanese, Korean, Vietnamese, and other Southeastern and South Asian communities will also be highlighted, with special emphasis on Asian communities in Northeast Ohio. Cross-listed with SWK 355. Human Diversity. Return to top

ANT 375 Ethnographic Field Methods (4-0-4).
Instruction in the methods of ethnographic observation, analysis, and description, with exposure to different research methods in ethnography and sociolinguistics. Topics covered include elicitation, social network analysis, participant/observation, consultants, ethics, data management, and ethnographic writing.  

**ANT 393 Area Studies in Archaeology (4-0-4).** Prerequisite: ANT 101 Human Biocultural Evolution (formerly ANT 201). Exploration of the principal developments, primary explanations, and main issues in the prehistory and/or historical archaeology of a particular area.  

**ANT 394 Area Studies in Anthropology (4-0-4).** Comparative study of cultures and societies of major world areas. May be repeated for credit by studying different areas. Courses on Asia (China, India, Indonesia) are Asian Studies courses.  

**ANT 395 Archaeology Field School (4-0-4).** Prerequisite: At least one course in anthropology. Assist with testing and excavation of archaeological sites in various locations. Training in archaeological field techniques, methods of data recording, laboratory procedures, and data analysis.  

**ANT 493 Topics in Anthropology (1-4 credits).** Topics reflect material of special or timely interest, such as food and culture, multimedia software, Mesoamerican art, expressive culture, the anthropology of music, folk voices, forensics, human anatomy. May be repeated when topic varies. Designated titles may fulfill the Arts and Sciences Foreign Culture requirement.  

**ANT 494 Advanced Area Studies in Anthropology (4-0-4).** Prerequisite: ANT 102 Study of Culture (formerly ANT 202) and appropriate ANT 35X area studies course. In-depth study of specific questions of anthropological concern in a particular cultural area. Topic and area may vary with each offering. May be repeated for credit with different topic/area.  

**ANT 496 Independent Study in Anthropology (1-4 credits).** Prerequisite: Junior standing. Written permission of instructor and chairperson is required for registration. Independent student research on selected advanced topics in anthropology under the direction of the faculty.
Associate Professor: George A. Mauersberger (Chairperson); Professors: Thomas E. Donaldson, Masumi Hayashi, John Hunter, Marvin H. Jones, Walter C. Leedy Jr., Kenneth Nevedomski; Associate Professors: Kathy Curnow, Richard D. Schneider; Assistant Professors: Irina A. Koukhanova, Jennifer Visocky-O'Grady; Gallery Director: Robert Thurmer.

Note: Materials fees are required for most studio courses at the 200-level and above, and they must be paid by the end of the first week of classes.

**Studio Art**

**ART 102 Introduction to Two-Dimensional Art and Design (2-6-4)** Beginning study of basic principles of two-dimensional visual organization and skills. Includes line, value, texture, color, shape, and other elements of form as they relate to two-dimensional art and design. Prerequisite for all upper level two-dimensional studio art courses. [Return to top](#)

**ART 103 Introduction to Three-Dimensional Art and Design (2-6-4)** Beginning study of basic principles of three-dimensional visual organization and skills. Includes line, value, texture, color, shape, and other elements of form as they relate to three-dimensional art and design. Prerequisite for all upper level three-dimensional studio art courses. [Return to top](#)

**ART 193 Art for Non-Majors (2-6-4).** An introductory course for non-majors that explores the fundamentals of a particular studio area. Depending upon the instructor, the course may focus on ceramics, drawing, painting, photography, printmaking, or sculpture. Focus to be announced in advance. May be repeated for credit. [Return to top](#)

**ART 211 Drawing I (2-6-4).** Prerequisite: ART 102. A beginning study of design principles, materials, and techniques of drawing. [Return to top](#)

**ART 221 Painting I (2-6-4).** Prerequisite: ART 102. A beginning study of design principles, materials, and techniques of painting. [Return to top](#)

**ART 226 Sculpture I (2-6-4).** Prerequisite: ART 103. A beginning study of design principles and techniques of three-dimensional visual expression with practical experience in metal casting. Materials fee. [Return to top](#)

**ART 231 Printmaking I (2-6-4).** Prerequisite: ART 102. A beginning study of design principles and techniques of selected printmaking processes. Materials fee. [Return to top](#)

**ART 232 Photography I (2-6-4).** Prerequisite: ART 102. A beginning study of black-and-white photography and darkroom techniques. Materials fee. [Return to top](#)

**ART 242 Introduction to Typographic Principles and Design (2-6-4).** Prerequisite: ART 102. Introduction to design aesthetics and the visual organization of information. Students will focus on learning typographic and aesthetic fundamentals and then applying these principles to two-dimensional design collateral with specific themes. Current design theory and practical application will also be studied in conjunction with project development. [Return to top](#)

**ART 244 Introduction to Macintosh (2-6-4).** Prerequisite: ART 102. Introduction to computer design using a Macintosh platform. The course will begin by developing an understanding of the current Macintosh operating system, and with a brief introduction of technical issues related to using the computer for design purposes. The remainder of the course will be devoted to studying the industry standard page layout, illustration, and photo alteration software (QuarkXpress, Adobe Illustrator, and Adobe Photoshop). Materials fee. [Return to top](#)
ART 246 Ceramics I (2-6-4). Prerequisite: ART 103. A beginning study of design principles and use of ceramic materials in solving problems of three-dimensional form using hand building methods and the potter’s wheel. Materials fee. Return to top

ART 293 Special Topics in Studio Art (0-2-1 or 1-3-2 or 1-5-3 or 2-6-4). Prerequisite: ART 102 or ART 103, depending on course. For students at a beginning level of expertise. Intensive study of subject or topic to be announced in advance. May be repeated for credit. Materials fee for some sections. Return to top

ART 311 Drawing II (2-6-4). Prerequisite: ART 211. Continued investigation into the concepts, materials, and techniques of drawing. Return to top

ART 321 Painting II (2-6-4). Prerequisite: ART 221. Continued investigation into the concepts, materials, and techniques of painting. Return to top

ART 326 Sculpture II (2-6-4). Prerequisite: ART 226. Investigation of three-dimensional form leading to the development of individual styles and the use of various materials. Materials fee. Return to top

ART 331 Printmaking II (2-6-4). Prerequisite: ART 231. Continued investigation of concepts, materials, and techniques in printmaking. Materials fee. Return to top

ART 332 Photography II (2-6-4). Prerequisite: ART 232. Continued study of black-and-white darkroom techniques and concepts of photographic imagery. Materials fee. Return to top

ART 344 Advanced Raster-Image Development (2-6-4). Prerequisites: ART 102, ART 244. Comprehensive instruction on the creation of raster-based imagery using photo-manipulation software (Adobe Photoshop). Technical topics include advanced image manipulation, color issues, file management, cross-program compatibility, and production and end-usage concerns. Raster image-based design and illustration issues also explored. Materials fee. Return to top

ART 345 Advanced Vector-Image Development (2-6-4). Prerequisites: ART 102, ART 244. Comprehensive instruction on the creation of vector-based imagery using illustration software (Adobe Illustrator). Technical topics include object-oriented image creation and manipulation, color issues, file management, cross-program compatibility, and production and end-usage concerns. Vector image-based design and illustration issues also explored. Materials fee. Return to top

ART 346 Ceramics II (2-6-4). Prerequisite: ART 246. Continuation of formal development through the use of the potter’s wheel; emphasis on decoration and glaze application. Materials fee. Return to top

ART 405 Museology: Exhibition Planning and Design (2-6-4). Prerequisites: ART 102, 200-level art-history course. This course provides a practical overview of the concepts and practices of exhibition curators (as opposed to collections curators). The course focuses on planning and design of exhibitions. Topics include thematic development, the purpose of the exhibition, presentation philosophies, presentation aesthetics, audience analysis, facility analysis, conceptual organization, spatial organization, traffic flow, information flow, art handling, installation techniques, lighting, graphics, publications, publicity, security, and the "whole" exhibition experience. Return to top

ART 411 Drawing III (2-6-4). Prerequisite: ART 311. An investigation into more advanced approaches to drawing. May be repeated an additional 16 hours. Return to top

ART 421 Painting III (2-6-4). Prerequisite: ART 321. An investigation into more advanced approaches to painting. May be repeated an additional 16 hours. Return to top

ART 426 Sculpture III (2-6-4). Prerequisite: ART 326. Emphasis on the development of individual approaches to three-dimensional form by extensive investigation of specified project areas. May be repeated an additional 16 hours. Materials fee. Return to top

ART 431 Printmaking III (2-6-4). Prerequisite: ART 331. An investigation into more advanced approaches to printmaking. May be repeated an additional 16 hours. Materials fee. Return to top

ART 432 Photography III (2-6-4). Prerequisite: ART 332. Advanced study of photographic techniques and concepts, with emphasis on development of a personal style. May be repeated an additional 16 hours. Materials fee.
**ART 444** Advanced Typography and Design (2-6-4). Prerequisites: **ART 102, ART 244.** Comprehensive instruction on the creation of design collateral using page layout and typesetting software (QuarkXpress). Focus on print-based media. Students will study the creation and production of a design piece, from initial production schedules and creative brainstorming and problem-solving techniques to aesthetic development and modes of output. Focus on technical, aesthetic, and communication issues. Professionalism stressed. Materials fee.  

**ART 445** Introduction to Digital Media (4-6-4). Prerequisites: **ART 102, ART 244, ART 344.** A broad introduction to digital media, specifically that which is used on the World Wide Web. Students will study information and interface design as well as analyze the structure and content of interactive media. Projects will involve the development and implementation of site architecture in conjunction with aesthetic considerations specific to the web. Materials fee.  

**ART 446** Ceramics III (2-6-4). Prerequisite: **ART 346.** Continuation of formal development on an advanced level through the use of the potter's wheel and glaze calculation. May be repeated an additional 16 hours. Materials fee.  

**ART 493** Special Topics in Studio Art (0-2-1 or 1-3-2 or 1-5-3 or 2-6-4). Prerequisite: For students of advanced level of expertise who have completed a 200-level studio art course. Check semester course schedule footnote. Intensive study of subject or topic to be announced in advance. May be repeated for credit. Materials fee for some sections.  

**ART 496** Independent Studies in Studio Art and Design (0-2-1 or 1-3-2 or 1-5-3 or 2-6-4). Prerequisite: Written permission of instructor, 8 credit hours at advanced Level III in field of choice. Studio projects in advanced work. Sections are: (1) graphic design, (2) ceramics, (3) drawing, (4) painting, (5) photography, (6) printmaking, (7) sculpture, (8) other (4 credits), and (9) other (2 credits). May be repeated for credit. Materials fee for some sections.  

### Art Education

**ART 341** Valuing Processes in the Visual Arts (4-0-4). An exploration of art criticism and aesthetics as part of a comprehensive art education program with practical application in a PreK-12 setting.  

**ART 393** Special Topics in Art Education (4-0-4 or 2-6-4). Intensive study of a relatively narrow subject or topic to be announced in advance.  

**ART 396** Independent Reading and Research: Art Education (2 or 4 credit hours). Prerequisite: Written permission of instructor. Study of an art education topic of special interest to the particular student. Subject and plan of study to be decided jointly by student and instructor. May be repeated for credit.  

**ART 441** Art in Social and Vocational Contexts (4-2-4). An introduction to philosophical and historical issues in art education with an emphasis on alternative venues for teaching art to varied populations.  

### Art History

**ART 150** Introduction to Art History and Appreciation (4-0-4). Study of the visual arts from the observer's point of view, with emphasis on the awareness of historical and critical functions. Arts and Humanities.  

**ART 252** Introduction to Early Western Art (4-0-4). The history of Western art and crafts from the prehistoric era through the Middle Ages. Classical and Medieval Studies course. Arts and Humanities, Western Culture and Civilization, Arts and Sciences Foreign Culture course.  

**ART 253** Introduction to Western Art Since 1400 (4-0-4). The history of Western art and crafts from the Renaissance to the present. Arts and Humanities, Western Culture and Civilization, Arts and Sciences Foreign Culture course.  

**ART 256** History of Photography (4-0-4).
A general survey of the history of photography from the middle of the 19th century to the present day. Arts and Humanities, Writing. Return to top

ART 281 Introduction to Far Eastern Art (4-0-4).
The history of the art and crafts of China and Japan. Asian Studies course, Arts and Humanities, Non-Western Culture and Civilization, Arts and Sciences Foreign Culture course. Return to top

ART 286 Introduction to African Art (4-0-4).
The history of the art and crafts of Black Africa. Black Studies course, Arts and Humanities, Non-Western Culture and Civilization, Arts and Sciences Foreign Culture course. Return to top

ART 356 Gothic Art (4-0-4).
The history of the art and crafts of Western Europe in the later Middle Ages. Classical and Medieval Studies course, Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 363 The Early Renaissance in Italy (4-0-4).
The history of art and architecture in Italy from the rise of the city-state to the voyages of Christopher Columbus, from Giotto to Leonardo da Vinci. Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 364 The High Renaissance and Mannerism in Italy (4-0-4). The history of art and architecture in Italy during the time of Leonardo da Vinci, Michelangelo, Raphael and their followers. Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 365 The Renaissance in Northern Europe (4-0-4). The history of art in the court of the dukes of Flanders and of the Kings of France, from Pucelle to Bruegel. Western Culture and Civilization, Writing. Return to top

ART 370 American Visual Culture (4-0-4).
A consideration of American visual culture from the late 19th through the 20th centuries, focusing on the interrelationship between artists and/or movement in traditional art media with the visual forms of American popular and mass culture. These widely divergent forms of visual culture will be considered within their appropriate social and political contexts. Western Culture and Civilization, Writing. Return to top

ART 371 Art in the 19th Century (4-0-4).
A survey of the major social and artistic developments of the 19th century across several national cultures - France, Germany, England, the United States, Italy - focusing on particular themes including romanticism and landscape painting; the deterioration of the distinction between "high" and "low" art forms; the transformation of Paris into the first modern metropolis; and the place of women, the "Orient," and the "primitive" within 19th-century art and society. Western Culture and Civilization, Writing. Return to top

ART 372 Art in the 20th Century (4-0-4).
The survey of 20th-century modernism and visual culture in its historical context, focusing on particular national cultures - France, the United States, Mexico, Soviet Russia, Germany, Holland, Italy, England - and themes including the concept of the avant-garde, the place of the gendered body, the development of differing modes of abstraction, art censorship from fascism to the present, the role of photography and mechanization, and the rise of the postmodern. Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 373 On the Edge: Art Since 1968 (4-0-4).
Study of international directions in visual culture since 1968 with emphasis on the development of new media forms such as performance, conceptualism, video, film, installation, and the expansion of older ones such as photography. New contexts for exhibition and the increasing importance of race, class, gender, and sexual identity within a global culture will also be discussed. Western Culture and Civilization, Writing. Return to top

ART 374 American Architecture (4-0-4).
An historical analysis of the built environment from the 17th century to the present. Various styles and types of buildings will be related to time and place, defining and identifying central characteristics, social function, cultural expression, technology, and changes in architectural practice. American Studies course. Cross-listed with UST 374. Western Culture and Civilization, Writing. Return to top

ART 375 Cities and Planning (4-0-4).
What man has done to form his communal environment since ancient times; social, symbolic, functional,
biotechnical domains as generators of architecture and urban planning; value systems in environmental change; policies, plans, and design proposals as the record of the humanized environment. Western Culture and Civilization, Writing. Urban Studies course. Cross-listed with UST 375. Return to top

ART 376 Architectural History: Great Monuments of Western Architecture in the Urban Context (4-0-4). An inquiry into the forms and meaning of architecture from antiquity to the present. Western Culture and Civilization, Writing. Return to top

ART 383 Indian Art (4-0-4).
The history of Indian art from the neolithic period through the late medieval period. Asian Studies course, Non-Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 384 Buddhist Sculpture (4-0-4).
An in-depth study of Buddhist sculpture in India and its spread to Tibet, China and Japan with special emphasis on iconography and stylistic development. Non-Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 385 The Hindu Temple (4-0-4).
A historical study of the development of the Hindu temple beginning with the simple flat-roofed Gupta structure and culminating with the multi-structured temple complexes of the 17th and 18th centuries. Architectural form and iconographical program will be equally stressed as well as Indo-Aryan (northern) and Dravidian (southern) styles of temple construction. Asian Studies course. Non-Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 386 Regional Art in Africa (4-0-4).
This course will examine the historical arts of a selected region of Africa from the archaeological past to contemporary movements. The course may be repeated for credit when the treated region changes. The changing areas to be treated are Western Sudan, Upper Guinea Coast, Lower Guinea Coast, Central Africa, and South and East Africa. May be repeated for credit. Non-Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

ART 388 African-American Art (4-0-4).
The history of African-American art from Colonial times to the present. Black Studies course. African American Experience, Human Diversity. Return to top

ART 390 Internship (1 to 8 credit hours).
Prerequisite: Written permission of supervising instructor. Independent learning involving theory and practice in a specific area of art, such as art education, art conservation, museology, and graphic or product design. Approved internships are usually with an external museum or an appropriate institution or commercial enterprise. Grading is on a S/U basis. This course cannot be substituted for other art courses in the degree requirements. Return to top

ART 394 Special Topics in Art History (2 or 4 credits). Study of a broad subject or topic in Western or non-Western art to be announced in advance. Return to top

ART 475 Cleveland: Form and Development of an Urban Environment (4-0-4). Workshop which examines aspects of visual communication relative to the city. Urban Studies course. Cross-listed with UST 475. Writing. Return to top

ART 495 Art Seminar (4-0-4).
Prerequisite: Written permission of instructor. Close examination of a topic to be selected jointly by instructor and students through research and discussion, with emphasis on artists at work in their milieu. May be repeated for credit. Return to top

ART 497 Independent Reading and Research: Art History (1 to 4 credit hours). Prerequisite: Written permission of instructor. Study of a topic of special interest to the particular student; subject and plan of study to be decided jointly by student and instructor. May be repeated for credit. Return to top

ART 499 Honors Thesis (4 to 8 credit hours).
Prerequisite: Admission to the Honors Program. Directed research under supervision, culminating in the writing of a thesis required of honors students in art history and art education. Return to top
ASC 101 Introduction to College Life (1-0-1).
An orientation course intended for entering freshmen. Freshman Orientation. Return to top
Professors: R. Jeffrey Dean, F. Paul Doerder, Michael A. Gates (Chair), Donald G. Lindmark, Michael J. Tevesz, Mark A. Tumeo, Harry van Keulen, George J. Wilder; Professors Emeriti: Peter C. Baker, Lorry J. Brenner, Ronald L. Clise, Frank DeMarinis, Kenneth M. Hoff; Associate Professors: Robert E. Bast, Randall J. Gee, A. Ralph Gibson, Madeline M. Hall, Barbara K. Modney, Tony Sahley, Tobili Y. Sam-Yellowe, B. Michael Walton; Associate Professors emeriti: Richard C. Dickerman, Sally Lewis, Jerome B. Senturia, James M. Willard; Assistant Professors: Joseph D. Fontes, Tomasz Kordula, Robert A. Krebs, Tarun K. Mal, Crystal M. Weyman, Julie A. Wolin; Adjunct Faculty: Ronald E. Blanton, Martha K. Cathcart, Clemencia Colmenares, Paul E. DiCorleto, L. Allen Ehrhart, Paul L. Fox, Karen Gerken, Stanley Hazen, Philip Howe, Donald W. Jacobsen, Jeffrey Johansen, Andrew Lamer, Scudder Mackey, Cahir A. McDevitt, Christine S. Moravec, Hugh R. Quinn, Robert Schmidt, George Stark, Carol Stepien, Dennis J. Stuehr, Vincent Tuohy, Qing Wang, Thomas Weimbs, Alan Wolfman.

Note: The 100-level biology courses are intended primarily for non-science majors. BIO 107 may be combined with BIO 102, 104, 106, or 168 to partially satisfy the university's requirement for Natural Science with Laboratory. BIO 109 may be combined with BIO 100, 108, 110, or 112 to partially satisfy the requirement for Natural Science with Laboratory. Courses with "Human" in their title discuss biological principles using humans as the main illustrative example.

**BIO 100 The Living World (3-0-3).**
An introduction to the biology of all major groups of living things, including microbial, unicellular, and parasitic organisms, as well as multicellular plants, animals, and fungi. The fundamental concepts of evolutionary and functional biology will be introduced through a systematic survey of the varieties of life. Natural Science. **BIO 109** may be combined with **BIO 100** to partially satisfy the requirement for Natural Science with Laboratory. **Return to top**

**BIO 102 Human Genetics, Reproduction, and Development (3-0-3).** Genetics and development of humans including application of genetic technology to humans. Natural Science. **BIO 107** may be combined with **BIO 102** to partially satisfy the requirement for Natural Science with Laboratory. **Return to top**

**BIO 104 The Brain (3-0-3).**
Introduction to the nervous system and the brain. Discussion of the function of brain cells, sensory systems, motor systems, and higher functioning in mammalian systems. Normal and abnormal functions of the human brain are emphasized. Natural Science. **BIO 107** may be combined with **BIO 104** to partially satisfy the requirement for Natural Science with Laboratory. **Return to top**

**BIO 106 Human Biology in Health and Disease (3-0-3).** Introduction to biological principles. Discussion of cell structure, cell function, and physiology of digestion, circulation, excretion, and coordination in normal and disease states. Natural Science. **BIO 107** may be combined with **BIO 106** to partially satisfy the requirement for Natural Science with Laboratory. **Return to top**

**BIO 107 Human Biology Laboratory (1-2-2).**
Laboratory study of diverse aspects of human biology. Topics include cell structure and function, human anatomy, physiology, disease, genetics, reproduction, development, and aging. Natural Science Laboratory. **Return to top**

**BIO 108 Environmental Ecology (3-0-3).**
Concepts of ecology as they relate to environmental problems in today's world. Natural Science. **BIO 109** may be combined with **BIO 108** to partially satisfy the requirement for Natural Science with Laboratory. **Return to top**

**BIO 109 Biological Diversity Laboratory (1-2-2).**
Laboratory study of past and present biological diversity, the importance and value of diversity, and the threats posed by human populations to the maintenance of biological diversity. Natural Science Laboratory. **Return to top**

**BIO 110 Plants and Civilization (3-0-3).**
The nature and uses of plants; the effects of plants on civilization and vice versa. Natural Science. **BIO 109** may be
combined with BIO 110 to partially satisfy the requirement for Natural Science with Laboratory. 

**BIO 112 Biology of the Dinosaurs (3-0-3).**
Dinosaurs are used to illustrate fundamental concepts of biology. Topics to be discussed will include methods of classification, evolutionary mechanisms including extinction, the process of fossilization, a survey of major dinosaur groups, and biological principles of biomechanics, physiology, and behavior. Current theories and controversies concerning dinosaur biology will be evaluated. One or two class meetings will be held at the Cleveland Museum of Natural History. Natural Science. BIO 109 may be combined with BIO 112 to partially satisfy the requirement for Natural Science with Laboratory.

**BIO 168 Biology of Aging (3-0-3).**
The various biological theories of aging, together with a review of the fundamental concepts of cell biology and physiology on which these concepts are based. Natural Science. BIO 107 may be combined with BIO 168 to partially satisfy the requirement for Natural Science with Laboratory.

**BIO 171 Summer Local Flora (2-4-4).**
Study and identification of representative species, genera, and families of mainly local vascular plants found in summer. Lecture, laboratory, and field work. Natural Science with Laboratory.

**BIO 173 Spring Local Flora (2-4-4).**
Study and identification of representative species, genera, and families of mainly local vascular plants found in spring. Lecture, laboratory, and field work. Natural Science with Laboratory.

**BIO 193 Special Topics in Biology (3-0-3).**
Study of a particular topic in biology. Topics to be announced in the course schedule each semester. May be repeated for credit with change of topic. Natural Science.

**BIO 194 Special Topics in Biology (4-0-4).**
Study of a particular topic in biology. Topics to be announced in the course schedule each semester. May be repeated for credit with change of topic. Natural Science.

Note: Courses numbered 200 and above are intended primarily for Biology majors, Health Science majors, Nursing majors, and other science majors. Courses numbered 260 to 272 do not fulfill the requirements for any Biology major.

**BIO 200 Introductory Biology I (3-0-3).** Corequisite: BIO 201. An introduction to modern biology covering basic principles of molecular and cell biology, immunity, genetics, evolution, and biological classification. Natural Science.

**BIO 201 Introductory Biology Laboratory I (0-2-1).** Corequisite: BIO 200. Selected exercises designed to reinforce concepts covered in BIO 200. Natural Science Laboratory.

**BIO 202 Introductory Biology II (3-0-3).** Prerequisite: BIO 200. Corequisite: BIO 200. An introduction to modern biology including a survey of biological diversity, anatomy and physiology of plants and animals, principles of ecology, and human impact on ecosystems. Natural Science.

**BIO 203 Introductory Biology Laboratory II (0-2-1).** Corequisite: BIO 202. Selected exercises designed to reinforce concepts covered in BIO 202. Natural Science Laboratory.

**BIO 260 Human Genetics (3-0-3).** Prerequisite: BIO 200. Discussion of basic Mendelian and biochemical genetics with emphasis on chromosomal and molecular disorders. Natural Science.

**BIO 262 Introductory Pharmacology (3-0-3).** Prerequisites: BIO 266 and 268. The mechanism of action of various addictive, prescription, and over-the-counter drugs and their effects on the nervous, cardiovascular, and excretory systems. Antibiotics and antineoplastic drugs also will be discussed. Natural Science.

**BIO 264 Introductory Microbiology (3-0-3).** Prerequisite: Upper-level high-school biology or BIO 106. Corequisite: BIO 265. Principles of microbiology, and immunology, including pathogenic microorganisms, and viruses. Natural Science.

**BIO 265 Introductory Microbiology Laboratory (0-2-1).** Corequisite: BIO 264. Selected exercises designed to reinforce concepts covered in BIO 264. Natural Science Laboratory.

BIO 267 Human Anatomy and Physiology I Laboratory (0-2-1). Corequisite: BIO 266. Selected exercises designed to reinforce concepts covered in BIO 266. Natural Science Laboratory. Return to top

BIO 268 Human Anatomy and Physiology II (3-0-3). Prerequisite: BIO 266. Corequisite BIO 269. Continuation of BIO 266. Systems approach to human anatomy and physiology. Natural Science. Return to top

BIO 269 Human Anatomy and Physiology II Laboratory (0-2-1). Corequisite: BIO 268. Selected exercises designed to reinforce concepts covered in BIO 268. Natural Science Laboratory. Return to top

BIO 270 Human Nutrition (3-0-3). Prerequisite: BIO 106, or 200, or 268. An introduction to human nutrition, including nutritional requirements throughout life, nutrient value, metabolic requirements, nutrition and disease, malnutrition and undernourishment, dieting supplements, and dietary fads. Natural Science. Return to top

BIO 272 Human Physiology (3-0-3). Prerequisites: BIO 268 and CHM 251. Advanced undergraduate study of human organ physiology, with emphasis on homeostasis, along with nervous and hormonal regulation of various organ systems. Considerations of cellular and molecular interactions emphasized. Natural Science. Return to top

BIO 281 UT-PHPR-1000 Orientation (1-0-1). Prerequisite: Admission to CSU-UT Pharmacy Partnership. Lectures and small group discussions include university, freshman orientation, FYI subjects, plus introductory elements of pharmacy professional culture. This course is for students in the CSU-UT Pharmacy Partnership. See the program advisor for details. Return to top

BIO 282 UT-PHPR-2010 Introduction to Patient Care (2-0-2). Corequisite: BIO 283. Introduction to the primary dimensions of the profession of pharmacy with an emphasis on the pharmacist’s responsibility to assure that drug therapy is used appropriately to improve patient outcomes. This course is for students in the CSU-UT Pharmacy Partnership. See the program advisor for details. Return to top

BIO 283 UT-PHPR-2600 Functional Anatomy and Pathophysiology I (4-0-4). Prerequisites: BIO 200/ 201 and 202/203; CHM 261/ 266 and 262/267. Corequisite: second-year standing. A study of functional anatomy, physiology and pathophysiology to serve as background for the understanding of the action of drugs. This course is for students in the CSU-UT Pharmacy Partnership. See the program advisor for details. Return to top

BIO 284 UT-PHPR-2620 Functional Anatomy and Pathophysiology II (4-0-4). Prerequisite: BIO 283. A continuation of BIO 283. This course is for students in the CSU-UT Pharmacy Partnership. See the program advisor for details. Return to top

BIO 285 Pharmacy Colloquium (1-0-1). This seminar will feature invited speakers, CSU and University of Toledo faculty, presenting topics related to the practice, science and business of pharmacy. Only students enrolled in the CSU-UT Pharmacy Partnership are eligible to enroll. Requires permission of Pharmacy Partnership advisor. Return to top

BIO 300 Plant Biology (3-0-3). Prerequisites: BIO 200 and 202. Corequisite: BIO 301. Plant diversity, structure, function, and evolution. Return to top

BIO 301 Plant Biology Laboratory (0-2-1). Corequisite: BIO 300. Selected exercises designed to reinforce concepts covered in BIO 300. Return to top


BIO 303 Animal Biology Laboratory (0-2-1). Corequisite: BIO 302. Selected exercises designed to reinforce concepts covered in BIO 302. Return to top


BIO 305 Population Biology and Evolution Laboratory (0-2-1). Corequisite: BIO 304. Selected exercises designed to reinforce concepts covered in BIO 304. Return to top
BIO 306 Biochemistry and Molecular Biology (4-0-4). Prerequisites: BIO 200, 202, and CHM 331. Discussion of the essential concepts underlying biochemistry. Topics include chemical concepts, structure of biological molecules, catalysis, metabolic regulation, and molecular genetics. Return to top

BIO 308 Cell Biology (3-0-3). Prerequisite: BIO 200, 202 and CHM 331. Corequisite: BIO 309. Structure, function, and biogenesis of cellular organelles and the cytoskeleton. Discussions of development at the cellular level, inter- and intra-cellular signaling, and regulation of the cell cycle. Return to top

BIO 309 Cell Biology Laboratory (0-2-1). Corequisite: BIO 308. Selected exercises designed to reinforce concepts covered in BIO 308. Return to top

BIO 400 Orientation for Medical Technology Students (1-0-1). Prerequisite: Admission to the Medical Technology Program. Pre-clinical orientation, general aspects of the hospital training program, concept of the medical technologist as a member of the health-care delivery team, lectures by education coordinators of hospital schools, visits to hospital clinical laboratories. Return to top

BIO 401 to BIO 406 are offered by hospital-based Schools of Medical Technology. Prerequisite: Enrollment in a hospital-based school of medical technology approved by the Council of Medical Education of the American Medical Association in collaboration with the National Accrediting Agency for Clinical Laboratory Sciences.

BIO 401 Microbiology and Immunology (10 Credits). Lectures and laboratory experience in bacteriology; parasitology, mycology, and immunology; culture and identification of microorganisms; preparation of media, antibiotic sensitivity studies; serology tests. Return to top

BIO 403 Hematology (5 Credits). Lectures and laboratory experience, blood morphology in health and disease, normal and abnormal physiology of blood, venipuncture technique, blood-cell counting and identification. Return to top

BIO 404 Blood Bank (3 Credits). Lecture and laboratory experience, common blood-group antigens and antibodies, identification, cross-matching techniques, collection and processing of blood for transfusion. Return to top

BIO 405 Clinical Microscopy (2 Credits). Lectures and laboratory experience, chemical and microscopic examination of urine. Return to top

BIO 406 Special Subjects (3 credits). Lecture, demonstrations, and laboratory experience in histology, cytology, nuclear medicine, electrocardiography, and other special subjects. Includes electives and research projects. Return to top

BIO 410 Theory and Practice of Light Microscopy (3-0-3). Prerequisite: Permission of instructor. Corequisite: BIO 411. Consideration of diverse theoretical and practical aspects of the light microscope. Writing. Return to top

BIO 411 Theory and Practice of Light Microscopy Laboratory (0-2-1). Corequisite 410. Laboratory exercises and projects undertaken outside of scheduled class time provide practical experience with various uses of the light microscope. Return to top

BIO 412 Elements of Immunology (3-0-3). Prerequisites: BIO 308 and 416/417. Corequisite BIO 413. Nature of antigens, antibody structure and function, B and T cell activation, cytokines, immunoassays, terminology. Return to top

BIO 413 Elements of Immunology Laboratory (0-2-1). Corequisite: BIO 412. Immunochemical assays and cell culture techniques. Preparation of single-cell suspensions and determination of cell viability. Identification and quantification of antigen-antibody interactions. Return to top

BIO 414 Parasitology (2-0-2). Prerequisite: BIO 302. Corequisite: BIO 415. A basic course primarily designed for biology majors who desire an understanding of animal parasitology, including ecology, life histories, and host-parasite relationships. Return to top

BIO 415 Parasitology Laboratory (0-4-2). Corequisite: BIO 414. Selected exercises designed to reinforce concepts covered in BIO 414. Return to top

BIO 416 Microbiology (3-0-3). Prerequisite: BIO 306. Corequisite: BIO 417. Structure, function, and genetics of
major groups of microorganisms, with emphasis on bacteria; the role of microbes in the economy of nature and man.

BIO 417 Microbiology Laboratory (0-4-2). Corequisite: BIO 416. The techniques of identification, manipulation, and quantification of microbes. Return to top

BIO 418 Histology (3-0-3). Prerequisite: BIO 308. Corequisite: BIO 419. Structure of mammalian cells, tissues, and organs, with emphasis on relationships of structure and function. Return to top

BIO 419 Histology Laboratory (0-2-1). Corequisite: BIO 418. Selected exercises designed to reinforce concepts covered in BIO 418. Return to top

BIO 420 Comparative Vertebrate Anatomy (2-0-2). Prerequisite: BIO 302. Corequisite: BIO 421. Comparative study of gross structure and evolutionary development of vertebrate organ systems. Return to top

BIO 421 Comparative Vertebrate Anatomy Laboratory (0-4-2). Corequisite: BIO 420. Detailed dissections of representative vertebrate specimens. Return to top

BIO 422 Mammalian Physiology (3-0-3). Prerequisites: BIO 302. Corequisite: BIO 423. Physiology of major organ systems of vertebrates, with an emphasis on mammalian physiology. Students may not take both BIO 422 and BIO 424 for credit. Writing. Return to top

BIO 423 Mammalian Physiology Laboratory (0-2-1). Corequisite: BIO 422. Exercises that emphasize modern methods of physiological measurement, and the analysis and presentation of physiological data. Return to top

BIO 424 Principles of Animal Physiology (3-0-3). Prerequisite: BIO 302. Corequisite BIO 425. Basic concepts of comparative animal physiology will be developed from fundamental principles of chemistry, biology, and physics. The evolution of major physiological systems will be examined through a comparison of taxa ranging from protists through vertebrates. Students may not take both BIO 422 and BIO 424 for credit. Writing. Return to top

BIO 425 Principles of Animal Physiology Laboratory (0-2-1). Corequisite: BIO 424. Exercises that emphasize modern methods of physiological measurement, and the analysis and presentation of physiological data. Return to top

BIO 426 Neurobiology (3-0-3). Prerequisite: BIO 302 or equivalent. Exploration of the relation of behavior to neural function. Topics include basic neurophysiology and properties of sensory and motor systems illustrated with human and nonhuman examples. Return to top

BIO 427 Neurobiology Laboratory (0-4-2). Prerequisite or corequisite: BIO 426. Classical invertebrate experiments that provide an introduction to standard neurobiological techniques for studying neural activity, including simple dissection, stimulating and recording neural activity, and analyzing data. Return to top

BIO 428 Endocrinology (3-0-3). Prerequisite: BIO 308. Introduction to functions of hormones and endocrine glands, including mechanisms controlling hormone secretion; mammalian systems emphasized. Writing. Return to top

BIO 430 Genetics (3-0-3). Prerequisite: BIO 308. Corequisite: BIO 431. Principles of Mendelian, molecular, and population genetics. Return to top

BIO 431 Genetics Recitation (0-2-1). Corequisite: BIO 430. Selected exercises designed to reinforce concepts covered in BIO 430. Return to top

B10 432 Molecular Genetics (3-0-3). Prerequisite: BIO 308. Principles of modern molecular genetics and gene regulation. Return to top

BIO 435 Techniques in Molecular Biology (1-6-4). Prerequisite: BIO 308. A lecture/laboratory course in fundamentals of modern biotechnology with emphasis on the techniques and procedures of molecular biology. Students will work together to complete a project. Writing. Return to top

BIO 436 Evolutionary Genetics (3-0-3). Prerequisites: BIO 304 and 308. An introduction to the modern theory of evolutionary genetics, including development of the concepts of genetic diversity, natural selection, random genetic drift, population substructure, infinite-alleles models, and the neutral theory of molecular evolution. Writing. Return to top
BIO 438 Advanced Cell and Molecular Biology (3-0-3). Prerequisite: BIO 308. Advanced study of topics in cell and molecular biology. Papers from the primary scientific literature will be read and discussed. Return to top

BIO 440 Elements of Pharmacology (3-0-3). Prerequisites: BIO 306, and BIO 422 or BIO 424, or permission of instructor. An analysis of the basic principles of the pharmacokinetics and pharmacodynamics of selected therapeutic agents. Emphasis will be on the experimental basis of drug discovery, design, and clinical use. Return to top

BIO 450 Evolutionary Biology (3-0-3). Prerequisite: BIO 300 or 302, and 304 or equivalent. Advanced lectures on evolution that consider traits, genes, and their interaction with environmental variation. Topics include the basic quantitative methods required to interpret evolutionary change, the consequences of population structure, molecular approaches to phylogenetic studies, and the changes in genetic variation under different models of selection, drift, migration, and mutation. Writing. Return to top

BIO 452 Marine Ecology (3-0-3). Prerequisite: BIO 300 or 302, and 304 or equivalents. An advanced ecology course that encompasses marine biology, ecological adaptations of organisms to the marine environment, and interspecific interactions. This course will cover marine habitats and the specializations of organisms that live in them. Return to top

BIO 453 Field Experience in Ecology and Conservation Biology (1 to 6). Prerequisites: BIO 300, 302, and 304 or equivalents. This course will examine principles of ecology and conservation biology through field research in a natural setting. Students will participate in research projects emphasizing analyses of biodiversity, population demography, species interactions, or behavior. Following preparatory sessions at Cleveland State University, the class will travel to off-campus field sites for the balance of the course. Living conditions may be primitive in the field and international travel may be required. See semester course schedule and contact the biology office (216) 687-2440 for further information. Return to top

BIO 454 Ecology (2-0-2). Prerequisites: BIO 300, 302, and 304. Corequisite: BIO 455. Study of interactions of organisms with their environment, including growth and regulation of populations, energetics of organisms and ecosystems, life-history evolution, and community ecology. Return to top

BIO 455 Ecology Laboratory (0-4-2). Corequisite: BIO 454. Selected exercises designed to reinforce concepts covered in BIO 454. The laboratory includes a few one-day field trips on weekends. Return to top

BIO 456 Vertebrate Biology and Evolution (3-0-3). Prerequisites: BIO 302 and 304. Topics cover the biology of vertebrates, with special emphasis on those aspects that relate to the evolutionary history of the group; lectures on the basic mechanism of Darwinian evolution. Return to top

BIO 458 Behavior (3-0-3). Prerequisites: BIO 302 and 304. An introduction to, and survey of, animal behavior from an evolutionary perspective. Writing. Return to top

BIO 460 Vertebrate Embryology (3-0-3). Prerequisite: BIO 308. A comparative study of development in the vertebrates. Emphasis is upon developmental anatomy and evolutionary aspects of the group. Return to top

BIO 464 Developmental Biology (3-0-3). Prerequisite: BIO 308. The fundamental principles of development will be illustrated using classical invertebrate and vertebrate systems. The molecular, genetic, and cellular basis of development will be integrated with classical descriptive and experimental approaches. Return to top

BIO 465 Developmental Biology Laboratory (0-2-1). Corequisite: BIO 464. Examination of important mechanisms and concepts operating in developing animal systems. Laboratories will expose students to both classical embryology and modern molecular approaches to experimental developmental biology. Writing. Return to top

BIO 468 Theories of Aging (3-0-3). Prerequisite: BIO 168, or 308, or permission of instructor. This course is an inquiry into the reasons why some organisms show aging in the form of senescence, while other organisms seem to be perennial, or at least long-lived. Current theories of aging will be critically analyzed. Return to top

BIO 471 Summer Local Flora (2-4-4). Study and identification of representative species, genera, and families of mainly local vascular plants found in summer. Lecture, laboratory, and field work. Students in BIO 471 are required to prepare 35 herbarium specimens. Return to top

BIO 473 Spring Local Flora (2-4-4).
Study and identification of representative species, genera, and families of mainly local vascular plants found in spring. Lecture, laboratory, and field work. Students in BIO 473 are required to prepare 35 herbarium specimens. Return to top

**BIO 476 Plant Biochemistry (3-0-3).** Prerequisites: BIO 300 and 308. Corequisite: BIO 477. Basic physiological processes in plants; photosynthesis, uptake of nutrients, respiration, growth, and the role of hormones and enzymes involved in these processes. Return to top

**BIO 477 Plant Biochemistry Laboratory (0-2-1).** Corequisite: BIO 476. Selected exercises designed to reinforce concepts covered in BIO 476. Return to top

**BIO 478 Morphology of Angiosperms (3-0-3).** Prerequisite: BIO 300 or permission of instructor. Corequisite: BIO 479. Study of the overall form, development and, to a minor extent, microscopic structure of the vegetative and reproductive structures of flowering plants. Writing. Return to top

**BIO 479 Morphology of Angiosperms Laboratory (0-2-1).** Corequisite: BIO 478. Selected exercises designed to reinforce concepts covered in BIO 478. Return to top

**BIO 480 Developmental Plant Biology (3-0-3).** Prerequisite: BIO 300 or permission of instructor. Corequisite: BIO 481. Plant anatomy and morphogenesis: a comparative study of the origin, differentiation, and structure of cells, tissues, and organs in higher plants, with emphasis on evolutionary development. Writing. Return to top

**BIO 481 Developmental Plant Biology Laboratory (0-2-1).** Corequisite: BIO 480. Selected exercises designed to reinforce concepts covered in BIO 480. Return to top

**BIO 490 Honors Research (1 or 2).** Prerequisite: Honors degree status. Supervised research in a faculty member's laboratory on a project approved by the Honors Program Committee. May be repeated for credit. Return to top

**BIO 491 Honors Thesis and Defense (3-0-3).** Prerequisite: Honors degree status. Written report on honors research project and a public defense of the thesis before a faculty committee. Writing. Return to top

**BIO 492 Honors Seminar (1-0-1).** Prerequisite: Honors degree status. Oral reports on selected topics, including the honors research project. May be repeated for credit. Writing. Return to top

**BIO 493 Special Topics in Biology (3-0-3).** Prerequisite: Permission of instructor. Study of a particular topic in biology. Topics to be announced in semester course schedule. May be repeated for credit with a change of topic. Return to top

**BIO 494 Special Topics in Biology (4-0-4).** Prerequisite: Permission of instructor. Study of a particular topic in biology. Topics to be announced in semester course schedule. May be repeated for credit with a change of topic. Return to top

**BIO 495 Seminar (1-0-1).** Prerequisites: Senior standing and major in biology. Presentation of student reports on topics of the instructor's choice. Writing. Return to top

**BIO 496 Independent Study in Biology (0-4-2).** Prerequisites: Junior or senior standing, and permission of chairperson. Special problem or independent study course for undergraduate biology majors. May be repeated for credit. Writing. Return to top

**BIO 497 Independent Study in Biology (0-8-4).** Prerequisites: Junior or senior standing, and permission of chairperson. Special problem or independent study course for undergraduate biology majors. May be repeated for credit. Writing. Return to top
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Business Law

Associate Professors: Theresa Johnson Holt, Bruce McClain.

**BLW 411 Ethics and Business Law I (3-0-3).**
Prerequisite: Junior standing. Topics include elements of legal contracts, proof, inadmissible evidence, discharge, breach, and termination; Statutes of Fraud and Limitations; principal-agent relationships; nature of partnerships and essentials of partnership agreements; formation and organization of corporations; powers and regulations of foreign corporations; Uniform Partnership and Ohio General Corporation Acts. Writing. Return to top

**BLW 412 Ethics and Business Law II (3-0-3).** Prerequisite: BLW 411. The Uniform Commercial Code and rules of law including those covering sales, bills of exchange, promissory notes, acceptables, and bills of lading; secured transactions, personal property, bailments and carriers; suretyship; the law of bankruptcy, administration of bankrupt estates. Writing. Return to top
Instructor: Debra Ghosh.

BUS 101 Introduction to College Life (1-0-1).
An orientation course intended for entering freshmen seeking business degrees. Freshman Orientation. Return to top
Chemical Engineering

Professors:
George A. Coulman (Emeritus), Bahman Ghorashi, Edward S. Godleski (Emeritus), Dhananjai B. Shah, Orhan Talu (Chair), Surendra N. Tewari; Associate Professors: Ananth Annapragada, Joanne M. Belovich, Rodney P. Elliott (Emeritus); Jorge E. Gatica; Assistant Professors: George P. Chatzimavroudis, Rolf Lustig, Sridhar Ungarala

CHE 300 Chemical Engineering Principles (4-0-4). Prerequisites: MTH 182, CHM 262, PHY 241. Mathematical analysis of steady-state chemical processes based on conservation of mass and energy. An introduction to computer-aided design of chemical processes. Return to top

CHE 302 Chemical Engineering Thermodynamics (4-0-4). Prerequisites: CHE 300, ESC 321, and ESC 250. Evaluation and application of the laws of thermodynamics with respect to physical and chemical processes. Real gas behavior, solution thermodynamics, phase and reaction equilibria. Return to top

CHE 306 Transport Phenomena (4-0-4). Prerequisites: CHE 300 and ESC 250. Formulation of the physical laws of momentum, heat, and mass transport, with emphasis on their interrelationship. Application of these principles to basic transport processes. Diffusive and convective transport mechanisms. Return to top


CHE 408 Separation Processes (4-0-4). Prerequisites: CHE 302, CHE 306, and ESC 350. Study of diffusion mass transfer and mass transfer operation, including humidification, absorption, stripping, distillation, liquid-liquid extraction, leaching, drying, crystallization, evaporation, filtration, adsorption, and membrane separations. Return to top

CHE 420 Chemical Engineering Laboratory (2-4-4). Prerequisites: CHE 306 and CHE 408. In this course chemical engineering experiments are performed on both bench and pilot plant scale apparatus. The results are used to correlate the chemical engineering science, and the design theory taught in previous course work with the units' actual operation. Emphasis is placed on technical report-writing and oral report presentation. Return to top

CHE 430 Process Control (3-2-4). Prerequisites: ESC 350 and CHE 404. Introduction to the application of process control to chemical and physical processes. Return to top

CHE 440 Process Design I (3-0-3). Prerequisites: CHE 404 and CHE 408. Design of small-scale chemical systems with project and case study approaches, equipment and materials specification, economic evaluation of individual plant subsystems. Writing. Return to top

CHE 441 Process Design II (3-0-3). Prerequisite: CHE 440. Large-scale, integrated design of chemical systems within the constraints of return on investment, market forecasts, safety, and pollution abatement. Writing. Return to top

CHE 451 Agile Manufacturing (3-0-3).
Prerequisite: Senior standing in Engineering, or permission of instructor. An interdisciplinary course in agile manufacturing. Emphasis is placed on re-configurable self-directed work teams, flexible structures, adoption of advanced technology, and quality improvements. Return to top

CHE 461 Principles of Air Pollution Control (3-0-3).
Prerequisite: Senior standing in Engineering, or permission of instructor. The application of engineering principles to the analysis and control of air pollution; includes techniques of air sampling and analysis, atmospheric chemistry and transport, air quality standards, and methods of air pollution abatement. Return to top

CHE 466 Biochemical Engineering (3-0-3).
Prerequisite: Senior standing in Chemical Engineering, or permission of instructor. Introduction to the fundamental concepts in biochemical engineering. Topics include enzyme kinetics, immobilized enzymes, genetic engineering, cell growth kinetics, batch and continuous bioreactor design. 

**CHE 468 Process Modeling (3-0-3).**
Prerequisite: Senior standing in Chemical Engineering, or permission of instructor. Review of the basic principles of transport of momentum, heat, and mass with applied problems. Numerical methods for solving more complex problems of transport phenomena and kinetics. 

**CHE 472 Principles of Adsorption and Catalysis (3-0-3).** Prerequisite: Senior standing in Chemical Engineering, or permission of instructor. An in-depth study of the chemical principles governing the adsorption of molecules onto chemically active surfaces of catalysts and determining how this adsorptive interaction causes chemical reactions to be promoted. The course emphasizes the study of catalysts in industrially significant reactions, such as in petroleum refining. 

**CHE 474 Multiphase Reactors (3-0-3).**
Prerequisite: Senior standing in Chemical Engineering, or permission of instructor. Isothermal and non-isothermal analysis of kinetic data for gas-solid catalytic and noncatalytic reacting systems. Design of packed bed, fluidized bed, and moving bed reactors. 

**CHE 476 Multicomponent Mass Transfer (3-0-3).** Prerequisite: Senior standing in Chemical Engineering, or permission of instructor. Diffusion and mass transfer as applied to stagewise and continuous operations. Emphasis will be placed on multicomponent, non-isothermal, unsteady-state operations. There will be a considerable amount of time devoted to computer programs. 

**CHE 478 Principles of Polymers (3-0-3).**
). Prerequisite: Senior standing in Chemical Engineering, or permission of instructor. Study of polymer molecular structure and its relation to physical properties, such as molecular weight distributions, gel point, glass transition, heat capacity, and viscosity; polymerization kinetics; condensation esterification, emulsion polymerization; methods of analysis, such as X-ray diffraction, infrared spectroscopy, and other important basic engineering properties of polymers. 

**CHE 480 Advanced Materials Processing (3-0-3).**
Prerequisite: Senior standing in Engineering, or permission of instructor. Use of fundamental principles in design and analysis of advanced materials processing, such as fabrication of semiconductor devices, optical materials fabricated by sol-gel processes, ceramic-metal composites, and control of morphology at submicron levels. 

**CHE 482 Introduction to Combustion Phenomena (3-0-3).** Prerequisite: Senior standing in Engineering or Science major, or permission of instructor. Develops a foundation in combustion phenomena including transport and other mechanisms in homogeneous and heterogeneous combustion. Environmental implications of combustion. Elementary modeling and preliminary design calculations in industrial and modern applications of combustion, such as hazardous waste incineration, gas turbines, catalytic converters, and coal combustion systems. Regulatory concerns, stoichiometry, thermochemistry, incinerators and air pollution control. 

**CHE 484 Principles and Applications of Rheology (3-0-3).** Prerequisite: Senior standing in Engineering, or permission of instructor. Rheological models for non-Newtonian fluids. Study of principles of equipment design. 

**CHE 486 Fundamentals of Polymers (3-0-3).**
). Prerequisite: Senior standing in Engineering, or permission of instructor. Study of polymer molecular structure and its relation to physical properties, such as molecular weight distributions, gel point, glass transition, heat capacity, and viscosity; polymerization kinetics; condensation esterification, emulsion polymerization; methods of analysis, such as X-ray diffraction, infrared spectroscopy, and other important basic engineering properties of polymers. 

**CHE 488 Materials Selection and Specification (3-0-3).** Prerequisite: Senior standing in Engineering or permission of instructor. Application of engineering of materials science principles in the selection and/or specification of metals, ceramics, and plastic materials for use in structural, mechanical, and chemical usage. Mechanical properties, corrosion, oxidation, and variation of properties with temperature are considered. 

**CHE 493 Selected Topics (3-0-3).**
Prerequisite: Permission of instructor. Topics of current importance in chemical engineering. 

**CHE 496 Chemical Engineering Projects (1-4-3).** Prerequisite: Senior standing in Chemical Engineering and 3.0 GPA or higher, or permission of chairperson. Special individual chemical engineering projects under the direction of
a faculty advisor. May be repeated for up to 6 credit hours.
## Chemistry

### Professors:
Stan A. Duraj (Chairperson), Baochuan Guo, John Masnovi, Lily Ng; Professors with joint appointments: Michael Tevesz; Professors Emeriti: Anson H. Andrist, Roger W. Binkley, Frank J. Bockhoff, Julius Kerkay, Kerro Knox, Robert L.R. Towns, Bruce F. Turnbull; **Associate Professors:**
David J. Anderson, David W. Ball, Thomas W. Flechtnier, Robert Wei, Yan Xu; Associate Professors Emeriti: Ralph A. Gardner, Robert Megargyle, Earl Mortensen, Paul Olynyk, Alan Rhodes; **Assistant Professors:**
Mekki Bayachou, Valentin Gogonea, Michael Kalafatis, John Turner, Aimin Zhou; Adjunct Faculty: Aloysius Hepp, James Phillips, Joseph Reed-Mundell, Alan Riga; Clinical Faculty: Michael P.C. Ip, Frederick Van Lente; CCF Faculty: Alex Almassan, Sipra Banerjee, Kathleen Berkner, Charles Bevins, Graham Casey, Martha Cathcart, Guy Chrisolm, John Cowell, John Crabb, Paul DiCorleto, Joseph DiDonato, Donna Driscoll, Serpal Erzurum, Paul Fox, Ram Ganapathi, Richard Gronostajski, Manjula Gupta, Stan Hazen, Henry Hoff, Mie-Jae Im, Donald Jacobsen, Sadashiva Karnik, Andrew Larner, Kunio Misono, Richard Morton, Richard Padgett, Edward Plow, Jun Qin, Robert Silverman, George Stark, Dennis Stuehr, Bruce Trapp, Bryan Williams, Yan Xu, Satya Yadav, Vivien Yee.

### CHM 151 Chemistry Around Us (3-0-3).
Study of chemical thought from alchemy to chemistry, and how it affects our lives from the kitchen to the nuclear power plant. Natural Science. [Return to top](#)

### CHM 156 Chemistry Around Us Laboratory (0-2-1). Corequisite: CHM 151. Selected experiments designed to reinforce concepts covered in CHM 151. Natural Science Laboratory. [Return to top](#)

### CHM 251 College Chemistry I (3-0-3).
Prerequisite: one unit high-school algebra. Introduction to chemistry, including fundamental concepts, tools and techniques; matter and energy; atomic structure; chemical bonds and reactions; equilibrium and the gas laws; applications to daily life, industry and life processes. Natural Science. [Return to top](#)

### CHM 252 College Chemistry II (3-0-3). Prerequisite: CHM 251. Survey of organic and biological chemistry with a specific orientation toward the health sciences. Natural Science. [Return to top](#)

### CHM 256 College Chemistry Laboratory I (0-2-1). Corequisite: CHM 251. Selected experiments designed to reinforce concepts covered in CHM 251. Natural Science Laboratory. [Return to top](#)

### CHM 257 College Chemistry Laboratory II (0-2-1).
Prerequisite: 256. Corequisite: 252. Selected experiments designed to reinforce concepts covered in CHM 252. Natural Science Laboratory. [Return to top](#)

### CHM 261 General Chemistry I (4-0-4).
Prerequisites: one unit each high-school algebra and chemistry or CHM 251. Stoichiometry, atomic theory, states of matter, electronic structure, oxidation-reduction, and thermodynamics. Natural Science. [Return to top](#)

### CHM 262 General Chemistry II (4-0-4). Prerequisite: CHM 261. Kinetics, equilibrium, acid-base chemistry, nuclear chemistry, and descriptive chemistry. Natural Science. [Return to top](#)

### CHM 266 General Chemistry Laboratory I (0-3-1). Corequisite: CHM 261. Selected experiments designed to reinforce concepts covered in CHM 261. Natural Science Laboratory. [Return to top](#)

### CHM 267 General Chemistry Laboratory II (0-3-1). Prerequisite: CHM 266 Corequisite: CHM 262. Selected experiments designed to reinforce concepts covered in CHM 262. Natural Science Laboratory. [Return to top](#)

### CHM 272 Honors General Chemistry (4-0-4). Prerequisites: CHM 261 and instructor approval. Advanced course parallel to CHM 262 open to qualified students by instructor approval only. Natural Science. [Return to top](#)

### CHM 277 Honors General Chemistry Laboratory (0-3-2). Prerequisites: CHM 266 and instructor approval. Advanced course parallel to CHM 267 open to qualified students by instructor approval only. Natural Science Laboratory. [Return to top](#)

### CHM 300 Computer Applications in Chemistry (2-0-2). Prerequisites: MTH 182 and CHM 262 or CHM 272.
Introduction to the use of personal computers for chemical problem solving, numerical methods, and access of on-line chemical resources. Return to top

CHM 310 Survey Analytical Chemistry (2-0-2). Prerequisite: CHM 262 or CHM 272 Corequisite: CHM 315. Introduction to and survey of classical and modern instrumental methods of chemical analysis. Return to top

CHM 311 Quantitative Analysis (4-0-4). Prerequisite: CHM 262 or CHM 272 Corequisite: CHM 316. Theory and techniques of gravimetric and volumetric analysis, and fundamentals of electroanalytical chemistry. Return to top

CHM 315 Survey Analytical Chemistry Laboratory (0-4-2). Prerequisite: CHM 267 or CHM 277 Corequisite: CHM 310. Classical analytical techniques: potentiometry and selective ion electrodes, solution and flame spectroscopy, infrared spectroscopy, gas chromatography. Return to top

CHM 316 Quantitative Analysis Laboratory (0-3-2). Prerequisite: CHM 267 or CHM 277 Corequisite: CHM 311. Selected experiments designed to reinforce concepts covered in CHM 311. Return to top

CHM 320 Survey of Physical Chemistry (4-0-4). Prerequisites: MTH 182 and PHY 222 or PHY 242 or PHY 244 and CHM 262 or CHM 272. A less rigorous survey of physical chemistry designed for preprofessional majors. Return to top

CHM 321 Physical Chemistry I (4-0-4). Prerequisite: MTH 281 or MTH 283 and PHY 242 or PHY 244 and CHM 262 or CHM 272. Behavior of gases, thermochemistry, spontaneity, equilibrium, phase rule, colligative properties, ideal and real solutions, condensed phases, electrochemistry, and introduction to chemical kinetics. Return to top

CHM 322 Physical Chemistry II (4-0-4). Quantum chemistry, spectroscopy, introduction to statistical mechanics, kinetic theory of gases, and theoretical kinetics. Return to top

CHM 331 Organic Chemistry I (4-0-4). Prerequisite: CHM 262 or CHM 272. Modern presentation of organic chemistry stressing theory and mechanism, extensive use of resonance and conformational analysis; alkanes, cycloalkanes, alkyl halides, alcohols, ethers, alkenes, alkynes, and stereochemistry. CHM 336 should be taken concurrently. Return to top

CHM 332 Organic Chemistry II (4-0-4). Prerequisite: CHM 331. Continuation of CHM 331. Spectroscopy, aromatic compounds, aldehydes and ketones, carboxylic acids and their derivatives, amines, and polyfunctional compounds. CHM 337 should be taken concurrently. Return to top

CHM 336 Organic Chemistry Laboratory I (0-3-2). Prerequisites: CHM 262 or CHM 272 and CHM 267 or CHM 277 Corequisite: CHM 331. Organic chemistry laboratory exercises to accompany CHM 331. Return to top

CHM 337 Organic Chemistry Laboratory II (0-3-2). Prerequisites: CHM 331 AND CHM 336 Corequisite: CHM 332. Organic chemistry laboratory exercises to accompany CHM 332. Return to top

CHM 379 Independent Study (v,1-4). Prerequisite: Approval of departmental faculty member. Content and credit (up to four credits) as arranged with instructor. Graded S/U. Return to top

CHM 401 Chemical Information (2-0-2). Prerequisite: CHM 332 or equivalent. The chemical literature and access to the information it contains, automated chemical filing systems and computerized database searches. Writing. Return to top

CHM 402 Biochemistry (3-0-3). Prerequisite: CHM 332. Chemistry and metabolism of carbohydrates, lipids, proteins, nucleic acids, vitamins and hormones, with major emphasis on biochemical processes in human cells and organs, enzyme kinetics, and energetics of metabolic reactions. Return to top

CHM 403 Environmental Toxicology (3-0-3). Prerequisite: one year of natural sciences or permission of instructor. Topics on the impact of environmental pollutants on humans. Return to top

CHM 404 Environmental Chemistry (3-0-3). Chemical aspects of environmental problems including air and water pollution, solid waste, toxic substances, and related topics. Return to top

CHM 406 Environmental Chemistry Laboratory (0-3-2). Prerequisites: CHM 316 and CHM 331. Selected experiments designed to reinforce concepts covered in CHM 404, with emphasis on standard methods of analysis of air and water samples. Return to top
CHM 410 Electronics (2-3-4). Prerequisite: CHM 411 or equivalent. Introductory modular approach to analog and digital electronics including processing of signals, display of results, and control of experimental parameters. Return to top

CHM 411 Advanced Instrumental Analysis (3-0-3). Prerequisites: CHM 322 and CHM 316 and C or better in CHM 311. Basic theory and techniques of instrumental methods of analysis, with emphasis on spectrophotometry, X-ray, NMR, chromatography, and mass spectrometry. Return to top

CHM 416 Advanced Instrumental Analysis Laboratory (0-6-4). Prerequisites: CHM 311 and CHM 316. Selected experiments designed to reinforce concepts covered in CHM 411. Writing. Return to top

CHM 421 Special Topics in Physical Chemistry (3-0-3). Prerequisite: CHM 322 or equivalent or instructor approval. Discussion of special topics in physical chemistry reflecting student and faculty interests. Return to top

CHM 423 Statistical Thermodynamics (3-0-3). Prerequisite: CHM 322 or equivalent. Fundamentals of statistical mechanics, distribution laws, and development and application of partition functions to the evaluation of thermodynamic properties of chemical substances. Return to top

CHM 424 Chemical Kinetics (3-0-3). Prerequisite: CHM 322 or equivalent. Principles of rate processes considered and applied to chemical kinetics, investigation of uni- and bi-molecular reactions, and effects of isotopic substitution. Return to top

CHM 426 Physical Chemistry Laboratory I (0-4-3). Prerequisites: CHM 321 and CHM 300 or equivalent. Selected experiments in physical chemistry. Writing. Return to top

CHM 427 Physical Chemistry Laboratory II (0-4-3). Prerequisites: CHM 322 and CHM 426. Selected experiments in physical chemistry. Return to top

CHM 431 Advanced Organic Chemistry (2-0-2). Prerequisite: CHM 332 or equivalent. Applications of spectroscopic techniques in the study of organic reactions and compounds. Return to top

CHM 441 Advanced Inorganic Chemistry (4-0-4). Prerequisite: CHM 321. Corequisite: CHM 322. Consideration of the elements and their compounds based on electronic structure, molecular orbital theory, shape and structure of molecules, and ligand field theory. Return to top

CHM 446 Advanced Inorganic Chemistry Laboratory (0-3-2). Corequisite: CHM 441. Selected experiments in inorganic chemistry. Return to top

CHM 461 Polymer Chemistry (3-0-3). Prerequisite: CHM 332. Consideration of polymer structures and properties; kinetics and mechanism of polymerization, copolymerization and polycondensation. Return to top

CHM 471 Faculty Colloquium (1-0-1). Prerequisite: Senior standing in chemistry. Research seminars presented by faculty. Graded S/U. Return to top

CHM 472 Student Colloquium (1-0-1). Prerequisite: Senior standing in chemistry. Seminars presented by students. Graded S/U. Return to top

CHM 479 Independent Study (v,1-6). Prerequisite: Approval of departmental faculty member. Content and credit (up to 4 credits) as arranged with instructor. Graded S/U. Return to top

CHM 489 Senior Research (v,1-6). Prerequisites: CHM 401 and senior standing in chemistry. Design and execution of experiments, recording and reporting of results. Requires written reports on specific problem. May be repeated for up to six credits. Graded S/U. Return to top

CHM 497 Topics in Chemistry (v,1-6). Prerequisite: Instructor approval. Discussion of selected topics in chemistry as determined by faculty and student interest. Return to top
Professors: Paul J. Jalics, Toshinori Munakata; Associate Professors: Timothy Arndt, Alan C. Benander, Barbara A. Benander, Ben A. Blake, Adam M.A. Fadlalla, Donald G. Golden, Chair, Chien-Hua (Mike) Lin, Victor M. Matos, David R. McIntyre, Santosh K. Misra, Howard Paul, Michael A. Pechura, Janche Sang; Assistant Professors: Theodore Randles, Nilmini Wickramasinghe, Jackie Woldering (Term); Instructor: Dennis Smolinski (Term).

See also Information Systems

CIS 260 Introduction to Programming (4-0-4). Introduction to the principles of computation, problem-solving methods, and algorithm development on a computer using a popular programming language. Development of good programming style and basic skills of designing, coding, debugging, and documenting programs. Topics include functions, arrays, strings, structures, recursion, file I/O, pointers, and introduction to linked lists. Return to top

CIS 265 Data Structures and Algorithms (4-0-4). Perquisites: CIS 260, MTH 153 or MTH 181. This is a continuation of CIS 260. Programming and problem-solving skills are further developed by using language features to implement various data structures such as stacks, queues, linked lists, trees, and graphs. Topics include additional programming and problem-solving techniques, and sorting, searching, and hashing algorithms. Return to top

CIS 270 Files and Large Systems (4-0-4). Prerequisites: CIS 260, MTH 153 or MTH 181. Files and their access methods. Sequential, indexed sequential, B+-Trees, etc. How they are structured and how they are used. Characteristics of physical storage devices such as tape and disk. Comparison of file systems on various computers. Return to top

CIS 306 Computers and Society(3-0-3). Prerequisite: CIS 265 or IST 203. History of computing and technology, the computer and the individual, privacy issues, legal issues, computer crime, computer security, future of computing. Return to top

CIS 324 Comparative Programming Languages (4-0-4). Prerequisite: CIS 265. A short history of programming languages and styles precedes the study of an important collection of programming paradigms. The major programming paradigms are surveyed, including procedural, functional, object-oriented, graphical-user-based, and logic programming. Note: course number changes to CIS 424 effective Fall 2003. Return to top

CIS 335 Language Processors (4-0-4). Prerequisite: CIS 265. Foundation of PC architecture and assembly language. Topics include machine language, hardware fundamentals, registers, numbering systems, data definition, and addressing modes. Fundamentals of systems programming including the implementation and use of assemblers, macro processors, linkers, loaders, and compilers. Examples of language processors are studied on various computers. Return to top

CIS 340 C/C++ For Systems Programming (2-0-2). Prerequisite: CIS 265. Covers the basics of the C/C++ languages and standard library functions needed for systems programming. Teaches students with a Java background to write C/C++ programs using standard library functions. Effective Fall semester 2003. Return to top

CIS 345 Operating System Principles (4-0-4). Prerequisite: CIS 265; effective Fall semester 2003: prerequisite: CIS 340. PC architecture and assembly language, including interrupts, I/O handling, and memory management. Study of operating system functions, including the management of computer resources such as processor scheduling, memory management, I/O device scheduling, and file system structure and protection using Unix. Return to top

CIS 368 Object Oriented Design and Programming (4-0-4). Prerequisite: CIS 265. Course builds on basic knowledge of computer programming and Java language. Presents in-depth practical exposure to object-oriented analysis and design. Based on the fundamental O-O concepts of inheritance and polymorphism. Introduces Unified Modeling Language (UML). Examines how fundamental building blocks of encapsulation, inheritance and polymorphism can be put together to build sensible libraries (packages) of classes. Effective Fall semester 2003. Return to top

CIS 408 Internet Programming (4-0-4). Prerequisite: CIS 265. Introduces Internet and intranet programming languages such as HTML, XML, Perl, JavaScript and ASP, in the context of building Internet and World Wide Web applications. Discusses other technologies including Unix, socket programming, remote procedure calls, and web-based application servers. Effective Fall semester 2003. Return to top

CIS 424 Comparative Programming Languages (4-0-4). Prerequisite: CIS 265. A short history of programming languages and styles precedes the study of an important collection of programming paradigms. The major programming paradigms are surveyed, including procedural, functional, object-oriented, graphical-user-based, and logic programming. Formerly CIS 324.
Effective Fall semester 2003.  

CIS 430 Data Base Concepts (4-0-4). Prerequisite: CIS 265. Concepts of data-base management systems and data-base models, including relational, network, hierarchical, and multi-indexed. Detailed study of query languages including relational algebra, Structured Query Language (SQL), and Query-by-Example (QBE). Introduction to data abstraction E-R models, normalization theory. Lab experience using a commercial DBMS and its supporting programming environment.  

CIS 433 Structured Systems Analysis (4-0-4). Prerequisite: CIS 430. Introduction to the tools and techniques of structured analysis: data flow diagrams, data dictionaries, process specification. System life cycle through the structured system specifications. Tools and techniques of structured design, including structure charts, coupling, cohesion, transform analysis, transaction analysis, balanced systems, packaging, design heuristics.  

CIS 434 Software Engineering (3-0-3). Prerequisite: CIS 433. Topics in software engineering and performance engineering, including comparison between structured and object-oriented software development, verification and testing, software design for concurrent and real-time systems, and system re-engineering for increased performance.  

CIS 438 Client-Server Computing (3-0-3). Prerequisite: CIS 430. Concepts of client-server architecture, distributed database design, electronic mail and data interchange, distributed programming methodology, and implementation issues. Distributed database and electronic mail applications will be developed in cooperative distributed computing environment. Students will acquire system design knowledge and programming experience in client-server computing applications.  

CIS 442 Operating Systems II (3-0-3). Prerequisite: CIS 345. Study of operating systems including deadlocks, command procedures. Emphasizes advanced concepts of distributed operating systems as well as client/server models; and study of Unix as a case study of an operating systems both from a system administrator and interprocess communication focus.  

CIS 443 543 Graphical User Interfaces (3-0-3). Prerequisites: CIS 345, CIS 459. Graphical User Interfaces for advanced bit-mapped display systems characterized by close interaction with pointing devices. Consideration of both the underlying application programming interfaces as well as the use of a framework of C++ classes. Use of an interactive environment for design and debugging. A specific industry standard system is explored in detail with extensive programming involvement.  

CIS 452 552 Advanced COBOL Programming (4-0-4). Prerequisite: CIS 270. Continuation of the study of COBOL language. Emphasis on structured programming and program design. Topics covered include: COBOL-85, multi-dimensional arrays, table handling, SORT, SEARCH, subprograms, random access file processing, character processing, internal data representation.  

CIS 454 554 Data Communications and Computer Networks (4-0-4). Prerequisite: CIS 345. Data communications: characteristics of physical transmission media, including international standards for data encoding and device interfacing; transmission principles, modems and multiplexors; data link protocols, mechanisms for error detection/correction, and flow control. Computer Networks: broad survey of existing networks; network topology; network layers from the ISO OSI reference model; network programming; analytical tools for network analysis and design.  

CIS 457 Computer graphics (3-0-3). Prerequisite: CIS 265. Investigation of some of the algorithms for the drawing of lines, polygons, circles and ellipses; image clipping, image transformation, fractals and splines.  

CIS 459 559 Object Oriented Programming (3-0-3). Prerequisite: CIS 265. This course teaches the methodology of object-oriented design and programming using the C++ language. Previous knowledge of C is required. The C++ language taught includes built-in data types, pointers, classes, operator overloading, code reusability via simple and multiple inheritance, polymorphism, stream I/O, and the use of class libraries.  

CIS 465 Multimedia (3-0-3). Prerequisite: CIS 265. Multimedia hardware; multimedia objects and their acquisition; applications of multimedia, multimedia tools and techniques; authoring advanced multimedia applications using authoring systems; investigating Windows programs for multimedia applications.  


CIS 467 Introduction to Artificial Intelligence (3-0-3). Prerequisite: CIS 265. The course is an elementary introduction to artificial intelligence, which presents an overview of various domains of the field. Topics studied include search techniques, symbolic algebra, natural language processing, knowledge-based systems, reasoning under uncertainty, machine learning,
and some non-symbolic topics such as neural networks and genetic algorithms. Common Lisp, a major symbolic AI language, will also be introduced. Return to top

CIS 469 569 Java Programming (4-0-4). Prerequisite: CIS 459. An in-depth look at the Java programming language. Classes and objects in Java, Java applets and applications, graphics, basic and advanced GUI components of Java, exception handling and multithreading in Java, files and streams. Use of Java on the Internet, networking, and Java Beans. Event-driven programming in Java. Return to top

CIS 470 570 Linear Programming (4-0-4). Prerequisites: CIS 265, MTH 288. Theory and application of linear programming; formulation of models: blending, transportation, warehousing, and applications to information technology and artificial intelligence; elimination methods, duality, revised simplex method, post optimization. Return to top

CIS 490 Foundations of Computing (3-0-3). Prerequisites: MTH 182, MTH 220, and CIS 335; Mathematics majors may substitute one mathematics course numbered 280 or above for CIS 335. Sets, relations, regular languages, finite automata, context-free languages, pushdown automata, phrase-structure languages, Turing machines, Church’s theory, recursion, computability, decidability, computational complexity. Return to top

CIS 491 Professional Internship (1-0-1). Prerequisite: Junior Standing and Permission of a CIS Department faculty advisor. Work experience in a professional environment. The work performed must extend the academic curriculum and provide a meaningful learning experience in the student’s area of interest. Term paper required. Effective Fall semester 2003. Return to top

CIS 493 Special Topics in Computer and Information Science (varies). Prerequisite: Varies. Special topics of current interest in computer and information science. Content varies each offering. May be repeated. Return to top

CIS 496 Special Study in Computer and Information Science (credit as arranged). Prerequisites: Senior standing, departmental approval. Special research projects in computer and information science. Arranged between student and adviser and subject to departmental approval prior to registration. Return to top
Classical and Medieval Studies

Professors:
Earl R. Anderson, Bruce A. Beatie, David E. Bynum, Lee Gibbs, John A.C. Greppin, Edward R. Haymes (Director), John Hunter, Walter C. Leedy, Nicholas J. Moutafakis, Glending Olson; Professors Emeriti: David H. Evett, William R. Martin, Reuben Silver, Jan van der Meulen, C. Angel Zorita; Associate Professors: Michael Baumer, Elizabeth Lehfeldt, Derwood C. Smith, Associate Professor Emeritus: James Barthelme; Assistant Professor: Laura Wertheimer.

CLM 293 393/493 Special Topics in Classical and Medieval Studies (1 to 6 credits).
Focus on some topic in classical and medieval studies otherwise not offered. The topic may be an individual author; text, monument; genre; style; historical period; social, philosophical, or religious movement; linguistic problem; or an appropriate combination of these. May be repeated for credit with a change in topic. Classical and Medieval Studies course.

CLM 495 Seminar (1 to 3 credits).
Prerequisite: Permission of the instructor. In-depth study of some area related to classical and medieval studies. May be repeated for credit with change in topic.

CLM 498 Senior Thesis Proposal (1-0-1).

CLM 499 Senior Thesis Writing (3-0-3).
Prerequisites: Senior standing and permission of the CLM Director. During their last year, CLM majors will propose a senior thesis topic to the CLM Advisory Committee for approval. In most cases, the thesis will be closely related to the student's area of concentration. When the topic has been approved, the student will be assigned to an appropriate thesis director and will register for the thesis over two semesters: CLM 498, followed by CLM 499.

Other courses may apply toward the CLM major and minor. Also, certain special topics courses may apply, if approved by the CLM Advisory Committee. See individual departmental listing for course descriptions and prerequisites. For additional information, call (216) 687-4645.
Communication

Professors:
Robert J. Abelman, David Atkin, Eileen Berlin Ray, Leo W. Jeffres, Sidney Kraus, Jae-won Lee, Carolyn Lin, Kimberly A. Neuendorf, Richard Perloff; Associate Professors: Austin Allen, Susan E. Kogler Hill (Chairperson), Michael H. Rand, George B. Ray, Jill E. Rudd; Assistant Professors: Renee Botta, Cheryl Bracken, Jenifer Kopfman, Loreen OIson; Term/Adjunct Faculty: Betty Clapp, Eleanor Dombrowski, Jack Powers, Jana Stone; Professional Staff/Faculty: John Ban, Richard Pitchford.

COM 100 200/300 Communication Lab (2 to 6 credits). Practical workshop and labs to develop communication skills. Students apply material from accompanying lecture courses (with which the lab is coordinated) to specific communication problems. May be repeated as topic varies. Return to top

COM 101 Principles of Communication (4-0-4).
Reviews principles of communication and introduces theories applied in various contexts, including interpersonal, organizational, and mass communication. Lab experiences help students develop specific communication skills and apply theories in their everyday lives. Social Science. Return to top

COM 131 Media Mystery Tour: Insiders' Perspective (3-0-3). Through a combination of videotaped interviews, lectures, discussions and electronic field trips, students are introduced to the processes that form video/audio communication. Professionals in broadcast, video and audio production, corporate and organizational video, and cable television explain how they work their crafts. The course explores electronic options such as direct broadcast television (satellite), specialty market videos, the Internet, digital imaging and emerging technologies. Return to top

COM 204 Single Source Video/Audio Production and Editing (4-4-4). Prerequisite: COM 101. Students are introduced to visual storytelling and writing for the ear. Concept of single-camera production, including composition and movement, moving image sequencing (such as cut-ins and cut-aways), shooting for the edit, and three-point lighting are stressed. Students learn operation of camcorders, portable audio recorders, and video editors. Single microphone techniques, cueing, editing, and dubbing of various audio media are also introduced. Return to top

COM 211 Communicating in Personal Relationships (4-0-4). Examines the fundamental role of communication in establishing and maintaining personal relationships. By surveying the leading research and theories in interpersonal communication, this course will engage students in the detailed analysis of how individuals enter into, maintain, and terminate relationships. Conceptual perspectives examined will include communicative competence, relational development, interaction process, codes, and context. Social Science. Return to top

COM 221 Introduction to Film (4-0-4).
Explores the range of film styles, movements, and genres; the relationship between theory and technique in the "language" of sounds and images; and the economic and social importance of film. Includes the screening and analysis of classical and contemporary films, both U.S. and international. Arts and Humanities. Return to top

COM 225 Media Writing (4-0-4).
Development of basic writing skills for journalists and other media professionals, including judging news values, following the inverted pyramid style of writing, and using the AP style and copy-editing techniques. Development of major news-gathering tools such as interviewing and covering traditional sources of news - meetings, speeches, and press conferences. Application of journalistic forms and tools for print and electronic media and public relations. Writing. Return to top

COM 226 Mass Media and Society (4-0-4). Prerequisite: COM 101 or permission of instructor. Examines basic theoretical concepts and models underpinning the study of mass communication, including processes of message construction in media organizations, content patterns, audience message processing, media effects, media systems, and relationships with other systems. Social Science. Return to top

COM 231 Evolution of Mass Media (4-0-4).
Survey course tracing the origin and growth of mass media in the United States. Presents an overview and analysis of the influence of media upon American society. Social Science. Return to top
COM 242 Public and Professional Speaking (2-1-3).
Organizing and presenting informative and persuasive speeches, with stress on evidence and reasoning to support ideas, and adapting to the audience and speaking situation. Return to top

COM 293 Special Topics in Communication (2-4 credits). Prerequisite: Permission of instructor. Topics of interpersonal, mass, or telecommunication that change each semester and focus on communication skills. May be repeated once. Return to top

COM 303 Communication Inquiry (4-0-4). Prerequisite: COM 101 or permission of instructor. Understanding methods of inquiry in communication, including social science orientation, quantitative and qualitative methods for gathering and analyzing data, and critiquing and interpreting research. Theory, design, and basic statistics involved in survey and experimental research. Students are actively involved in data collection and research projects. Return to top

COM 320 History of the Moving Image (4-0-4). Prerequisite: COM 221, COM 226, or permission of instructor. Historical study of silent and sound film styles in their social, economic, and technological contexts. Film influence in early television production is also considered. Both U.S. and international films are considered. Western Culture and Civilization. Return to top

COM 321 Documentary Form in Film and Television (4-0-4). Prerequisite: COM 221 or permission of instructor. The history, theory, and contemporary practice of nonfiction film and film-for-television. Involves intensive analysis of selected films and tapes. Return to top

COM 326 Advanced Reporting and Specialized Writing for the Media (4-0-4). Prerequisite: COM 225. Development of advanced information-gathering skills for the media, with an emphasis on use of public records, observational techniques, electronic data bases, and interviewing techniques. Covers various public and urban affairs contexts for the media, and some specialized writing forms, including writing features and writing for the Internet. Writing. Return to top

COM 327 Media Criticism (4-0-4).
Introduces criteria for determining social responsibilities and judging the performance of print, broadcast, and film media. Addresses history, analysis, and evaluation of technique, content, and aesthetic effect of media messages. Writing. Return to top

COM 329 Contemporary Film (4-0-4). Prerequisite: COM 221 or permission of instructor. Explores and examines structures of narrative filmmaking for cinema and television from World War II to the present. Examines cinematic practices outside and inside of the domestic U.S. market influence, the development of television, the economic expansion of the Hollywood apparatus, and ultimately the development of cinema in opposition to dominant culture. Return to top

COM 330 Nonverbal Communication (4-0-4).
Study of nonlinguistic and paralinguistic aspects of communication, including personal space, body language, eye contact, touching, and paralanguage; survey of research in the field along with class experiences in nonverbal communication. Return to top

COM 331 Gender and Communication (4-0-4).
Explores the relationship of gender to the communication process. Examines issues of power, conflict, sex role stereotypes, and cultural patterns of interaction on interpersonal relationships. Human Diversity. Return to top

COM 332 Interracial Communication (4-0-4).
Applies communication theory to interracial situations, problem-solving in interracial groups, blockages to successful relations between the races, stereotyping, prejudice, and roles. African-American Experience, Human Diversity. Return to top

COM 341 Group Process and Leadership (4-0-4).
Examines the structure and dynamics of groups, the nature and function of leadership, problem-solving and decision-making, communication networks, role differentiation, and group growth. Return to top

COM 346 Communication in Organizations (4-0-4).
Explores approaches and processes of communication in organizational settings. Specific focus is on structure and function of messages and information dissemination, as well as application of theory. Return to top

COM 347 Political Communication (4-0-4).
Introduces students to contemporary and historical scholarship of politics, mass media, and public opinion. Examines
such issues as the impact of television on elections, the press and the presidency, political advertising, presidential debates, and opinion polling. Explores theories and research on mass media and elections. Return to top

**COM 348 Intercultural Communication (4-0-4).**
Analyzes the cultural dimensions of communication with emphasis on interpersonal and social encounters. Examines the cultural foundations of communication behavior, including ethnicity, cultural sensitivity, personal relationships, group processes, verbal and nonverbal communication, and cultural adaptation. Strategies for effective intercultural communication are also discussed. Return to top

**COM 350 Persuasive Communication and Attitude Change (4-0-4).** Introduces students to the field of persuasion. Examines theories of persuasion, research on persuasive communication, and the formation of social and political attitudes. Topics include the dynamics of attitude change, interpersonal persuasion, brainwashing, subliminal persuasion, and media information campaigns. Return to top

**COM 351 Audio Production for Radio (4-2-4).** Prerequisite: COM 204, COM 231, or permission of instructor. Focuses on microphone techniques, commercial and news production techniques, radio writing, and operational tasks of broadcast radio and recording studios. Radio formats and program types are studied. Digital audio editing is introduced. Includes lab component. Return to top

**COM 352 Multi-Source Video Production (4-2-4).** Prerequisite: COM 204, COM 231, or permission of instructor. Focuses on operation of video switcher, teleprompter, lighting board and studio cameras. Students learn television program direction and floor managing. Students study multicamera production, studio and remote multicamera lighting, and put knowledge in practice in the lab component. Program types studied include persuasive, news/informational, and entertainment. Return to top

**COM 353 Media Electronics (4-0-4).** Prerequisite: COM 204, COM 352, or permission of instructor. Covers history, practical application, and basic electronic theory as applied to design, operation, and maintenance of video/audio origination, recording, playback, and distribution equipment. Designed for majors and non-majors with technical/engineering interests or background. Students may work as engineering crew for Video/Audio Communication Center productions. Return to top

**COM 357 Principles of Public Relations (4-0-4).** Prerequisite: COM 225 or permission of instructor. Examines the role and context of professional public relations practitioners and development of techniques for ongoing public relations programs, managing crises, and conducting projects and campaigns. Development of particular public relations writing forms, including speeches, press releases, reports, and fact sheets. Return to top

**COM 358 Media Law, Economics and Ethics (4-0-4).** Examines media law, including first amendment and administrative law. Focuses on social, political, and economic influences. Examines legal constraints for students planning to become professional communicators. Return to top

**COM 359 International Communication (4-0-4).** Surveys the global, regional, and national media systems and practices. Examines the role of the mass media in public diplomacy, national development, national policies, cultural interactions, and perceptions and images people develop about other countries, peoples, and the world. Also examines the future of the New World Information and Communication Order. Return to top

**COM 360 Principles of Advertising (4-0-4).** Presents an overview of the field. Surveys the operational principles and fundamental practices of advertising that include advertising theories, ethics, regulation, research methods, media planning, message strategy and campaign planning strategy. Students also are involved in an advertising campaign project as part of the hands-on exercise in class. Return to top

**COM 362 Health Communication (4-0-4).** Focuses on interactions of people involved in the health-care process and the dissemination and interpretation of health-related messages. Provides overview of provider-recipient communication, communication in health-care organizations, and public health concerns as they relate to physical, mental, and social health issues. Return to top

**COM 366 Communication and Conflict (4-0-4).** Approaches to the management of intrapersonal, interpersonal, and societal conflict, game theory, frustration and aggression, the etiology of conflict; role playing and case study methods to be supplemented by lecture-discussions and readings. Return to top
COM 368 Introduction to Language (4-0-4). Introduces the role of language in communication. Topics include an introduction to linguistics, sociolinguistics, psycholinguistics, information processing, and animal language systems from a communication perspective. Return to top

COM 370 Communication Technology and Social Change (4-0-4). Studies the role of communication in societal change and the diffusion of innovations. Particular emphasis is placed on new communication technologies and the attributes of their adopters; the ongoing convergence of such technologies as telephone, broadcasting, film and the Internet. Return to top

COM 379 Communication and Negotiation (4-0-4). Prerequisite: COM 366 or permission of instructor. Examines basic dimensions and theories of negotiation, and develops an understanding of the significance that communication theory has on the study of negotiation. Covers conflict resolution in a wide variety of contexts including interpersonal, organizational, community, international, and public policy. Return to top

COM 380 Family Communication (4-0-4). Investigates communication in the family group, with emphasis on functional and dysfunctional ways in which family members relate to one another. Return to top

COM 388 The Rhetoric of Black America (4-0-4). Studies the use of rhetoric by Black Americans as an instrument for modifying social, economic, and political conditions. Materials include speeches and documents by Black American spokespersons. African-American Experience, Human Diversity. Return to top

COM 393 Special Topics in Communication (2-4 credits). Prerequisite: Permission of instructor. Topics of interpersonal, mass, or telecommunication that change each semester and emphasize skills and communication theory. May be repeated once. Return to top

COM 400 Studio and Media Production Department Management (4-2-4). Prerequisite: COM 204, COM 352, or permission of instructor. Analyzes and provides practical techniques and procedures of studio and media production department management. Students learn production systems design, production planning and process, facility bookmaking and budgeting. The lab component requires participation in Video/Audio Communication Center productions. Return to top

COM 401 Advanced Video/Audio Production (4-4-4). Prerequisites: COM 204, COM 226, COM 351 or COM 225, COM 352, COM 404, or permission of instructor. COM 403 suggested as companion course. Students produce commercial-grade information, educational, training or marketing programs, or broadcast or cable programs for on- or off-campus clients. There is a lab component. Students also study basic operation of broadcast newsrooms and corporate/organizational video departments. (May rotate instructors from other areas to allow for differing emphasis). Return to top

COM 403 Advanced Video/Audio Editing (4-4-4). Prerequisites: COM 204, COM 352, COM 353 and permission of instructor. Students learn operation of nonlinear video editing, and digital audio workstations and digital graphics applications. Students study and practice the concepts of sequencing (including cut-ins and cut-aways), montage, time manipulation, rhythm, and transitions. Students spend considerable lab time outside the classroom. Return to top

COM 404 Performance for the Screen: Broadcast and Film (4-2-4). Prerequisites: COM 204 and Theater prerequisites and permission of instructor. Students learn broadcast talent skills for both on- and off-camera work. Delivery styles, dressing for video success, and performance self-criticism techniques are all studied. The role of talent as communicator is emphasized. There is a lab component. Return to top

COM 405 Electronic Journalism (4-4-4). Prerequisites: COM 204, COM 225, COM 226, COM 351 or COM 352 and permission of instructor. Students learn to produce news programs and program components through further development of newswriting, news talent, and news production skills. Students also learn of the dilemmas faced every day by working broadcast journalists. Ethics and technologies are studied. Also includes elements of Computer-Assisted Reporting and reporting for the Internet. There is a substantial lab component. Writing. Return to top

COM 425 Editing and Graphics (4-0-4). Understanding basic principles for print media graphics and developing editing skills. Learning how to design and layout newspapers, newsletters, magazines and Web pages using such computer software as PageMaker. Return to top
COM 426 Laboratory Newspaper I (1-10-4). Prerequisites: COM 225 or 360 and permission of instructor. Introduces students to all aspects of newspaper work and publishing a publication - from advertising sales to distribution on news stands. Students will increase skills in reporting, interviewing, and photography; learn basics of editing, newspaper design and layout; develop fundamental skills in PageMaker and PhotoShop software; understand rudiments of the business side of the publication; and participate in its distribution. Return to top

COM 427 Laboratory Newspaper II (Advanced) (1-10-4). Prerequisites: COM 426 and permission of instructor. Continuation of Com 426: Laboratory Newspaper I. Students hold staff positions on the paper, mentor students in COM 426, and develop and maintain publication Web site. Students will continue to work on all aspects of creating a publication - from advertising sales to distribution on news stands, and will become increasingly involved in the decision-making process for news selection and placement, coordination of reporting assignments and story development, and the application of ethics and other related concerns. Return to top

COM 428 Imaging Africa (4-0-4). Designed to enable students to explore and examine the processes, images, stereotypes, and myths associated with the historical development of film. Taught through lectures and intensive examination of films and television programming within a seminar setting. Non-Western Culture and Civilization. Return to top

COM 429 Mediation and Collaborative Problem Solving (4-0-4). Prerequisite: COM 366, or COM 379, or permission of instructor. Examines how mediation works, factors that determine whether mediation can be used to resolve disputes, and the conditions under which mediation is most effective. Return to top

COM 444 Public Relations Writing (4-2-4). Prerequisites: COM 225, COM 226 and COM 357, or permission of instructor. A workshop course in advanced public relations-writing skills. Emphasizes message design and dissemination techniques that range across print and electronic media for communication with both internal and external organizational publics, including newsletters and annual reports. Writing. Return to top

COM 448 Managing Organizational Teams (4-0-4). Focuses on the structure, functions, and processes of organizational teams and work groups. Special attention is given to promoting effective teamwork in today's organizations through methods of team-building and examining leadership issues confronting teams. Return to top

COM 449 Advanced Issues in Health Communication (4-0-4). Prerequisite: COM 362 or permission of instructor. Provides in-depth examination of key theoretic and applied approaches to health communication. Topics include health communication models, doctor-patient communication, gender issues and health, health information campaigns, mass-media influences on health, the role of culture on health and disease, the health-care organization, group influences on well-being, communication and mental health, communication and social health, and the politics of health communication. Return to top

COM 450 Media Programming and Research (4-0-4). Prerequisite: COM 226, COM 231 or permission of instructor. Analysis of the social, economic, political and cultural setting of the media; exploration of the determinants of programming strategies based on media research at the local and national levels. Return to top

COM 455 Communication Campaigns (4-0-4). Prerequisites: COM 226, COM 357 or COM 360, or permission of instructor. Introduces students to the fundamentals of communication campaigns, including public information and political campaigns. Course content encompasses the role of campaigns in shaping social, cultural, and political agendas; theoretical foundations of communication campaigns; and campaign management techniques. Students participate in an actual campaign exercise to gain experience as campaign strategists. Return to top

COM 460 Advertising Copywriting and Layout Design (4-0-4). Prerequisite: COM 360, or permission of instructor. Students learn practical skills in writing copy for advertising and in laying out designs; focuses on creative writing exercises, computer graphic designs, portfolio development and the discussion of audience/consumer psychology as well as media use patterns as the basis for copywriting. Return to top

COM 490 Internship in Communication (2 to 8 credits). Prerequisites: Junior or senior standing, permission of internship director. Field work with community agencies concerned with promotional communication, communication in organizations, political campaigns, and the media. May be repeated for a maximum of 8 credit hours (only 4 credit hours can count toward the major). Return to top

COM 493 Special Topics in Communication (2 to 8 credits). Prerequisite: COM 226, or permission of instructor. Topics in interpersonal and organizational communication, broadcasting, film, journalism, and mass communication that change each semester and deal with a variety of important subjects and issues. May be repeated with
COM 495 Seminar in Communication (4-0-4).
Prerequisites: Senior standing, permission of instructor. Seminar topics vary across specific areas of emphases. May be repeated once. Return to top

COM 496 Independent Study (2 to 8 credits).
Prerequisites: Junior or senior standing, approval of a department faculty member. May be repeated for a maximum of 8 credit hours (only 4 credit hours can count toward the major). Return to top
CSC 121 Career Orientation (1-0-1).
Prerequisite for entry into the Cooperative Education Program, but open to all students. Covers policies and procedures of the Cooperative Education Program, orientation to career decision-making, personal evaluation, interviewing techniques, resume preparation, and job market trends. Satisfactory/Unsatisfactory basis only. Note: this description effective Fall, 2003.

CSC 224 Career Exploration (3-0-3).
Designed to help students explore the world of work, their skills and interests, job-search strategies, and the relationship between various college majors and careers. Highly recommended for undeclared/undecided students. Satisfactory/Unsatisfactory basis only. Note: this description effective Fall, 2003.

CSC 300 Co-op Field Experience (1-0-1).
Required of and limited to students on co-op work assignments in all colleges. One hour of credit is awarded for each successful assignment completed. This credit is not counted toward the number of hours needed for graduation but it will add academic hours to a student’s credit total and enhance career preparedness. Note: this description effective Fall, 2003.

CSC 321 Employment Strategies (1-0-1).
Designed to prepare juniors, seniors, and graduate students for an effective job search; covers a range of related subjects: taking personal inventory; initiating a personal job campaign, resume preparation, telephone techniques, accessing the hidden job market, salary negotiations, networking, interviewing, follow-up measures, and strategies to enhance on-the-job success. Satisfactory/Unsatisfactory basis only. Note: this description effective Fall, 2003.

CSC 400 Co-op Field Experience (1-0-0).
Special field assignment for students who have completed prior co-op requirements or participate in community work study. Satisfactory/Unsatisfactory basis only.

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Civil Engineering


CVE 211 Surveying (3-2-3). Prerequisite: MTH 181. Theory and techniques of horizontal and vertical distance measurement, angle measurement, theory and adjustment of errors, area and traverse calculations, tacheometry, state plane coordinate system, topographic mapping, horizontal and vertical curves, earthwork calculations, fundamentals of engineering graphics, integration of geometrical theory, and computer-aided drawing. Return to top

CVE 212 Surveying Laboratory (1-2-2). Practical application of theory learned in CVE 211 through field problems involving the measurement of angles and horizontal and vertical distances. CVE 211 must be taken concurrently or as a prerequisite. Return to top

CVE 310 Strength of Materials Laboratory (1-2-2). Laboratory testing of engineering materials to determine physical properties and to verify basic theories. ESC 211 must be taken concurrently or as a prerequisite. Return to top

CVE 312 Structural Analysis I (3-0-3). Prerequisite: ESC 211. Truss and frame analysis, influence lines and load position criteria, deflection analysis, analysis of indeterminate structures by compatability methods, moment distribution method, slope deflection method. Return to top

CVE 322 Structural Steel Design (3-0-3). Prerequisite: CVE 312. Design of structural steel components subject to tensile, compressive, bending and combined bending and compressive loadings; design of bolted and welded connections. Return to top

CVE 331 Introduction to Geotechnical Engineering (3-0-3). Prerequisite: ESC 211. Phase relationships, index properties, soil classification, clay mineralogy and soil structure. Soil-water interaction; capillarity, shrinkage and swelling, permeability seepage and effective stress, shear strength and consolidation theories, slope stability. Return to top

CVE 332 Geotechnical Engineering Laboratory (1-2-2). Corequisite: CVE 331. Performance of basic soil tests, such as Atterberg limits, grain size analysis, compaction, consolidation, and triaxial testing. Writing. Return to top

CVE 361 Hydraulic Engineering (3-0-3). Prerequisite: ESC 301. Application of the principles of fluid mechanics to the design and operation of pipeline, pump, open channel, and ground-water hydraulic systems. Introduction to hydrology. Return to top

CVE 362 Hydraulics Laboratory (1-2-1). Prerequisite or Corequisite: CVE 361. Experimental verification of pump, open channel, and ground-water energy-loss theory. Measurement of pipe and open-channel flow. Determination of centrifugal pump operating characteristics. Simulation of flow in pipe networks. Return to top

CVE 371 Environmental Engineering I (3-0-3). Prerequisite: ESC 301. Introduction to environmental engineering issues, legal aspects, engineering solutions, and basic approaches to abatement system design. Includes water quality, water supply, wastewater treatment systems, air pollution abatement, fate of pollutants, solid wastes, hazardous wastes, hazardous materials management, and environmental impacts. Return to top

CVE 401 Structural Engineering Laboratory (0-3-1). Prerequisite: CVE 422. Laboratory work in testing of structural engineering materials and components; proportioning of concrete mixes; testing of concrete cylinders and beams, reinforcing bars. Return to top

CVE 403 Construction Planning and Principles of Estimating (3-0-3). Prerequisites: CVE 322, CVE 331. Types and uses of construction equipment and study of construction procedures; study of different types of estimates, direct and indirect costs, insurance, taxes, and bonds; analysis of construction schedule planning by CPM or PERT. Return to top

CVE 404 Civil Engineering Systems Analysis (3-0-3). Prerequisite: Senior standing. Application of standard mathematical optimization procedures to the solution of linear and nonlinear civil engineering systems. Return to top

CVE 412 Structural Analysis II (3-0-3). Prerequisites: CVE 312, ESC 350. Matrix analysis of two- and three-dimensional trusses, continuous beams, and frames; emphasis on the displacement method and stiffness matrix development. Use of AutoCad and an ALGOR software program are required. Return to top

CVE 413 Advanced Strength of Materials (4-0-4). Prerequisite: ESC 211. This course will foster an understanding of a
number of advanced concepts in the field of engineering mechanics. Topics include three-dimensional stress-strain relationships, failure theories, bending of non-symmetrical members, curved beam theory, beams on elastic foundations, torsion of noncircular shafts using membrane analogy, and plate theory.  

**CVE 414 Analysis and Design of Composite Materials (4-0-4).** Prerequisite: **ESC 211.** Behavior of unidirectional composites, rule of mixtures, short-fiber composites, analysis of orthotropic lamina, analysis of laminated composites, design of polymer composite structures, and repair of reinforced concrete structures with composite materials.  

**CVE 415 Structural Reliability (4-0-4).** Prerequisites: **CVE 413, ESC 310.** Structural reliability depends on a precise definition of failure, which is usually specified by loss of service. In order to quantify reliability, a basic review of reliability mathematics, including probability density functions and hazard rate functions, is provided. Aspects of Monte Carlo and decision tree analysis will be discussed as they relate to structural analysis. Since there is appreciable scatter in the failure strength of brittle materials (such as ceramics and concrete) the concepts of Weibull analysis and weakest link theory will be thoroughly discussed. Bundle theory and its relationship to composite materials will be introduced. Standard techniques to estimate statistical parameters such as linear and nonlinear regression analysis, as well as maximum likelihood estimation methods will be highlighted. Finally, issues relating to limit state functions, the reliability index, and approximate methods will be discussed.  

**CVE 417 Structural Vibrations (4-0-4).** Prerequisites: **ESC 202, ESC 250, CVE 412.** Dynamic response of single and multiple degree-of-freedom and continuous structural systems to general force inputs by integration and modal methods, approximate design methods of structural systems under dynamic loading.  

**CVE 421 Behavior and Properties of Concrete (3-0-3).** Prerequisite: **CVE 422.** Properties of hydraulic cements, aggregates, plastic, and hardened concrete; effect of admixtures and curing conditions; specifications and acceptance tests; placement, consolidation, finishing, and durability of concrete.  

**CVE 422 Reinforced Concrete Design (3-0-3).** Prerequisite: **CVE 322.** Analysis and design of reinforced concrete members by service and ultimate strength methods; flexure, shear, displacement, and anchorage of beams; combined axial and bending stresses in columns; one-way slabs and continuous beams.  

**CVE 423 Prestressed Concrete (3-0-3).** Prerequisite: **CVE 422.** Immediate and long-term stress losses in post-tensioned and pre-tensioned members; analysis and design of prestressed structural members for flexure and shear; proportioning of members for size and placement of reinforcement; analysis of crack width, development, and deflection.  

**CVE 424 Non-Destructive Evaluation (3-2-4).** Methods of non-destructive evaluation are studied in this course. Topics include ultrasonics, acoustic emissions, penetrants, eddy current, X-ray and neutron radiography, digital radiography, computed tomography, and thermography.  

**CVE 425 Advanced Structural Design (3-0-3).** Topics in reinforced concrete and steel design, plastic design of beams and frames, composite construction, plate girder design, torsion, two-way slab design and limit state design.  

**CVE 426 Senior Design (0-3-2).** Prerequisite: Senior standing. A capstone course which applies and extends previously developed principles of civil engineering. Students will form teams and work on design projects under the supervision of civil engineering faculty in the various areas offered by the faculty. Computer-aided analysis, cost estimation, planning, and management should be included in the design. Registration must be for two consecutive semesters of 1 credit each. Writing.  

**CVE 428 Structural Wood Design (4-0-4).** Prerequisite: **CVE 322.** Vertical dead and live loads due to gravity, roof, and floor. Lateral design loads due to wind and seismic. Properties and grades of sawn lumber and glulam members; modification factors of allowable stresses; analysis and design of sawn and glulam beams for flexure and lateral stability, shear, bearing, and deflections; analysis and design of axially loaded members, combined axial, and bending effects. Properties and grades of plywood and other rated sheathing; analysis and design of horizontal diaphragms, chords, drag struts, and shearwalls. Design of nailed, bolted connections; timber connectors and connection hardware.  

**CVE 429 Foundation Engineering (3-0-3).** Prerequisites: **CVE 331, CVE 332, CVE 422.** Subsurface exploration, bearing capacity analysis, shallow foundation design; spread footing, combined footing and mat footing. Lateral earth pressure theory; Retaining wall design; sheet piles; deep foundations; piles and caissons; soil improvement.  

**CVE 430 Advanced Soil Mechanics (3-0-3).** Prerequisite: **CVE 331.** Soil mineralogy, determination of soil composition, clay-water electrolyte systems, soil composition, and engineering properties. Conduction phenomenon. Frozen soil engineering.  

**CVE 431 Advanced Foundations (3-0-3).** Prerequisite: **CVE 429.** Subsurface explorations, shallow foundations, design of spread footings, mats, retaining walls, deep foundations, design of piles, piers and caissons.
CVE 434 Advanced Foundations (3-0-3). Prerequisite: CVE 429. Subsurface explorations, shallow foundations, design of spread footings, mats, retaining walls, deep foundations, design of piles, piers, and caissons. Return to top

CVE 440 Soil Stabilization and Decontamination (3-1-3). Prerequisites: CVE 331 and CVE 373. Engineering classification of soils; clay mineralogy; properties of different types of soils including strength, permeability, volume-density and characteristics; soil contaminant interaction, methods of soil stabilization, methods of soil decontamination, process selection, and site remediation. Soil decontamination design project. Return to top

CVE 446 Transportation Engineering (3-0-3). Prerequisite: CVE 331. Survey of transportation development, characteristics, and planning; traffic characteristics capacity of various systems, including basic procedures, controls, and criteria in highway design; environmental considerations. Return to top

CVE 450 Environmental Technology (3-0-3). Introduction to environmental quality, water resources, wastewater treatment, air pollution, solid and hazardous waste management, waste site remediation. Emphasis on solutions to business, industrial, and manufacturing problems; including site audits, pollution prevention and regulatory issues. Return to top

CVE 451 Boundary Surveying (3-0-3). Prerequisites: CVE 211, CVE 212. The Land Surveyor's Role, analysis of evidence and procedures for boundary locations, retrace-ment principles for sequences, simultaneous and public surveys, laws on surveying practices. Return to top

CVE 452 Real Estate Law (3-0-3). Prerequisites: CVE 211, CVE 212. Legal aspects of real estate transactions and documents (deeds, mortgages and leases) and selected elements of the law of real estate brokerage. Return to top

CVE 453 Subdivision Design (3-0-3). Prerequisites: CVE 211, CVE 212. Process of subdividing and platting land; analysis of soils, topography, terrain, earthwork, geometry and other variables for land subdivision; plat preparation; layout of development plans. Return to top

CVE 454 Route Surveying (3-0-3). Prerequisites: CVE 211, CVE 212. Route surveying and geometric design; topographic site surveys and mapping; civil engineering and construction surveys; earthwork computation; layout of industrial plants, buildings, cables, pipelines and manufacturing. Return to top

CVE 461 Hydrologic Analysis (3-0-3). Characterization and analysis of the hydrologic cycle and associated hydrologic abstractions. Statistical analysis of hydrologic events, hydrologic routing, and the effects of urbanization on the hydrologic response of a watershed. Return to top

CVE 462 Open Channel Hydraulics (3-0-3). Application of the principles of the conservation of mass, energy, and momentum to open channel flow phenomena. Analysis of open channel hydraulic structures and floodplain hydraulics. Emphasis is on computer applications and numerical methods. Return to top

CVE 463 Water Resources Engineering (3-0-3). Prerequisite: CVE 361. Analysis and hydraulic design of water resource engineering subsystems including subsurface drainage, pressure flow systems, pumps and turbines, reservoirs, spillways, and landfills. Return to top

CVE 464 Ground-Water Hydrology (3-0-3). Analysis of the physical properties and the resultant ground-water flow in porous media. Application of the principles of the conservation and mass, energy, and momentum to ground water flow systems. Includes well hydraulics, well design, aquifer analysis, infiltration, flow in the unsaturated zone, and introduction to ground-water contamination. Return to top

CVE 470 Environmental Chemistry (3-0-3). Theoretical concepts from inorganic, organic, and physical chemistry applied to water chemistry and environmental engineering issues. Return to top

CVE 471 Environmental Law, Regulation and Compliance (3-0-3). The study of environmental legislation and the resultant regulations as they apply to the environmental engineering profession. Addresses federal, state, and local regulations as applied to soil, water, air, and multimedia engineering activities. Return to top

CVE 472 Biological Principles of Environmental Engineering (3-0-3). Application of the principles of biochemistry and microbiology including microbial metabolic cycles, enzyme systems, inhibitors, and electron transport mechanisms important to the water and wastewater treatment processes. Return to top

CVE 473 Environmental Engineering II (3-0-3). Prerequisite: CVE 371. Introduction to environmental engineering design of unit processes and pollution abatement systems. Topics include water treatment plant design, wastewater treatment plant design, air pollution abatement systems, solid waste engineering management, hazardous waste engineering management, and waste site remediation. Return to top
CVE 474 Environmental Engineering Laboratory (1-2-2). Prerequisite: CVE 371. Laboratory methods for the measurement of physical, chemical, and bacteriological parameters of water and wastewater. Interpretation of laboratory results with regard to the design and operation of water and wastewater treatment processes and to the control of the quality of natural waters. Return to top

CVE 475 Solid Waste Engineering Management (3-0-3). Generation, storage, collection, transfer, treatment, and disposal of solid waste. Addresses engineering and management issues including waste minimization and recycling. Return to top

CVE 476 Environmental Health Engineering (3-0-3). The application of engineering principles to the analysis and control of problems in occupational and environmental health, with emphasis on problems in small water and wastewater treatment systems, industrial hygiene, air pollution, noise, hazardous materials control, and public health. Return to top

CVE 478 Water Treatment Plant Design (3-0-3). Design of water treatment and distribution systems, engineering principles in design, selection of alternative process schemes, and cost estimates. Return to top

CVE 479 Wastewater Treatment Plant Design (3-0-3). Design of wastewater treatment and collection systems, engineering principles in design, selection of alternative process schemes, and cost estimates. Return to top

CVE 481 Air Pollution (3-0-3). Prerequisite: CVE 570. Types of air pollutants, and their sources, characteristics, environmental effects, control, and environmental fate. Dispersion modeling. Return to top

CVE 490 Special Topics (1 to 4 credits). Prerequisites: Senior standing and Departmental approval. Detailed study of a special topic under the guidance of a faculty member. Available every semester. Return to top

CVE 491 Advanced Civil Engineering Design or Research I (1 to 4 Credits). Prerequisite: Senior standing. Advanced design or research under the direction of an instructor. Available every semester. Return to top
DAN 100 Performance Practicum (1 hour).
Prerequisite: Concurrent enrollment in one PES or DAN dance activity course and permission of instructor. Introduction to the performance techniques of live dance production. Learning, rehearsing, and performing a contemporary dance work in an informal and/or formal setting. Return to top

DAN 201 Introduction to Dance (3 hours).
Survey course exploring the diverse aesthetic, multicultural, and historical aspects of Western dance, including theater, social, and ethnic forms. Arts and Humanities. Return to top

DAN 210 Dance for the Physical Educator (1 hour).
Introduction to the fundamentals of dance, providing concentrated experience in assessing and improving personal movement skills, achievement of greater efficiency of movement, and improved skeletal alignment, with focus on clear movement patterning. Theories and skills of dance technique will be explored, including elements of rhythm, phrasing, step patterns, movement combinations, and qualitative and aesthetic considerations. Includes attention to dance teaching strategies. Return to top

DAN 211 Dance History (3 hours).
Study of the history of dance and its relationship to the arts and society from the 16th century to the present. Arts and Humanities, Writing. Return to top

DAN 240 Modern Dance III (2 or 3 hours).
Prerequisite: PES 141 or permission of instructor. Further study of modern dance theory and skill with emphasis on increasing physical competence and understanding of underlying theory. May be repeated for up to 9 hours. Return to top

DAN 250 Ballet III (2 hours).
Prerequisite: PES 151 or permission of instructor. Further study of the theory and skills of classical ballet, with emphasis on increasing physical competence and understanding of underlying theory. May be repeated for up to 8 hours. Return to top

DAN 300 Modern Dance Repertory (3 hours).
Techniques, improvisation, choreography, and production experience leading to public performance. May be taken four times for hour; may also be participated in without hour. Audition is required for entry. Return to top

DAN 301 Dance Composition I (2 hours).
Study and exploration of the elements of dance composition, including rhythm, time, space, gesture, and sources of composition material. Return to top

DAN 302 Dance Composition II (2 hours).
Prerequisite: DAN 301. Explores the creative process and compositional elements of designing a choreographic work beyond the solo. Student will take the choreographic tools from previous levels of dance composition and apply them to the solo and group work. Return to top

DAN 340 Modern Dance IV (3 hours).
Prerequisite: DAN 240 or permission of instructor. Advanced contemporary dance technique expanding upon previously learned modern training to develop advanced movement phrases, integrated body patterning, and sensitivity to the body as an expressive instrument. Return to top

DAN 350 Ballet IV (2 hours).
Prerequisite: DAN 250 or permission of instructor. Advanced ballet technique expanding upon previously learned ballet training to develop articulate execution of complex classical ballet vocabulary and refined presentational skills. Return to top

DAN 410 Teaching Dance (2 hours).
Prerequisite: DAN 210. Methods for teaching various elements of dance in the elementary and secondary schools. Emphasis is upon developing educational dance/movement activities of both spontaneous and formal structure. Included are dance appreciation and interdisciplinary activities. Return to top

DAN 473 Contemporary Dance Technique (1 hour).
Prerequisite: Intermediate/advanced level or above of previous contemporary dance training. Continuing study in the techniques of contemporary dance; designed for the professional or post-graduate dancer interested in maintaining a dance training program. Consists of warm-up, floor and centerwork, and complex combinations emphasizing integrated
body patterning and rhythmic clarity with a diverse qualitative sensibility. Return to top

**DAN 480 Practicum in Dance (3 hours).**
Prerequisite: Permission of instructor. A structured, supervised field experience designed to provide an extended, practical experience in a selected dance setting; designed and executed by the student in consultation with a member of the faculty. Return to top

**DAN 496 Independent Study (Hour as Arranged).**
Prerequisite: Permission of instructor. Faculty supervised independent study in an area of the student's interest. Return to top

**DAN 499 Dance Seminar (1 hour).**
Intensive study in topics of importance for contemporary dancers including creative process, world dance forms, guest artist residency activities, and body work issues. May be taken for credit more than once, but no single topic may be repeated. Topics appear in course schedule. Return to top
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Dramatic Arts

Associate Professor: Guy E. Hare Jr. (Director).

**DRA 101 Production Practicum (0-6-2).**
Laboratory experience through work on university theater productions in performance, technical work, or business participation. May be taken four times for credit; may be repeated thereafter without credit. [Return to top](#)

**DRA 110 Playgoing Lab (0-3-1).**
Designed to broaden the student's knowledge of theater by attendance at productions at area professional theaters. Students are required to attend a minimum of six performances of six different productions taking place in at least three professional theaters approved by the instructor during the semester. The course may be repeated up to four times for credit. [Return to top](#)

**DRA 111 Theatre Appreciation (3-0-3).**
Survey of the elements of dramatic/theatric communication; intended to develop understanding and enjoyment of the theater in all of its forms; lectures, readings, demonstrations. Arts and Humanities. [Return to top](#)

**DRA 115 Overcoming Stage Fright Lab (0-3-1).**
Designed to help the student cope with the debilitating effects of stage fright not only on stage but in settings from the board room to the club house. [Return to top](#)

**DRA 200 Introduction to Technical Theatre (3-0-3).**
A survey of the basic techniques and practices in technical theater and production, including stage management, pre-production, the rehearsal period, technical rehearsals, load-ins, and calling the show. Building a prompt script with all detailed paperwork will be emphasized. Prerequisite to all other technical theater courses. [Return to top](#)

**DRA 210 Theatre Review Lab (0-3-1).**
Designed to broaden the student's knowledge of theater and develop the student's critical faculties by actual attendance at and reviewing of productions at area professional theaters. May be repeated up to four times for credit. [Return to top](#)

**DRA 211 History of the Theatre I (3-0-3).**
Survey of dramatic and theatrical developments from their ritual beginning through the theaters of the Greek, Roman, Medieval, and Italian and Spanish Renaissance, French Neoclassic and Elizabethan periods; focuses on the physical theaters, production techniques, and dramatic literature and conventions. Classical and Medieval Studies, Arts and Humanities, and Writing. [Return to top](#)

**DRA 212 History of the Theatre II (3-0-3).**
Continuation of the history survey; Italian and French Neoclassicism, Restoration, 18th Century; Romanticism, 19th Century through 1850. Arts and Humanities and Writing. [Return to top](#)

**DRA 213 History of the Theatre III (3-0-3).**
Traces the rise of Realism and Naturalism, "Modern" theater, Symbolism, Expressionism, Dada, Futurism, and Epic, to the beginnings of contemporary theater. Arts and Humanities. [Return to top](#)

**DRA 216 African American Theatre (3-0-3).**
Study of contemporary Black plays and playwrights; the practice and roots of the contemporary Black theater; the changing image of African-Americans from the stereotypes of early American theater to today's varied characterizations. African-American Experience, Human Diversity and Arts and Humanities. [Return to top](#)

**DRA 225 Principles of Acting for Television, Film, and the Stage (3-0-3).**
Study of the actor's vocal, physical, and psychological resources; introduction to the mechanics of stage movement; exercises in sensory, imaginative, emotional, and pantomimic responsiveness; fundamentals of characterization; attendance at productions. [Return to top](#)

**DRA 300 Stage Management (3-0-3).**
Study of the special problems and considerations of stage management in and out of rehearsal. Special emphasis is placed on prompt-books, scheduling and coordination functions of a working stage manager as well as performance functions such as calling a show. [Return to top](#)

**DRA 301 Lighting Design (3-0-3).** Prerequisite: **DRA 200.** This is an introductory course in the basic elements of stage
lighting design. Study includes principles, theories, equipment and use of lighting, as applied to today's modern professional theater. Return to top

**DRA 311 Drama and Film (4-0-4).** Prerequisite: DRA 111, COM 221, or permission of instructor. Detailed study of ten major plays which have been adapted into major films; study of differences in stage and film presentations with emphasis on structure, acting styles, and directing techniques. Return to top

**DRA 314 Plays in Performance I (3-0-3).** Designed to acquaint the student with the major trends in literature and the authors writing for the stage from the earliest pre-literary oral traditions in the Middle East through the Greek Golden Age, Medieval European Drama, the Spanish Renaissance to and including 17th-Century France. A brief look at major classical Far Eastern (Sanskrit, Noh, Kabuki, Kyogen) dramatic literature will be included. Emphasis will be placed on the conventions, structures, and themes unique and common to each of the plays considered. Writing. Return to top

**DRA 315 Plays in Performance II (3-0-3).** The course, consisting of lectures and guided class discussions, is designed to acquaint the student with the major trends in literature and the authors writing for the stage from the earliest pre-Elizabethan England to modern-day America. Topics will include Elizabethan, Jacobean, and Restoration England; 18th-Century England, France and Germany; 19th-Century England, France, Germany, Russia and America, French Neo-Classicism, and Romanticism to 1850. Emphasis will be placed on the conventions, structures, and themes unique and common to each of the plays considered. Writing. Return to top

**DRA 316 Plays in Performance III (3-0-3).** The course, consisting of lectures and guided class discussions, is designed to acquaint the student with the major trends in literature and the authors writing for the stage from the mid-19th-century Europe to modern-day America. Topics will include the rise of Realism and Naturalism, Symbolism, Expressionism, Futurism, Dadaism and The Anti-Literary Movement. Playwrights will include Shaw, Wilde, Pinero, Strindberg, and Pirandello. Emphasis will be placed on the conventions, structures, and themes unique and common to each of the plays considered. Writing. Return to top

**DRA 317 Society and Minority Theatre (3-0-3).** "Society & Minority Theatre" is predicated on the notion that the American melting pot has failed in its original intent: E Pluribus Unum ("Out of Many, One"). Instead, we may describe the U.S. in reverse: "In One, Many"-so visible and vocal are the nation's sub-groups. Their rise to prominence has been so vigorous and occasionally so strident that it is often described as a revolution. Blacks, Gays, Women, Hispanics, Native Americans, Asians, Handicapped, Aged, et al. Theater artists have chronicled these social eruptions, and their works illuminate these historical and social developments with insight and passion. Through the playwright's lens, we can gain insight and understanding into both the arts of the theater and significant contemporary social manifestations. Human Diversity. Return to top

**DRA 318 African American Theatre II (3-0-3).** Prerequisite: DRA 216. Explores in greater depth the topics, theaters, playwrights, and themes introduced in DRA 216 "African American Theatre." African American Experience, Human Diversity. Return to top

**DRA 319 Non-Western Culture: Theatre of the East (3-0-3).** Survey of non-Western theater forms, exploring the classic theater of India, Japan, China, and Indonesia. The course will include lectures on and films of Kabuki, Chinese Opera and other Asian productions, as well as hands-on experience with Indian, Indonesian, Japanese and Chinese puppets. Non-Western Culture and Civilization. Return to top

**DRA 321 Contemporary Drama (4-0-4).** Prerequisite: DRA 111 or permission of instructor. Survey of dramatic literature post- World War II to the present with emphasis on new trends in the theater; lectures, readings, demonstrations; where possible, attendance at productions. Return to top

**DRA 325 Intermediate Acting (4-0-4).** Prerequisite: DRA 225. Study of and experimentation with theories of characterization and role preparation; study of voice and movement. Return to top

**DRA 326 Voice and Movement (4-0-4).** A study of conventional, period, and abstract stage movement in association with a study of voice improvement and standards used in various styles of theater. Return to top

**DRA 331 Principles of Directing (3-0-3).** Prerequisite: DRA 225. Study of various conceptualizations of the director's role; fundamental consideration of play analysis, rehearsal and production procedures, and essentials of directing techniques. Return to top

**DRA 332 Advanced Directing (4-0-4).** Prerequisite: DRA 331. Detailed study of directing theories and techniques, applications to scenes directed in class, in-class analysis and criticism. Return to top
DRA 333 Directing a High School Production (3-0-3). Prerequisite: DRA 225. Study of special problems and considerations of the high school director's role; fundamental and practical consideration of play selection and analysis, rehearsal and production procedures, and essentials of special directing techniques appropriate to the high school production. Return to top

DRA 351 Theatre Makeup (3-0-3). Study and practice in the art and science of the use of theatrical makeup for the legitimate stage, film, and television. Return to top

DRA 352 Creative Dramatics (3-0-3). Theories and methods of developing the creative capacities through original dramatization, freeing the imagination to create plays spontaneously or from literature; practice in workshop. Valuable course for majors in Elementary Education. Return to top

DRA 353 Children's Theatre (3-0-3). Study of theory and methods of producing plays for children; scriptwriting analysis and adaptation; rehearsal and production procedures. Return to top

DRA 354 Puppet Production (3-0-3). A study of various types of puppetry, construction, and design methods; manipulation, scripting and producing. Return to top

DRA 371 Scene Design I (4-0-4). A study of research methods for theater design, including the compilation of a reference file, the drafting techniques used to produce working drawings for scenic construction, and perspective drawing and rendering techniques used in set design. Return to top

DRA 372 Scene Design II (4-0-4). A study of the design of the single-set play and the design of the multiset play. Return to top

DRA 381 Theatre Organization and Management (4-0-4). Prerequisite: DRA 111. Study of organizational patterns and management theories and practices in educational, community, and professional theater; organization of personnel; publicity/promotion; fiscal operations; familiarization with theater unions and contracts. Return to top

DRA 391 Costume History and Design (3-0-3). Study of period, fashions, research, presentation, and design techniques. Return to top

DRA 425 Advanced Acting (4-0-4). Prerequisite: DRA 325. Study of acting styles and the performance characteristics of serious drama, comedy, melodrama, and farce; experimental approaches to contemporary acting theories and techniques; emphasis on performance and audition. Return to top

DRA 426 Stand-up Comedy (3-0-3). An exploration of the historical, societal, and political context of American comedy, with particular emphasis on stand-up comedy and comedians. Practicum includes study of the craft of writing, producing, and performing comedy; learning improvisational techniques; and opportunities for presentation and performance. Return to top

DRA 451 Theatre Criticism (4-0-4). Prerequisite: DRA 111. Examination of major historical theories in the criticism and evaluation of drama and theater; study of contemporary approaches to criticism. Return to top

DRA 452 3-D Makeup (4-0-4). Prerequisite: DRA 351. A study of the modeling, casting, and application of three-dimensional material in makeup. Return to top

DRA 461 Playwriting (4-0-4). Prerequisite: Permission of instructor. Study of materials and forms pertinent to the creation of play scripts; methods of encoding dramatic information; exposure to theoretical writings of playwrights; lectures, discussions, practice in writing scenes and short plays for class analysis and criticism. Return to top

DRA 490 Professional Theatre Internship (4-16 Credits). Prerequisite: Senior standing or permission of instructor. Majors assigned to an internship at a professional theater in tech, design, performance, or administrative areas. Approval of Cleveland State University Dramatic Arts faculty and professional theater staff required. Syllabi will be created to meet specific demands. Return to top

DRA 491 Comprehensive Exam (4-0-4). Required of all graduating senior Drama majors, this course is a term-long final preparation for the career centered on comprehensive oral examination by the faculty. Return to top
DRA 494 Studio Production Lab (1-4 credits).
Prerequisite: permission of instructor. Participant will produce an original script at the Theatre Arts facility with the support of the Theatre Arts Area. Credit will be given for playwriting, directing, stage management, acting, design, and technical work. Credit hours will be assigned by instructor for each production according to the need. (May be repeated for a maximum of 8 credit hours.) Return to top

DRA 495 Drama Seminar (Maximum 12 credits).
Prerequisite: Senior standing or permission of instructor. In-depth study of selected topics in drama and theater; may involve either group work or individual research. Return to top

DRA 496 Independent Study (Maximum 12 credits).
Prerequisite: Senior standing or permission of instructor and director. Individual study and research of a topic of interest to the student. Return to top
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The requested item does not exist on this server. The link is either outdated or inaccurate.

Return to the Cleveland State University home page.
ECE 300 Introduction to Early Childhood Education (3 hours). Prerequisites: PSY 220 and EDC 300. A study of the history of early childhood education; survey of major models and programs that educate young children and examination of the theories that provide the foundation for such programs. Attention to current issues in the classroom and beyond. Satisfies Writing Across the Curriculum requirement. Return to top

ECE 401 Developmental Curriculum for Early Childhood Education (4 hours). Prerequisites: EDB 200, EDB 300, EDB 301, EDB 302, and ECE 300. Study of curriculum development for educational settings that serve children from age 3 to age 8, including typically developing children, children at risk, and children with mild and moderate disabilities. Attention is given to developmental considerations and national and state subject matter standards; different curriculum theories and models as well as their implementation. Return to top

ECE 402 Teaching Methods in Early Childhood Education (4 hours). Prerequisites: EDB 200, EDB 300, EDB 301, EDB 302, and ECE 300. Study of teaching methods for educational settings that serve children from age 3 to age 8. Attention given to strategies for planning; teacher-child interactions; guiding children's behavior; organizing the learning environment; conducting activities; care giving; and supporting play, projects, and integrated curriculum. Return to top

ECE 403 Teaching Young Children with Mild and Moderate Disabilities (3 hours). Prerequisites: EDB 200, EDB 300, EDB 301, EDB 302, and ECE 300. Introduction to educational issues related to working in regular early childhood settings with young children who have mild and moderate disabilities. Attention is given to characteristics, etiology, classification, and legal and interdisciplinary issues, as well as to curricular and pedagogical approaches for the inclusive classroom. Return to top

ECE 412 Collaboration with Families and Professionals in Early Childhood Settings (4 hours). Prerequisites: EDC 300 (take with Student Teaching; petition required). Explores the relationship between early childhood professionals and families. Strategies for communicating and collaborating with others and for fostering home-school connections are examined. History, philosophy, and issues related to collaboration and family involvement, including diversity, are discussed. Return to top

ECE 415 Mathematics Instruction in Preschool and the Primary Grades (3 hours). Prerequisites: MTH 127, MTH 128, MTH 129. Aimed at development of a justifiable rationale and philosophy for teaching and learning mathematics in preschool and the primary grades that takes into account the interrelationships among curriculum, instruction, and assessment. Includes exploration of constructive processes involved in developing mathematical understanding in young children with particular attention given the acquisition of numeracy and problem-solving strategies. Also examined and evaluated will be current standards, methods, and materials for teaching and learning mathematics during early childhood. Return to top

ECE 416 Social Studies Instruction in Preschool and the Primary Grades (3 hours). Prerequisite: EDC 300. Objectives, principles, trends, materials and current practices for teaching social studies and fostering social development in early childhood education. This course will focus on developmentally appropriate content and strategies for introducing young children to the study of history, geography, economics, and other social sciences. Return to top

ECE 417 Science Instruction in Preschool and the Primary Grades (3 hours). The nature, scope, and role of science experiences in the learning and development of young children with emphasis given to a constructivist, inquiry-oriented approach consistent with national standards. Discussions, demonstrations, and experiments to be drawn from physical, biological, and earth science. Return to top
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Economics


ECN 201 Principles of Macroeconomics (3-0-3).
Introductory course in macroeconomic theory: national accounting, levels of output and employment, money supply, government monetary and foreign exchange, and the international monetary system. Social Science. Return to top

ECN 202 Principles of Microeconomics (3-0-3).
Introductory course in microeconomic theory: pricing, resource allocation, distribution, current domestic economic problems, international trade, and alternate economic systems. Social Science. Return to top

ECN 221 Introduction to Mathematical Methods in Economics (3-0-3). Prerequisite: high-school algebra. Introduction to mathematical tools necessary for the effective study of economic theory and econometric models. Cannot be used for elective credit to satisfy major field requirements. Return to top

ECN 301 Intermediate Macroeconomics (3-0-3). Prerequisites: ECN 201 and ECN 202 or equivalent. Determinants of aggregate economic variables such as GDP, unemployment, inflation, interest rate, exchange rate and trade balance. Return to top

ECN 302 Intermediate Microeconomics (3-0-3). Prerequisites: ECN 201 and ECN 202 or equivalent. Systems for allocating resources among competing wants, prices as a rationing mechanism, consumer choice, business behavior under various market situations, markets for capital and labor, general equilibrium and welfare economics. Return to top

ECN 311 Economic History of the United States (3-0-3). Economic development of agriculture, commerce, money and banking, industry, labor, and government. Return to top

ECN 316 Comparative Economic Systems (3-0-3). Prerequisites: ECN 201 and ECN 202 or equivalent. American capitalism compared with socialism, communism, and other planned economies. Return to top

ECN 322 Statistics and Econometrics (3-0-3). Prerequisite: MTH 147 or equivalent. Development of statistical theory and its application to econometric models, including simple, multiple, and nonlinear regression and correlation; derivations of some important sampling distributions and their application in economics and business. Return to top

ECN 330 Managerial Economics (4-0-4). Prerequisite: ECN 302. Applications of economic theory and methodology to decision-making problems of business and public institutions. The course deals with microeconomic concepts, such as demand, demand forecasting, production, costs, pricing practices, and capital budgeting. Return to top

ECN 333 Economics of Health Care (4-0-4). Prerequisite: ECN 202 or equivalent. Overview of health and the features of medical-care markets; economic analysis of demand for medical care including the role of uncertainty and insurance on demand; supply of medical care and the role of doctors, hospitals and insurance on supply side; organizational form of health-care markets and policy issues in financing and resource allocation; international dimensions of health-care issues. Return to top

ECN 350 Economics of Crime and Punishment (4-0-4). Prerequisite: Junior standing. Trends in criminal activity, data and data sources; economic impact on society of criminal activity; economic analysis of behavior of the criminal justice system; role of deterrence including certainty and severity of punishment, and economics of victimless crimes with applications in the markets for heroin and cocaine. Return to top

ECN 355 Money and Banking (4-0-4). Prerequisites: ECN 201 and ECN 202 or equivalent. The role of money in economic activity, financial markets and instruments, depository financial institutions and money, the Federal Reserve System, monetary theory and policy, international banking and finance. Return to top

ECN 360 Public Sector Economics (4-0-4). Prerequisite: ECN 201 or ECN 202 or equivalent. Economics of the governmental or public sector in the United States; topics include the economic rationale for government, theory of public choice, public expenditure theory, analysis of selected expenditure programs, taxation theory, analysis of selected taxes and fiscal relations between governments. Writing. Return to top

ECN 391 Consumer Economics (3-0-3). Money management and consumer choice and protection; budgeting, saving, and borrowing; buying food, clothing, housing,
ECN 415 History of Economic Thought (3-0-3). Prerequisites: ECN 201 and ECN 202 or equivalent. Development of economic thought from ancient times to the present day. Return to top

ECN 433 Industrial Organization (4-0-4). Prerequisite: ECN 202 or equivalent. Investigation of how market structure and firms’ conduct influence economic performance. Topics include oligopoly theory, entry barriers, merger activity, product differentiation, and innovation. Effects of government regulation (and deregulation) and antitrust policy will also be examined. Return to top

ECN 441 Business Fluctuations and Forecasting (4-0-4). Prerequisite: ECN 301 or permission of instructor. Nature and causes of business fluctuations; business cycle theories; methods of forecasting GDP, inflation, and unemployment. Return to top

ECN 450 Economics of Law (4-0-4). Prerequisite: ECN 302. The economic concepts of public and private goods, externalities, and benefits vs. cost will be used to analyze the economic basis for and effects of property, contract, tort, and criminal law. Important cases will be discussed and issues such as the rules for determining the liability for accidents and the proper level of penalties for crimes will be explored. In addition, the trade-offs involved in the use of the legal system itself will be explored in such areas as plea bargaining, trial vs. settlement of civil cases, and various arrangements for payment of legal costs. Writing. Return to top

ECN 470 Urban Economics (4-0-4). Prerequisites: ECN 201 and ECN 202 or equivalent. Theory concerning development and growth of cities; land rent and land use patterns, suburbanization, and control; discussion of urban problems and issues such as poverty and public policy, housing market, discrimination; and local government finance. Return to top

ECN 474 Environmental and Natural Resource Economics (4-0-4). Prerequisite: ECN 302. Using the concepts of public goods and externalities, the causes of environmental problems will be analyzed. Regulatory approaches will be examined as to their impact and efficiency in controlling pollution and congestion. Extremity and sustainability issues involving the rate of exploitation of natural resources will be explored. Both positive and normative economic reasoning will be applied to the related issues of population size, economic-ecological interactions, and future prospects for humanity. Cross-listed with ECN 574 and ENV 553. Return to top

ECN 482 International Economics (4-0-4). Prerequisites: ECN 201 and ECN 202 or equivalent. The determinants of comparative advantage and the pattern of international trade, the gains from trade, and the effects of trade restrictions, trade growth and development, the balance of payments, the economics of exchange rates, and macroeconomics in an open economy. Return to top

ECN 494 Special Topics in Economics (Maximum of 4 credits). Prerequisite: Permission of instructor. Course title and content may change from term to term. Return to top

ECN 496 Independent Study in Economics (Maximum of 3 credits). Prerequisite: Permission of instructor. Independent research project under faculty supervision. Return to top

ECN 497 Honors Essay (3-0-3). Prerequisite: Admission to the honors program. Required of all honors students in economics. Directed research supervised by the Honors Essay Committee. Return to top
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Curriculum and Foundations

Associate Professor: Francine Peterman (Chairperson); Professor: David Adams, Rosemary Sutton; Professor Emerita: Elyse S. Fleming, Carol A. Takacs; Professor Emeriti: Jerrold Burnell, Frank Johns, Robert MacNaughton, Sam P. Wiggins; Associate Professors: Joshua G. Bagaka's, William Beasley, Jim Carl, Sanza Clark; Associate Professors Emeriti: Floyd M. Adams, Gordon E. Samson; Assistant Professors: Aida Adams, Jeremy Genovese, Seung Jin, Mehmet Ozturk, Michael Sanders, Emesicia M. Torbert-Richardson, Lih-Ching Chen Wang.

EDB 101 Developmental Reading (4 hours).
Development of reading comprehension, vocabulary, and study strategies that enhance comprehension of narrative and expository text. Emphasis on critical and analytical reading, and instruction in synthesizing and analyzing text from various academic disciplines. Course is designed to prepare students for the demands of college reading and college studying. Letter grading system used. Graduation hour.

EDB 200 Teaching as a Profession (2 hours).
Students will examine teaching as a profession - the roles and responsibilities they will encounter in the classroom, the school, and the community. Students will develop a teaching philosophy, examining why they want to be teachers, what will be expected of them in that role, and what being a professional teacher means. Offered every semester.

EDB 250 Politics of Black Education (4 hours).
Using a historical perspective, this course will examine the nature, functions, and consequences of schooling for African-Americans in both the North and South since the Civil War. Special attention will be given to the interface of schools as social and political institutions with both the larger society and African-American communities. African-American Experience, Human Diversity.

EDB 300 Educational Technology (2 hours).
Provides an introduction to instructional technology useful to teachers. Students will use and evaluate media technology, focusing on ways to effectively integrate technology and other media resources into the instructional program. Offered every semester.

EDB 301 Social Foundations of Education (3 hours). Prerequisite or Corequisite: EDB 200. An examination of the school in its cultural context. Emphasis is on the historical, social, economic, and technological forces that shape current educational discourse. Special emphasis is placed on the role of diversity in educational decision-making. Offered every semester. Writing.

EDB 302 Psychological Foundations of Education (3 hours). Prerequisites: PSY 220 and PSY 221; Prerequisite or Corequisite: EDB 200. An analysis of the nature of human learning and development and their relationship to the process of education and to instruction. Emphasis is on current theories and research relating to the contextual nature of human learning to instructional practice. Offered every semester. Writing.

EDB 303 Teaching and Management in the Middle School (3 hours). Prerequisites: EDB 200, EDB 301, EDB 302; Prerequisite or Corequisite: EDB 300. The primary purpose of this course is to combine educational theory with actual classroom practice. Students will identify and plan appropriate instructional strategies for diverse learners in middle-school contexts and identify appropriate classroom management skills and techniques for adolescents. Students will examine a variety of programs and strategies such as advisor-advisee, interdisciplinary team teaching, and integrated curriculum planning. A field experience will provide students with an opportunity to reflect upon their own teaching. Taken concurrently with EDB 304. Return to top

EDB 304 History and Philosophy of the Middle School (1 hour). Corequisite: EDB 303. This course addresses the historical and philosophical foundations of the middle school. In particular, students will examine the historical dimensions of the structure and curriculum of middle schools. Philosophical issues such as tracking, interdisciplinary curriculum, and experiential learning will be discussed. Taken concurrently with EDB 303. Return to top

EDB 305 Teaching and Management in the Secondary School (3 hours). The primary purpose of this course is to combine educational theory with actual classroom practice. Students will identify and plan appropriate instructional strategies for diverse learners and secondary school contexts and identify appropriate classroom management skills and techniques for secondary students. Students will examine a variety of classroom management techniques and develop a disciplinary unit of instruction to implement. A field experience will provide students with an opportunity to reflect upon their own teaching. Return to top
EDB 400 Communication and Collaboration (2 hours). Corequisite: Student teaching. Students will examine their roles as colleagues, reflective practitioners, and advocates. They will develop techniques for effective communication with students, parents, teachers, administrators, community members, and other professional educators. Students will explore methods for collaborating effectively across differences of race, class, gender, and sexuality. Return to top

EDB 411 Seminar on Improving Instruction (1 to 4 hours). Prerequisite: Completion of course(s) in teaching methods in the content area or written permission of instructor. Opportunity to explore in-depth a topic of special nature with a group having similar interests. Topic explored may be under consideration as a new course and will be included in the seminar title. May be repeated in different topics. No more than eight EDB 411 hours may be included in a degree program. Return to top

EDB 451 Individual Projects in Education (1 to 4 hours). Prerequisite: Permission of chairperson. An independent project in a selected area of education. Project must be approved by department chairperson and advisor. Return to top

EDB 455 Women and Education (4 hours). Examination of gender bias beliefs, attitudes and values in schools and society and their effects on the aspirations and autonomy of women; multidisciplinary examination of effects of socialization process on women; consideration of possible school-based remedies to sexism. Women's Studies course, Human Diversity. Return to top
EDC 300 Diversity in Educational Settings (3 hours). Focuses on issues related to the education of culturally and linguistically diverse children, gifted children, and children with special needs. Gender issues in education and the relation of diversity to all areas of the teaching-learning process are discussed. Course work involves the development of effective strategies for teaching all children about diversity and for promoting positive relationships among teachers, parents, and children. Satisfies Human Diversity requirement. Return to top

EDC 309 Art Methods for the Classroom Teacher (2 hours). Prerequisites: EDB 301, EDB 302, and ART 252 or 253. Offers techniques for teaching expressive and responsive dimensions of the visual arts to young children and individuals with special needs. Return to top

EDC 310 Elementary Methods for the Art Specialist (2 hours). Prerequisites: EDB 200, EDB 301, and EDB 302 (open only to Art Education majors). Provides a series of learning experiences that develop knowledge and skills relative to planning, implementing, and evaluating art programs for children in the elementary grades. Return to top

EDC 311 Secondary Methods for the Art Specialist (2 hours). Prerequisites: EDB 200, EDB 301, and EDB 302 (open only to Art Education majors). Class sessions, studio laboratory work, and school-site experiences that develop the necessary knowledge and competencies for planning, implementing, and evaluating art programs in the secondary school. Return to top

EDC 312 Foreign Language Education in the Elementary Schools (2 hours). Prerequisites: EDB 200, EDB 301, EDB 302, EDB 305, and oral competency in the target language; must be taken concurrently with EDC 313. Structured field experience. Consideration and evaluation of the philosophy, practices, and problems of teaching modern foreign languages and cultures at the elementary level, with emphasis on lesson planning, implementation, and evaluation. Return to top

EDC 313 Foreign Language Education in the Secondary Schools (2 hours). Prerequisites: EDB 200, EDB 301, EDB 302, EDB 305, and oral competency in the target language; must be taken concurrently with EDC 312. Techniques and materials for teaching modern foreign languages and cultures at the secondary level, with emphasis on lesson planning, implementation, and evaluation. Return to top

EDC 418 Physical Science for the Classroom Teacher (3 hours). Consideration of topics within physics, chemistry, and earth/space science. Emphasis will be given on enhancement of the science content, knowledge of the future, and practicing elementary- and middle-school teachers. Course combines lecture and discussion with hands-on activities thereby modeling appropriate instructional practices. Return to top

EDC 419 Outdoor Science for the Classroom Teacher (3 hours). Provides a wide variety of outdoor learning experiences to develop environmental awareness through sensory exploration. Models appropriate instructional practice through lecture, discussion, and field work that actively engages the learner in scientific inquiry. Return to top
EDL 300 Phonics Assessment and Instruction (3 hours). Prerequisite: EDC 300. Focuses on the nature and role of word recognition in proficient reading and spelling. Provides the background necessary for teaching and assessing phonics, phonemic awareness, and word recognition. Return to top

EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours). Prerequisite: EDC 300. Survey of methods and materials used to teach reading in elementary-, middle-, and junior-high school settings. Includes overview of the reading process, introduction to diagnostic measures for assessing reading development, techniques for remediating reading difficulties, and critical examination of related theory and research. Satisfies Writing Across the Curriculum requirement. Return to top

EDL 305 Reading in the Content Areas (3 hours). Prerequisite: EDC 300. Critique and analysis of current theory, research, and practice as it relates to content-area reading instruction. Particular attention is given to the development of comprehension, metacognitive awareness, and effective study strategies. Also stressed are internal and external textbook-thinking skills, the integrated use of reading and writing, and materials and methods to promote lifelong learning. Other topics considered include media literacy, inquiry learning, authentic assessment, action research, and diversity issues. Required for reading endorsement. Return to top

EDL 311 Emergent Literacy (3 hours). Prerequisites: EDL 300 and EDL 301. Examines theory, research, and practice as it pertains to the processes by which young children learn to read and write in day care, preschool, and primary classrooms. Consideration of language, literacy, and concept development, with emphasis on factors that influence children's growth in these areas. Addresses the relationships between thought and language, as well as integrative methods for language-arts instruction and assessment that build on these relationships and contribute to the acquisition of literacy during early childhood. Return to top

EDL 312 Literature-Based Reading Methods for Children (3 hours). Prerequisites: EDB 302, ECE 402, and EDC 300. Focuses on techniques for using classic, contemporary, and multicultural children's literature of all genres to support reading acquisition and instruction in preschool and the primary grades, with particular attention given to teaching methods using literature. Other topics for discussion include the evaluation and selection of appropriate trade and picture books for classroom use, the application of children's literature to content area instruction, and the role of children's literature in family literacy and recreational reading programs. Satisfies Writing Across the Curriculum requirement. Return to top

EDL 313 Literature-Based Reading Methods for Adolescents (3 hours). Prerequisites: EDB 302, EDC 300, and EDB 303 or EDB 305. Focuses on techniques for using classic, contemporary, and multicultural literature of all genres to support reading instruction in grades 4 through 12. Emphasizes the developmental nature of reading preferences and comprehension, the application of reader-response theory to the selection and design of teaching strategies and materials, the potential use of literature across the curriculum, and criteria for selecting and evaluating trade books for young adults. Return to top

EDL 402 Foundations of Literacy: Theory and Practice (3 hours). Explores the linguistic, psychological, social, cultural, philosophical and historical bases of literacy acquisition and its development. Particular emphasis is given to current research and classroom practice. Required for reading endorsement. Return to top

EDL 403 Assessment and Evaluation of Diverse Literacy Learners (3 hours). Prerequisite: EDL 402. Assessment and evaluation of literacy development, with a focus on reading, writing, and complementary language-arts processes for students of all ages. Consideration of linguistic, affective, cognitive, and physical factors that may influence encoding, decoding, comprehension, and composition and their evaluation. The construction, administration, interpretation, and critique of formal and informal assessment procedures are addressed. Course includes supervised, weekly, two-hour practical experience with an assigned client resulting in development of a case study. Required for reading endorsement. Return to top

EDL 404 Literacy Development: Meeting the Needs of Diverse Learners (3 hours). Prerequisite: EDL 403. Supervised practice in teaching reading and writing with emphasis given to the preparation, analysis, and evaluation of individualized instructional programs based on case study evaluations. Includes approaches for developing positive attitudes toward literacy and strategies aimed at overcoming difficulties in reading and writing development. Course requires preparation of a progress report based on weekly, two-hour practical experience with an assigned client. Required for reading endorsement. Return to top

EDL 406 Second Language Learning and Pedagogy (3 hours). Prerequisites: EDC 300 and EDB 303, EDB 305, or ECE 402. The first of a two-course sequence in ESL/EFL pedagogy, this course covers theories of second-language acquisition, competing methods for teaching English to speakers of other languages, psycholinguistics, sociolinguistics, and issues involving language learning in multicultural settings. Required for TESOL endorsement. Return to top
EDL 407 TESOL Methods (3 hours). Prerequisite: EDL 406. The second of a two-course sequence in ESL/EFL pedagogy, this course provides critical exploration and analysis of current approaches for teaching English to speakers of other languages with particular emphasis given to the development of communicative competence. Consideration of the role of assessment in instructional design, student placement, and advancement, as well as related legal issues. Required for TESOL endorsement. Return to top

EDL 408 Applied Linguistics for Teachers (3 hours). Designed for practicing and prospective teachers, this course provides an introduction to linguistic theory as it relates to the language development of native and non-native speakers of English. Emphasis is given on the practical application of linguistic knowledge in phonetics, phonology, syntax, morphology, and semantics to classroom practice. Required for TESOL endorsement. Return to top

EDL 409 Assessment and Evaluation in the ESL/Bilingual classroom (3 credits). This course will explore the notion of second language proficiency and help students develop an understanding of how they can assess or evaluate LEP (limited English proficiency) students' progress in the development of proficiency. Addresses topics of formal and informal methods of assessing language proficiency, test preparation, and interpretation of test results. Students will have a chance to practice creating authentic assessment tasks. Required for TESOL Endorsement. Return to top

EDL 410 Pedagogical Grammar (3 credits). This course provides foundational knowledge of the history and structure of the English language and explores a variety of approaches to teaching grammar in the ESL/EFL classroom. Reviews the historical development of English and explains many of the irregular aspects of the language. The major focus of the course is on the grammatical structures of English and their functions in communication. An experiential, discussion-based course appropriate for all students interested in improving their knowledge about teaching English grammar. Required for TESOL endorsement. Return to top
EDM 313 Teaching and Assessing Language Arts in the Middle School (4 hours). Prerequisites: EDC 300, EDB 303, and ESE 400. Critical exploration and analysis of student-centered methods that encourage integrated study of the language arts. Areas of study include pragmatic and theoretical aspects of reading, writing, listening, and oral language development during early adolescence - especially as they apply to the selection of objectives, strategies, and materials for instruction and the evaluation of pupil progress. Satisfies Writing Across the Curriculum requirement. Return to top

EDM 315 Teaching and Assessing Mathematics in the Middle School (4 hours). Prerequisites: EDB 303, ESE 400, MTH 127, MTH 128, and MTH 129. Materials and strategies for teaching mathematics to all pupils stressing the importance of assessment to provide for individual differences in abilities and needs. Includes activities for developing students' problem-solving, reasoning, and communication skills; fostering mathematical connections; and applying technology. Return to top

EDM 316 Teaching and Assessing Social Studies in the Middle School (4 hours). Prerequisites: EDB 303 and ESE 400. Explores concepts, purposes, and underlying assumptions of teaching the social sciences; develops activities to improve children's understanding of democratic citizenship in a pluralistic society; addresses interdisciplinary curriculum linkages. Return to top

EDM 317 Teaching and Assessing Science in the Middle School (4 hours). Prerequisites: EDB 303 and ESE 400. Introduction to the structure and function of science instruction in upper elementary-, middle-, and junior-high school settings. Provides background and principles of science education, including instructional planning, methods, materials, and a philosophy for teaching science. Return to top
EDS 313 Secondary Language Arts Instruction and Assessment (4 hours). Prerequisites: EDB 305 and ESE 400.
Critical exploration and analysis of current developments in the teaching of secondary English with emphasis on student-centered methods that encourage integrated study of the language arts. Pragmatic and theoretical aspects of language, literature, and composition instruction are considered - especially as they apply to the selection of objectives, strategies, and materials for instruction and evaluation. Areas of study include reading and writing development, the writing process, the processes involved in reading literary works, oral language and listening skill development, as well as formative and summative techniques for assessing pupil progress. Satisfies Writing Across the Curriculum requirement. Return to top

EDS 315 Secondary Mathematics Instruction and Assessment (4 hours). Prerequisites: EDB 305 and ESE 400.
Traces the historical development of various fields of mathematics and provides opportunities for the prospective mathematics teacher to gain experience in assessing, preparing, and teaching problem-centered lessons. Focuses on materials and strategies for teaching mathematics at the intermediate and secondary level. Also considered are student characteristics, teaching and learning styles, issues of equity and diversity, and constructivist theories of learning. Topics for discussion include issues associated with inquiry learning and changing instructional practices that provide a problem-rich environment for learning and the use of technology. Return to top

EDS 316 Secondary Social Studies Instruction and Assessment (4 hours). Prerequisites: EDB 305 and ESE 400.
Explores concepts, purposes, and underlying assumptions of teaching and assessing social sciences; develops activities to improve intermediate and secondary student's interest and competence in democratic citizenship in a pluralistic society; addresses interdisciplinary curriculum linkages. Return to top

EDS 317 Secondary Science Instruction and Assessment (4 hours). Prerequisites: EDB 305 and ESE 400.
Introduction to structure and function of science instruction and assessment in today's intermediate and secondary schools; provides background and principles of science education, including instructional planning, methods, and materials and philosophy for teaching science. Return to top
Undergraduate Catalog 2002-2004

Education

Curriculum and Foundations
Teacher Education

- Early Childhood Education
- Multi-Age Instruction
- Literacy Development and Instruction
- Middle Childhood Education
- Secondary Education
- Special Education

Specialized Study and Field Experiences
EDB 101 Developmental Reading (4 hours).
Development of reading comprehension, vocabulary, and study strategies that enhance comprehension of narrative and expository text. Emphasis on critical and analytical reading, and instruction in synthesizing and analyzing text from various academic disciplines. Course is designed to prepare students for the demands of college reading and college studying. Letter grading system used. Graduation hour.

EDB 200 Teaching as a Profession (2 hours).
Students will examine teaching as a profession - the roles and responsibilities they will encounter in the classroom, the school, and the community. Students will develop a teaching philosophy, examining why they want to be teachers, what will be expected of them in that role, and what being a professional teacher means. Offered every semester.

EDB 250 Politics of Black Education (4 hours).
Using a historical perspective, this course will examine the nature, functions, and consequences of schooling for African-Americans in both the North and South since the Civil War. Special attention will be given to the interface of schools as social and political institutions with both the larger society and African-American communities.

EDB 300 Educational Technology (2 hours).
Provides an introduction to instructional technology useful to teachers. Students will use and evaluate media technology, focusing on ways to effectively integrate technology and other media resources into the instructional program. Offered every semester.

EDB 301 Social Foundations of Education (3 hours). Prerequisite or Corequisite: EDB 200. An examination of the school in its cultural context. Emphasis is on the historical, social, economic, and technological forces that shape current educational discourse. Special emphasis is placed on the role of diversity in educational decision-making. Offered every semester. Writing.

EDB 302 Psychological Foundations of Education (3 hours). Prerequisites: PSY 220 and PSY 221; Prerequisite or Corequisite: EDB 200. An analysis of the nature of human learning and development and their relationship to the process of education and to instruction. Emphasis is on current theories and research relating to the contextual nature of human learning to instructional practice. Offered every semester. Writing.

EDB 303 Teaching and Management in the Middle School (3 hours). Prerequisites: EDB 200, EDB 301, EDB 302; Prerequisite or Corequisite: EDB 300. The primary purpose of this course is to combine educational theory with actual classroom practice. Students will identify and plan appropriate instructional strategies for diverse learners in middle-school contexts and identify appropriate classroom management skills and techniques for adolescents. Students will examine a variety of programs and strategies such as advisor-advisee, interdisciplinary team teaching, and integrated curriculum planning. A field experience will provide students with an opportunity to reflect upon their own teaching. Taken concurrently with EDB 304.

EDB 304 History and Philosophy of the Middle School (1 hour). Corequisite: EDB 303. This course addresses the historical and philosophical foundations of the middle school. In particular, students will examine the historical dimensions of the structure and curriculum of middle schools. Philosophical issues such as tracking, interdisciplinary curriculum, and experiential learning will be discussed. Taken concurrently with EDB 303.

EDB 305 Teaching and Management in the Secondary School (3 hours). The primary purpose of this course is to combine educational theory with actual classroom practice. Students will identify and plan appropriate instructional strategies for diverse learners and secondary school contexts and identify appropriate classroom management skills and techniques for secondary students. Students will examine a variety of classroom management techniques and develop a disciplinary unit of instruction to implement. A field experience will provide students with an opportunity to reflect upon their own teaching.
EDB 400 Communication and Collaboration (2 hours). Corequisite: Student teaching. Students will examine their roles as colleagues, reflective practitioners, and advocates. They will develop techniques for effective communication with students, parents, teachers, administrators, community members, and other professional educators. Students will explore methods for collaborating effectively across differences of race, class, gender, and sexuality. Return to top

EDB 411 Seminar on Improving Instruction (1 to 4 hours). Prerequisite: Completion of course(s) in teaching methods in the content area or written permission of instructor. Opportunity to explore in-depth a topic of special nature with a group having similar interests. Topic explored may be under consideration as a new course and will be included in the seminar title. May be repeated in different topics. No more than eight EDB 411 hours may be included in a degree program. Return to top

EDB 451 Individual Projects in Education (1 to 4 hours). Prerequisite: Permission of chairperson. An independent project in a selected area of education. Project must be approved by department chairperson and advisor. Return to top

EDB 455 Women and Education (4 hours). Examination of gender bias beliefs, attitudes and values in schools and society and their effects on the aspirations and autonomy of women; multidisciplinary examination of effects of socialization process on women; consideration of possible school-based remedies to sexism. Women's Studies course, Human Diversity. Return to top
Teacher Education

Professors:
Clifford T. Bennett (chair), Thomas W. Frew, Nancy K. Klein, James A. McLoughlin, Dinah Volk, Jane A. Zaharias;
Professor Emerita: Mary A. Boehnlein; Associate Professors: Ronald J. Abate, Cynthia A. Dieterich, Roland G. Pourdavood, Theresa A. Quigney, Judy I. Stahlman; Associate Professors, Emeriti: Lillian R. Hinds; Assistant Professors:
Maria Angelova, Kay E. Benjamin, Ruth Bombaugh, Mary K. Gove, Joanne E. Goodell, Michael Lambert, Trisha Wies Long, Kristien Marquet-Zenkov, Barbara Rucker, James Salzman, James J. Sheehan, Deborah Durham Webster, Karl F. Wheatley; Term Faculty: Margaret Smedley.

- Early Childhood Education
- Multi-Age Instruction
- Literacy Development and Instruction
- Middle Childhood Education
- Secondary Education
- Special Education
**EEC 310 Electric Circuits I (4-0-4).** Prerequisite or corequisite: ESC 250. Basic electrical concepts; network theorems; circuit laws; resistance, capacitance, inductance; response of RC, RL and RLC circuits to initial conditions and constant forcing functions; AC steady-state analysis and AC power; integration of computer applications using PSPICE. Return to top

**EEC 311 Electric Circuits II (4-0-4).** Prerequisites: EEC 310, ESC 250. Prerequisite or corequisite: PHY 244. Continuation of EEC 310. Polyphase AC circuits; magnetically-coupled circuits; frequency response and resonance; two-port networks; Laplace transform analysis of circuits; transfer functions, poles and zeros; convolution; Fourier series and Fourier transform analysis; integration of computer applications using PSPICE. Return to top

**EEC 313 Electronics I (4-0-4).** Prerequisites: ESC 250, EEC 310. Prerequisite or corequisite: EEC 311. Rectifier diodes and applications; Zener diodes and applications; biasing BJT and FET amplifiers; small signal analysis of BJT and FET amplifiers; power amplifiers; amplifier frequency response. Return to top

**EEC 314 Electronics II (4-0-4).** Prerequisites: EEC 311, 313. Operational amplifiers and op-amp applications; active filters; oscillator circuits; logic circuit concepts; TTL, CMOS circuits. Return to top

**EEC 315 Electronics Laboratory (0-3-2).** Prerequisites: EEC 311, 313. Prerequisite or corequisite: EEC 314. Selected experiments on electronic circuits. Return to top

**EEC 316 Electronics Device Laboratory (0-3-1).** Prerequisites: EEC 311, 313. Selected experiments on electronic circuits. Return to top

**EEC 360 Field Analysis (4-0-4).** Prerequisite: EEC 311. The electromagnetic field quantities; derivation of Maxwell's equations; boundary conditions; power flow; propagation of plane waves in media; transmission lines, waveguides and cavity resonators; electromagnetic radiation and antennas. Return to top

**EEC 361 Electromechanical Energy Conversion (4-0-4).** Prerequisites: EEC 311, MTH 283. Energy storage and conversion, force and emf production, coupled circuit analysis of systems with both electrical and mechanical inputs, applications to electric motors and generators and other electromechanical transducers. Return to top

**EEC 380 Digital Systems (4-0-4).** Prerequisite: EEC 311. Prerequisite or co-requisite: EEC 313. Binary number systems, Boolean algebra, combinational logic design principles, combinational logic design practices, sequential logic design principles, sequential logic design practices, memory elements; programmable logic devices (PLD). Return to top

**EEC 381 Digital Systems Laboratory (0-3-2).** Prerequisites: EEC 380, EEC 315, or EEC 316. Experiments and projects on digital circuits, including basic gates, combinational circuits, flip-flops, sequential circuits, arithmetic unit and CPLD. Return to top

**EEC 417 Embedded Systems (4-0-4).** Prerequisites: EE: EEC 314, 315, 380, 381; CE: EEC 313, 316, 380, 381. Software design of microcontroller-based embedded systems. Topics covered include: microcontroller architecture, assembly programming, C programming, real time interrupts, program size considerations, input/output issues, analog-to-digital conversion, serial port reception/transmission. Return to top

**EEC 430 Digital Signal Processing (4-0-4).** Prerequisites: EE: EEC 314, 315, 380; CE: EEC 313, 316, 380. Modeling of DSP operations using discrete-time signals and systems: difference equations, Z-transforms, Fourier methods; signal sampling (A/D) and reconstruction (D/A); digital filters; sample rate converters and oversampling; DFT, fast convolution, and spectrum estimation; selected applications. Out-of-class projects done on DSP equipment in lab. Return to top

**EEC 440 Control Systems (4-0-4).** Prerequisites: EE: EEC 314, 315; CE: EEC 313, 316. Feedback control systems. Topics include: characteristics and analysis of feedback control systems; controlled system modeling; performance measures; stability; design using the root locus, frequency response, and state variable methods; characteristics of digital control loops; digital controller design using the emulation method. Return to top

**EEC 441 Control Systems Laboratory (0-3-2).** Prerequisite: EE: EEC 315, CE: EEC 316. Pre- or co-requisite for EE and CE: EEC 440. A series of control system experiments including process control using a PID controller, and modeling and digital control of a torsion mechanism. Return to top

**EEC 447 Engineering Applications of Programmable Logic Controllers (4-0-4).** Prerequisites: EE: EEC 314, 315; CE: EEC
Applications of PLC’s including ladder logic concepts, data manipulation, analog input and output with an emphasis on PID control, network configurations and concepts, and the solution of practical industrial problems through design projects.  

**EEC 450 Communications (4-0-4).** Prerequisites: EE: EEC 314, ESC 310; CE: EEC 311, 313, ESC 310. Analog modulation techniques; system performance under noise; digital communication concepts; pulse and digital modulation schemes; data communication techniques; spread spectrum communications.  

**EEC 451 Communications Laboratory (0-3-2).** Prerequisites: EE: EEC 314, 315; CE: EEC 313, 316. Pre- or co-requisite for EE and CE: EEC 450. Use of communications-specific test and measurement equipment. Experiments on spectrum analysis, noise, amplitude, frequency and phase modulation, mixers, IF amplifiers, pulse modulation, sampling, baseband modulation, optimum receivers, and amplitude-, frequency-, and phase-shift keying.  

**EEC 470 Power Electronics I (4-0-4).** Prerequisites: EEC 314 and EEC 360 or 361. Analysis, performance characterization, and design of power electronics converters using diodes, thyristors, and controllable semiconductor switches. Power supplies; DC and AC motor drives.  

**EEC 471 Power Electronics and Machines Laboratory (0-3-2).** Prerequisite: EEC 470. Experiments dealing with single-phase and three-phase transformers; steady-state performance of dc, induction, and synchronous machines; rectifiers, inverters, switch-mode converters and their applications in adjustable motor drives.  

**EEC 473 Power Systems (4-0-4).** Prerequisite: EEC 470. Power system components modeling: transformers, generators, transmission lines; power flow; economic scheduling of generation; power system faults and transient stability.  

**EEC 474 Power Electronics II (4-0-4).** Prerequisite: EEC 311. Advanced course in Power Electronics: switching function representation of converter circuits (DC-DC, AC-DC, DC-AC and AC-AC), resonant converters, adjustable torque drives, field oriented induction motor control, residential and industrial applications, utility applications, power supply applications.  

**EEC 480 Modern Digital Design (4-0-4).** Prerequisite: EEC 380, 381 and EEC 483 or 417. Coverage includes CPLD/FPGA devices, modern digital design methodology, VHDL hardware description language, VHDL description for combinational circuits, sequential circuits and register-transfer-level systems.  

**EEC 481 Digital Systems Laboratory II (0-3-2).** Prerequisite: EEC 381 and EEC 483 or 417. Pre- or corequisite: EEC 480. Experiments and projects utilizing VHDL, modern EDA software tools and CPLD/FPGA devices to design, synthesize, simulate, implement and test combinational circuits, sequential circuits and register-transfer-level systems.  

**EEC 482 Computer Engineering Laboratory (0-4-2).** Prerequisites: EEC 480, 481, 483. Laboratory experience with both digital computer subsystems and complete computer systems. The student will design and simulate subsystems of a full digital computer, such as a CPU, memory subsystems, disk-CD ROM-tape-DVD, graphics processors, and I/O subsystems.  

**EEC 483 Computer Organization (4-0-4).** Prerequisites: EEC 380, CIS 260, 265, 335, 345. Illustration of basic architecture concepts and control circuit implementation. Topics include basic computer organization, central processor organization, instruction set design and addressing schemes, microprogram control, input-output organization, and memory organization.  

**EEC 484 Computer Networks (4-0-4).** Prerequisite: EEC 483. Network architectures, Ethernet and token passing networks, performance modeling, error detection and recovery, high-speed LANs, metropolitan area networks, and internetworking.  

**EEC 485 High Performance Architecture (4-0-4).** Prerequisite: EEC 483. Architecture of high-speed computer systems with emphasis on design, analysis, and cost-performance ratios, including cache and virtual memory design, pipeline design and control techniques, vector computers, multi-processor computers and parallel algorithms.  

**EEC 490 Senior Design (4-0-4).** Prerequisites: Communications: EEC 450; Controls: EEC 440; Digital: EEC 381, 480; Power: EEC 470. Students are formed into small design groups (typically three students) and assigned a project. In addition to carrying out the design project, students are required to keep a design notebook, to write progress reports and a final report, and to make an oral presentation of the design effort.  

**EEC 492 Special Topics in Electrical and Computer Engineering (4-0-4).** Prerequisites: approval of instructor and academic advisor. Presentation and discussion of a current topic in electrical and computer engineering.  

**EEC 495 Undergraduate Research (Credit as arranged).** Prerequisites: approval of research advisor and academic advisor. Participation in on-going research. Student will be involved in an original investigation. Course may be substituted for a regularly required departmental course in the curriculum.  

**EEC 496 Independent Study (Credit as arranged).**
Prerequisite: Approval of instructor and academic advisor. Independent study on a special topic under the guidance of a faculty member. May be repeated up to 8 credits.
Associate Professors:
A. Fouad Abou-Ghalioum (Interim chairperson), Robert J. Mikel, Donald F. Zeller; Associate Professor Emeritus: John R. Zeller; Assistant Professors: Harry W. Fox, Asad A. Salem, John W. Spring.

Electronic Engineering Technology

EET 315 Microprocessor & Digital System Design (3-0-3). Return to top

EET 316 Microprocessor & Digital System Design Lab (0-3-1). Prerequisites: associate-degree-level microprocessor course and digital logic course. Architecture and hardware design of microprocessor-based system, including bus structure, interrupts handling, I/O ports, control signal, and peripherals. Combinational and sequential logic circuitry implemented with Field Programmable Gate Array design methodology. Return to top

EET 320 Embedded Microprocessor Systems (3-0-3). Return to top

EET 321 Embedded Microprocessor Systems Lab (0-3-1). Prerequisites: EET 315, EET 316. A comprehensive understanding of the instruction set and the related programming algorithmic thought process required to design with and incorporate microprocessor-based systems in dedicated applications. Topics include serial and parallel data communication, exception processing, file transfer protocol, I/O interfacing and peripherals, and assembly language programming. Return to top

EET 330 Advanced Circuit Analysis (3-0-3). Prerequisites: associate-degree-level DC and AC circuit courses, MTT 300. Co-requisite: MTT 301. Transform methods in circuit analysis, including the detailed analysis of circuits, waveforms, time-domain techniques, Laplace transform solutions, transfer functions, frequency response and Bode diagrams. Return to top

EET 410 Power Electronic Systems (3-0-3). Return to top

EET 411 Power Electronic Systems Lab (0-3-1). Prerequisites: associate-degree-level DC and AC machines courses, MTT 301, EET 330. Fundamentals of mechanics, DC machines, and AC machines reviewed. Design considerations of power electronic rectification, controlled rectification, DC chopper power modulators, and DC-to-AC inverters. Fourier series analysis of inverter waveforms and power filter design are examined. Technical Elective. Return to top

EET 415 Electronic Circuits, Signals, and Systems (3-0-3). Return to top

EET 416 Electronic Circuits, Signals, and Systems Lab (0-3-1). Prerequisites: associate-degree-level analog electronics courses, EET 315, EET 315, and EET 330. Analog electronics with applications using current integrated circuit devices. Analysis techniques of linear and non-linear systems and ideal and non-ideal device characteristics with an emphasis on practical design concepts. EET 416 Writing Course. Return to top

EET 430 Applications of FPGAs and VHDL (3-0-3). Prerequisites: EET 315, 316. Programming in Very High Speed Integrated Circuit Hardware Description Language (VHDL) that describes the inputs and outputs, behavior, and functions of circuits. Applications of logic circuitry will be implemented with Field Programmable Gate Array (FPGA) technology. Technical Elective. Return to top

EET 440 Feedback Control Systems (3-0-3). Return to top

EET 441 Feedback Control Systems Lab (3-0-3). Prerequisite: EET 330. Algebraic diagram representation of open and closed loop processes. Block diagram reduction methods. Fundamental analysis methods of linear feedback controls using transfer function, time-domain, and frequency-domain methodologies. Analysis and design is also extended to non-linear processes using computer simulation methods. Simulation evaluations include closed loop tuning, dead-time process control, and electro-mechanical motion control. Technical Elective. Writing Course. Return to top

EET 450 Digital signal Processing (3-0-3). Return to top

EET 451 Digital Signal Processing Lab (0-3-1). Prerequisites: EET 330. This course introduces DSP theory, with an emphasis on digital filter design and implementation. Topics covered include discrete-time system analysis, sampling
theory, Z-transforms, IIR and FIR filter design techniques, and Fourier analysis. Technical Elective. Return to top

EET 460 Senior Design A (1-0-1).  
Prerequisites: Senior standing and all required 300- and 400-level program courses. Planning for the capstone course, EET 480. 
Senior Design B, to demonstrate the ability to define a problem in engineering terms and develop a realistic plan to complete an engineering project. A comprehensive written plan including budget, equipment requirements, time schedule, problem description, design alternatives, and tentative design will be prepared. Students are expected to extend their knowledge through self-study and research in developing and assessing design options. Ethical, legal, and environmental considerations are included. Students are encouraged to propose team projects. Return to top

EET 470 Machine Vision and Image Processing (3-0-3).  
Prerequisites: Senior standing and permission of instructor. Image formation, image filtering, template matching, histograms, and morphological operations applied to vision inspection system. Technical Elective. Return to top

EET 480 Senior Design B (1-5-3). Prerequisite: EET 460 in previous semester. Complete project development from concept and proposal submitted in EET 460. Final written and oral reports will be required. Return to top

EET 494 Advanced Topics in Electronics Engineering Technology (3-0-3). Prerequisite: Senior standing. Topics of current technical interest in electronics, controls, and computer industries, applying core concepts across the electronic engineering technology curriculum. Return to top

NOTE: The content of this course changes periodically to provide the injection of recent technological topic areas and subject material into the curriculum. May be repeated for credit under different course subtitles. Technical Elective.

EET 497 Special Topics in Electronics Engineering Technology (1 to 6 credits). Prerequisite: Senior standing. Independent study on a special topic or project under the guidance of a faculty member. May be repeated for credit. Technical Elective. Return to top
The following courses offer foreign literatures in English translation designed for nonlanguage majors. These courses require no knowledge of any foreign language.

All of these courses, as noted in the descriptions, meet the GenEd. Arts and Humanities requirement as well as the Arts & Sciences Foreign Culture requirement for B.S., B.S.N., and B.Mus. degrees.

The ENF courses are numbered to indicate whether the course is writing or nonwriting. Students should read the course schedule carefully to ensure enrollment in the proper course.

A student can remove a foreign language deficiency by taking any course with the ENF rubric and the American Sign Language sequence (SPH 251 American Sign Language I; SPH 252 American Sign Language II).

**ENF 210 Non-Western Literature in English Translation (4-0-4) effective Fall 2002; (3-0-3) prior to Fall 2002.** Works representing many eras, Non-Western cultures, and genres; readings, written work, lectures and discussions in English. Topics announced in semester course schedules. May be repeated for credit with a change of topic. Arts and Humanities, Non-Western Culture and Civilization; Arts and Sciences Foreign Culture course. May be cross-listed with ENG 204. Return to top

**ENF 211 Non-Western Literature in English Translation (writing) (4-0-4) effective Fall 2002; (3-0-3) prior to Fall 2002.** Works representing many eras, Non-Western cultures, and genres; readings, written work, lectures and discussions in English. Topics announced in semester course schedules. May be repeated for credit with a change of topic. Arts and Humanities, Non-Western Culture and Civilization, Writing; Arts and Sciences Foreign Culture course. May be cross-listed with ENG 204. Return to top

**ENF 212 Western Literature in English Translation (3-0-3).** Works representing many eras, Western cultures, and genres; readings, written work, lectures and discussions in English. Topics announced in semester course schedules. May be repeated for credit with a change of topic. May be taken by Foreign Language majors as elective only. Arts and Humanities; Western Culture and Civilization; Arts and Sciences Foreign Culture course. Return to top

**ENF 213 Western Literature in English Translation (writing) (3-0-3).** Works representing many eras, Western cultures, and genres; readings, written work, lectures and discussions in English. Topics announced in semester course schedules. May be repeated for credit with a change of topic. May be taken by Foreign Language majors as elective only. Arts and Humanities; Western Culture and Civilization; Writing; Arts and Sciences Foreign Culture course. Return to top

**ENF 214 Women Writers in English Translation (3-0-3).** Selection of works by women writers representing different genres from one or more cultures and eras; readings, written work, lectures and discussions in English. Topics announced in semester course schedules may be thematic, comparative, or representative of one cultural tradition. May be repeated for credit with a change of topic. May be taken by Foreign Language majors as elective only. Arts and Humanities; Western Culture and Civilization; Arts and Sciences Foreign Culture course. Return to top

**ENF 215 Women Writers in English Translation (writing) (3-0-3).** Selection of works by women writers representing different genres from one or more cultures and eras; readings, written work, lectures and discussions in English. Topics announced in semester course schedules may be thematic, comparative, or representative of one cultural tradition. May be repeated for credit with a change of topic. May be taken by Foreign Language majors as elective only. Arts and Humanities; Western Culture and Civilization; Writing; Arts and Sciences Foreign Culture course. Return to top

**ENF 216 Foreign Film (3-0-3).** Study of foreign films, their contexts and related readings; readings, written work, lectures, and discussions in English. Topics announced in semester course schedules may be thematic, comparative, or representative of one era or culture. May be repeated for credit with a change of topic. May be taken by Foreign Language majors as elective only. Arts and Humanities; Arts and Sciences Foreign Culture course. Return to top

**ENF 217 Foreign Film (writing) (3-0-3).** Study of foreign films, their contexts and related readings; readings, written work, lectures and discussions in English. Topics announced in semester course schedules may be thematic, comparative, or representative of one era or culture.
ENF 310 The Post-colonial Self in Search of Identity (4-0-4). Works representing pre- and post-colonial Non-Western cultures as well as theoretical treatments of the post-colonial condition. Readings, written work, lecture and discussions in English. May be repeated for credit with a change of topic. Return to top

ENF 312 Western Literature in English Translation (4-0-4). Works representing many eras, Western cultures, and genres; reading, written work, lecture, and discussions in English. Topics announced in semester course schedules such as "Short European Fiction" and "European Romanticism." May be cross-listed with English. May be repeated for credit with a change of topic. Foreign Language majors may take it as elective only. Western Culture and Civilization, Arts and Sciences Foreign Culture course. Return to top

ENF 313 Western Literature in English Translation (writing) (4-0-4). Works representing many eras, Western cultures, and genres; reading, written work, lecture, and discussions in English. Topics announced in semester course schedules such as "Short European Fiction" and "European Romanticism." May be cross-listed with English. May be repeated for credit with a change of topic. Foreign language majors may take it as elective only. Western Culture and Civilization, Writing, Arts and Sciences Foreign Culture course. Return to top

- **Freshman English and Basic Composition**
- **Basic Writing Courses**
- **Freshman English Courses**
- **Sophomore Level Courses**
- **Upper Division Courses**
  - Courses on Writing and Composition Theory
  - Linguistics Courses
  - Literature Courses

### Freshman English and Basic Composition

ENG 101 and 102 (or an approved equivalent writing course) are university-degree requirements, designed to concentrate on composition skills that are essential for success in many college courses. These courses lay the foundation for the university's Writing course requirements. Students should, therefore, enroll in ENG 101 as soon as possible in their college career. Students taking Freshman English at CSU must earn a C or better in both ENG 101 and 102 (or equivalent writing course) in order to graduate. Equivalency rule for First College: students may count FST 101 and FST 102 (or after 2000-2001, FST 115 and FST 116) as the equivalent of ENG 101 and ENG 102.

**Placement Testing:**

Before enrolling in ENG 101, all students, including transfer students who have not taken Freshman English, must take the English Placement Exam. Students who are not ready for ENG 101 may be placed in ENG 090. Students enrolled in the Student Development Program must take the comparable exam offered by the Office of Collegiate Studies, and may be placed in ENG 085.

**Placement for transfer students with ENG 101 equivalent:** Transfer students who enter CSU with 3 or more credits of Freshman English and are credited with ENG 101 do not have to take the placement exam; they may register for ENG 102 (or equivalent writing course).

**Placement for International Students Whose Native Language is not English:** At the time of publication of this catalog, English as a Second Language requirements and services are under revision. International students should expect to undergo placement testing in the Division of Collegiate Studies, and may be required to complete an ESL program before beginning the Freshman English sequence.

**ENG 101-102 as Matriculation Requirements:**

All students, in order to graduate from Cleveland State University, must complete the Freshman English requirement within the first 45 hours of academic work at CSU by passing ENG 101 and ENG 102 (or equivalent course) with grades of C or better. Students who have not completed ENG 102 (or equivalent course) within their first 45 hours may not register for any further courses without registering for the appropriate Writing course.

**Contact information:**

For Freshman English: Jane Dugan, (216) 687-2532.

### Basic Writing Courses

Note: ENG 085-090 do not count toward graduation.
ENG 085 Sentence Grammar and Composition (4-0-4).
Review of grammar and punctuation of standard written English, paragraphs, and introduction to the composition of essays. Pass/fail system of grading, but students receive modified letter grades: S(A), S(B), S(C), U(D), U(F). The letter grades in parentheses are not computed in the student's GPA's. Upon completion of this course, students are eligible to enroll in ENG 101. Return to top

ENG 090 Introductory Writing (4-0-4).
An intensive review of the writing process intended to improve student's ability to write brief essays. Covers methods of developing ideas and emphasizes the importance of revision. Students learn essential rhetorical concepts so that they can write with a clear sense of audience and purpose. This course also provides a review of sentence grammar for those students for whom it is appropriate. Pass/fail system of grading. Upon successful completion of this course, students are eligible to enroll in ENG 101. Return to top

English as a Second Language Courses
Note: ENG 095-097 do not count toward graduation.

ENG 095 Intermediate ESL (4-0-4).
Prerequisite: Placement by ESL coordinator. An integrated skills approach to communicative competence in academic English as a Second Language. Intermediate academic listening comprehension (lecture note-taking), oral reporting, summarizing, and short essay-writing with an emphasis on grammar and vocabulary-building. Return to top

ENG 096 Advanced ESL (4-0-4).
Prerequisite: Placement by ESL coordinator. An integrated skills approach to communicative competence in academic English as a Second Language; advanced academic listening comprehension, oral reporting, analysis of Western organizational patterns and writing with an emphasis on reviewing and refining grammar knowledge and building academic vocabulary. Return to top

ENG 097 ESL and Computer Literacy. (2-0-2).
Prerequisite: Placement by ESL coordinator. An integrated skills approach to computer literacy and ESL written communicative competence at the advanced level; project-based by links to an academic content course or professional needs; search, gathering, and synthesis of information from a number of electronic sources; writing of formal reports in different organizational patterns; continued emphasis on grammar and vocabulary. Return to top

Freshman English Courses

ENG 101 English I (4-0-4). Prerequisite: Placement by Freshman English Placement Exam, or completion of ENG 085 or ENG 090. Intensive guided practice in reading and analyzing expository and argumentative prose and in writing and revising essays that demonstrate coherent logical development, an ability to employ effective strategies of argument and persuasion, and a command of written English appropriate for college-level work. Writing Center assistance for this course is available by taking ENG 105 (2 credits). Each semester during the academic year, a special ESL section of ENG 101 is offered, open only to students whose native language is not English. English. Return to top

ENG 102 English II (3-0-3). Prerequisite: ENG 101 with a grade of C or better, or placement by Freshman English Placement Exam. Transfer students who are credited with ENG 101 may enroll in ENG 102 without taking the Placement Exam. Introduction to academic research and writing through intensive investigation of an issue or topic specified by the instructor. Students will be required to develop and organize a substantial research project related to the topic of the course and to demonstrate the information literacy skills required to find, evaluate, and make appropriate use of primary and secondary materials relevant to their project. Assistance for this course is available by taking ENG 105 or 106 (2 credits). Note: students who earn an A in ENG 101 may take ENG 201, 300, or 301 in lieu of ENG 102. English. Return to top

ENG 105 Writing Center I (2 credits). Workshops and tutorials to assist students taking ENG 101 or 102; also available to students for help with writing assignments in other courses. Pass/fail grading system. Return to top

ENG 106 Writing Center II (2 credits). Prerequisite: ENG 105. Workshops and tutorials on writing, with topics based on the particular writing problems experienced by students. Pass/fail grading system. Return to top

Note: Students may earn no more than 4 credit hours for Writing Center courses.
Sophomore-Level Courses

Completion of ENG 101 and 102 is a prerequisite for all courses numbered ENG 201 and above.

**ENG 201 Grammar and Writing for Prospective Teachers (3-0-3).** Review of traditional grammar, in conjunction with writing assignments and readings intended to introduce prospective teachers to reading and writing strategies that have professional language arts applications. Students who need extra help with writing may be required to take ENG 106 Writing Center concurrently with ENG 201. Writing. Return to top

**ENG 204 Non-Western Literature (4-0-4) effective Fall 2002; (3-0-3) prior to Fall 2002.** Significant literary works representing cultures of Africa, Asia, Latin America, and the Caribbean. Includes such authors as Basho, Mo Yan, Mishima, Yosano, Ruben Dario, Borges, Garcia Marquez, Vargas Ilolsa, the griot Kouyate, Maran, Achebe, and Soyinka. Cross-listed with MLA 204. Arts and Humanities, Non-Western Culture and Civilization. Return to top

**ENG 206 Literature and American Culture (4-0-4).** Selected works of American literature illustrating American myths central to our culture's self-conception. Includes such writers as Franklin, Thoreau, Twain, Hemingway, Ellison, and Arthur Miller. Arts and Humanities, Western Culture and Civilization. Return to top

**ENG 207 African-American Literature (4-0-4) effective Fall 2002; (3-0-3) prior to Fall 2002.** Introduction to the tradition of African-American literature and its underlying historical experiences, cultural values, and modes of literary expression. Western Culture and Civilization, African-American Experience, Human Diversity. Return to top

**ENG 208 Womanism/Feminism (3-0-3).** Literature reflecting women's movement in America. Initial focus examines 19th-century bi-racial origins and ideologies to establish definitions of womanism as distinct from feminism and to frame readings of women's movements across ethnic and cultural communities in America over the 20th-century. African-American Experience, Western Culture and Civilization, Human Diversity. Return to top

**ENG 209 Bible as Literature (3-0-3).** The Bible in English translation, studied with special attention to its genres and modes of literary expression. Arts and Humanities, Western Culture and Civilization. Return to top

**ENG 210 Native American Literature (4-0-4).** Introduction to literature by Native Americans, with emphasis on their cultural diversity and their struggle for national survival and identity. Arts and Humanities, Western Culture and Civilization. Return to top

**ENG 240 Introduction to Poetry (4-0-4).** The study of poetry written in English, with emphasis on its forms and distinctive characteristics. Students will develop their ability to analyze literary texts and to write persuasive essays about them. Particular attention will be paid to understanding some principal genres of poetry. The course will include poets, both women and men, from several different historical periods in which English verse has been composed, and poets from the diverse national/ethnic groups who have written in English. To place English poetry in the context of world literature, some poems composed in other languages will be read in translation. This course introduces English majors to research and critical techniques needed for the baccalaureate study of literature. Arts and Humanities; Writing. Return to top

**ENG 241 Introduction to Fiction and Drama (4-0-4).** An introduction to analyzing and writing about literature, focusing on the genres of fiction and drama. Students will learn techniques for reading analytically and critically and for writing critical/research papers on fiction and drama. The course will examine the generic characteristics of a variety of types of fiction and drama, including works written in English by men and women from diverse ethnic/cultural groups and some translated works illustrating various national traditions. Arts and Humanities, Writing. Return to top

**ENG 248 U.S. Ethnic Literature (4-0-4).** An introduction to the literature (in English or in translation) of one or more racial/ethnic minority groups in the United States, such as Puerto Ricans, Cuban Americans, Chinese Americans, Japanese Americans. Topics, texts and approaches will vary depending on the expertise of the instructor. May be taken up to three times with change of topic. Human Diversity. Return to top

**ENG 260 Language, Society, and Culture (3-0-3).** Interdisciplinary introduction to the study of linguistics and of language in its social and cultural contexts. Cross-listed with LIN 260, ANT 260, and MLA 260. Counts as an elective in the linguistics major. Social Science, Writing. Return to top
ENG 271 Shakespeare and Film (4-0-4) effective Fall 2002; (3-0-3) prior to Fall 2002. Essential plays of Shakespeare studied and viewed in performance on videotape. Arts and Humanities, Western Culture and Civilization, Writing. Return to top

ENG 280 Classical Literature in Translation (4-0-4). Survey of major literature of ancient Greece and Rome, including the Iliad, the Odyssey, Vergil's Aeneid, and other significant works by classical authors. Classical and Medieval Studies course. Arts and Humanities, Western Culture and Civilization. Return to top

Upper-Division Courses

The Handbook of Undergraduate Studies in English contains full descriptions of upper-division English courses. The handbook may be obtained in the Department of English office, Rhodes Tower 1815. English majors are advised to take ENG 240 and 241 before taking courses numbered ENG 330 and above. Equivalency rule for transfer students: A student who transfers to Cleveland State with 3 credits or more of 200-level literature courses may take ENG 300 in lieu of either ENG 240 or 241. A student who transfers with 6 credits or more of 200-level literature courses may take ENG 300 and one other upper-level literature course in lieu of ENG 240 and 241. For nonmajors, one 200-level literature course, or permission of the instructor, is prerequisite for literature courses numbered ENG 303 and above. This prerequisite does not apply to linguistics courses (ENG 310-318).

Courses on Writing and Composition Theory

ENG 300 Writing About Literature (4-0-4). Practical criticism and research techniques in the study of literature. Writing. Return to top

ENG 301 Advanced Expository Writing (4-0-4). Discussion and practice of writing in nonfiction genres such as the essay, technical writing, and journalism. Writing. Return to top

ENG 302 Rhetoric of the Law (4-0-4). Analysis of strategies used in a variety of legal contexts such as closing arguments in criminal trials or arguments before the Supreme Court. Writing. Return to top

ENG 303 Creative Writing (4-0-4). Techniques of nonexpository writing, applicable to poetry, fiction, and drama. Nonmajors are advised to take the course on a pass/fail basis. Return to top

ENG 304 Creative Writing for Teachers (4-0-4). Poetry, fiction, and/or drama-writing with emphasis on teaching creative writing in the schools. Return to top

ENG 305 Creative Writing Workshop (4-0-4). Prerequisite: ENG 303 or permission of instructor. Craft course in poetry, fiction, playwrighting, or a specialized creative writing topic. May be taken up to three times with change of topic. Return to top

ENG 307 Style (4-0-4). Experiments with the effects of diction, syntax, punctuation, and other linguistic tools in the creation of meaning, using the student's own writing. Writing. Return to top

ENG 308 Composition Theory (4-0-4). Approaches to teaching writing, combined with practical internship experience. Writing. Return to top

ENG 309 Writing Center Practicum (1-4-2). Prerequisite: Permission of instructor based on evaluation of a writing sample. Composition and tutoring theory integrated with practical experience in the teaching of writing. May be repeated for up to 4 credits. Counts toward the secondary English certification requirement in advanced composition. Writing. Return to top

Linguistics Courses

ENG 310 Traditional Grammar (4-0-4). Survey of traditional grammar, its history and present use in the schools. Cross-listed with LIN 310. Linguistics course. Return to top
ENG 311 Elements of Linguistics (4-0-4).  

ENG 312 Modern English Grammar (4-0-4).  
Prerequisite: ENG/LIN 311 or ANT/MLA 325. Systematic description of English sentences according to structuralist and transformational-generative principles. Cross-listed with LIN 312. Linguistics course.  

ENG 313 Studies in Linguistics (4-0-4).  
Core course in a mainstream linguistic topic, such as American English dialects, historical linguistics, morphology, history of the English language, semantics, or sociolinguistics. May be taken up to three times with change of topic. Linguistics course.  

ENG 314 Applied Linguistics (4-0-4).  
Course in the professional application of linguistics, such as Language Diversity and Teaching English, Lexicography, or English as a Second Language. May be taken up to three times with change of topic. Cross-listed with LIN 314. Linguistics course.  

ENG 318 Language Analysis (2 or 4 credits). Prerequisite: ENG/LIN/MLA/ANT 260 or ENG 311 or a strong background in a foreign language. Topics may include Sanskrit, Hittite, Classical Armenian, Old English, Old Norse, or Gothic, studied with an emphasis on grammar and linguistic issues. May be repeated as the continuing study of one language, or with a change of topic. A two-semester sequence of one language (such as Sanskrit I and II), or a semester of Old English followed by a semester of Old Norse or Gothic, may satisfy the Arts and Sciences foreign language requirement. Students who take Sanskrit I and II (4 credits each) may take second year Sanskrit III and IV (2 credits each). Cross-listed with LIN 318. Linguistics course; Classical and Medieval Studies course.  

Literature Courses

ENG 320 Classical Literature in Translation (4-0-4). Survey of major literature of ancient Greece and Rome, including the Iliad, the Odyssey, Vergil's Aeneid, and other significant works by classical authors. Classical and Medieval Studies course, Western Culture and Civilization.  

ENG 321 British Literature I (4-0-4).  
Survey of British literature from its Anglo-Saxon beginnings to 1789. Western Culture and Civilization.  

ENG 322 British Literature II (4-0-4).  
Survey of British literature from 1789 to the present. Western Culture and Civilization.  

ENG 330 Studies in Ancient Literature (4-0-4).  
Study of a single aspect of ancient Greek, Roman, or other classical literature, such as Greek tragedy, feminist approaches to the classics, oral poetics, a writer, genre, theme or period. May be taken up to three times with change of topic. Classical and Medieval Studies course.  

ENG 331 Studies in Medieval Literature (4-0-4).  
Topics include Arthurian tradition, Dante, Malory, women and writing, and other medieval themes and genres. May be taken up to three times with change of topic. Classical and Medieval Studies course. Writing.  

ENG 332 Studies in Renaissance Literature (4-0-4).  
Sixteenth- and 17th-century authors, genres, themes, or movements, including humanism, the Reformation, metaphysical and cavalier poetry, scientific empiricism, neo-classicism. May be taken up to three times with change of topic. Writing, Western Culture and Civilization.  

ENG 333 Studies in 18th-Century British Literature (4-0-4). Authors, genres, themes, or movements in 18th-century poetry and fiction. Possible topics include the Enlightenment, satire, rise of the novel, and neoclassical and pre-Romantic poetry. May be taken up to three times with change of topic. Writing.  

ENG 334 Studies in 19th-Century British Literature (4-0-4). Romantic and Victorian authors, genres, themes, or movements. May be taken up to three times with change of topic. Writing.  

ENG 335 Studies in 20th-Century British and Anglophone Literature (4-0-4). Modern and contemporary British and Anglophone authors, genres, themes or movements. May be taken up to three times with change of topic. Writing.
ENG 342 Survey of American Literature (4-0-4).
American literature from the 17th century to modern times, intended to provide a sense of historical movements - colonialism, federalism, romanticism, realism, modernism. Return to top

ENG 345 Studies in American Literature (4-0-4).
Authors, genres, themes, or movements of significance in American literature. May be taken up to three times with change of topic. Writing. Return to top

ENG 346 Studies in American Fiction (4-0-4).
Studies in the American short story and/or novel focusing on a specific author, theme, movement, period, or subgenre. May be taken up to three times with change of topic. Writing. Return to top

ENG 347 Studies in African-American Literature (4-0-4). Authors, themes, or movements of significance in African-American literature. Topics include slave narratives, Harlem Renaissance, literature of the 1950s, African-American women authors. May be taken up to three times with change of topic. Writing, African-American Experience, Human Diversity. Return to top

ENG 348 Studies in Multicultural Literature (4-0-4). Authors, genres, themes, or movements representing the ethnic diversity of modern American or world literature. May be taken up to three times with change of topic. Writing, Human Diversity. Return to top

ENG 349 Multicultural Literature: Theory and Methods (4-0-4). Interviews, ethnography, theater, poetry, chant, memoir, fiction and criticism by and about minority groups, are used to explore functions of literature and society. Role of writer will be explored, as well as aesthetics of literary production, biculturality, cultural hybridity, displacement, and impact of portrayals of one's own community in mass culture. Writing, Human Diversity. Return to top

ENG 350 Studies in Fiction (4-0-4).
Authors, themes, or movements significant in British, American, European, or world fiction. May be taken up to three times with change of topic. Writing. Return to top

ENG 351 Studies in Drama (4-0-4).
Authors, themes, or movements significant in British, American, European, or world drama. May be taken up to three times with change of topic. Writing. Return to top

ENG 352 Studies in Poetry (4-0-4).
Authors, themes, or movements significant in British, American, European, or world poetry. May be taken up to three times with change of topic. Return to top

ENG 355 Major Themes or Genres (4-0-4).
Themes or genres significant in British, American, European, or world literature. Topics in the past have included European Romanticism, and multicultural literature and pedagogy. May be taken up to three times with change of topic. Return to top

ENG 360 Studies in Literary Criticism (4-0-4).
Study of milestones in criticism by Aristotle, Sidney, Johnson, Wordsworth, and Arnold, and/or of modern and contemporary critical movements such as new criticism, structuralism, deconstruction, feminist criticism, and post-structuralism. May be taken up to three times with change of topic. Writing. Return to top

ENG 361 Classical Rhetoric (4-0-4).
Tradition of rhetoric established in ancient Greece and Rome and its continuing influence on literature and composition. Classical and Medieval Studies course, Writing. Return to top

ENG 363 Gender Issues in Literature (4-0-4).
Studies in gender theory and gender issues in literature. Topics may include contemporary feminist themes, writings of women of a particular ethnicity such as Asian-American or Latina; the intersection of gender, race, and class; the relationship of gender to voice, technique and genre; archetypes and how questions of language are linked to these issues. May be taken up to three times with change of topic. Human Diversity, Writing. Return to top

ENG 364 Popular Culture (4-0-4).
Critical methodology and study of genres in such areas as science fiction, the western, gothic romance, comparative
studies in literature and film, or mass media aesthetics. May be taken up to three times with change of topic. Return to top

ENG 370 Chaucer (4-0-4).
Study of Chaucer's Canterbury Tales and other works. Classical and Medieval Studies course, Western Culture and Civilization. Return to top

ENG 371 Shakespeare I (4-0-4). Study of Shakespeare's comedies and romances. Western Culture and Civilization. Return to top

ENG 372 Shakespeare II (4-0-4). Study of Shakespeare's tragedies and history plays. Western Culture and Civilization. Return to top

ENG 374 Milton (4-0-4). Study of Paradise Lost, Paradise Regained, Samson Agonistes and other works of Milton. Return to top

ENG 375 Major Author (4-0-4).
Intensive study of a major author writing in English. May be taken up to three times with change of topic. Return to top

ENG 380 Imagination Conference (4-0-4).
Prerequisite: Permission of instructor, based upon manuscript submission. Intensive five-day summer workshop with visiting writers (fiction, poetry, and creative non-fiction); "craft" analyses of creative writing. Students complete a manuscript at the beginning of summer semester and present the manuscript in revised form at the end of the summer semester. In addition to tuition, students will be charged a Workshop and Materials Fee. Contact Imagination Conference website http://www.csuohio.edu/poetrycenter/imagination. Return to top

ENG 380 Literary Magazine (1 or 2 credits).
Prerequisite: Approval of faculty advisor to the literary magazine. Practicum in professional editing, writing and administration of a literary magazine. Graded S/U only; does not count toward the major. Current options are editorial work on the Whiskey Island magazine, or work in the preparation of reviews of poetry books for the Burning Press. May be repeated for up to four credits. Return to top

ENG 396 Independent Study (1 to 4 credits).
Prerequisites: Written permission of the instructor and prior approval by the Committee on Instruction in the English Department. Intensive study of a specialized topic growing out of 300-level English course work. Students are limited to one independent study per semester, and may count up to 6 credits toward the major. A student must be in good academic standing to qualify for an independent study. Independent studies cannot be given as substitutes for courses that normally are offered in the curriculum. Contact the English Department for further information. Return to top

ENG 397 Portfolio Preparation (1 credit).
Prerequisites: The student must be enrolled in the Writing Certificate Program and must have earned at least 12 credits toward the Writing Certificate Program and must have earned at least 12 credits toward the English major or minor. Offered each semester in the Writing Center. Return to top

ENG 490 Professional Internship (1 or 2 credits).
Prerequisites: Permission of the faculty anchor and field supervisor. Internships are available through Career Services. Professional writing interns must have completed all university writing requirements. Return to top

ENG 495 Senior Seminar (4-0-4).
Prerequisite: English major with senior standing or permission of instructor. Literature studied in the context of significant theoretical questions: an author, genre, or theme considered from a variety of critical perspectives. Students may fulfill the senior seminar requirement by taking one 4-credit semester seminar, or a two-semester seminar series of 2 credits each. The seminar may be repeated with change of topic. Writing. Return to top
Professors:
Mark S. Rosentraub (Dean), Stan A. Duraj, Michael Gates, Miron Kaufman, Sandra Kaufman, W. Dennis Keating (Associate Dean), Dianne Rahm (Assistant Dean), Robert A. Simons (Director, MUPDD Program), Roberta Steinbacher (Assistant Dean), Michael Tevesz; Associate Professors:
Virginia O. Benson, William Bowen, Wendy Kellogg, Mark Tumeo, Michael V. Wells (Director, Undergraduate Programs);
Assistant Professors: Nancy Meyer-Emerick, Brian A. Mikelbank

**ENV 259 Natural History of the Cleveland Area (2-6-4).** General geology, ecology, flora, and fauna of the Cleveland area; field trips to parks and museums to study local rock formation, forest types, and plant and animal identification. Designed primarily for nonscience majors. Cross-listed with UST 259. Natural Science with Lab. Return to top

**ENV 435 Environmental Policy and Administration (4-0-4).** Administration of the organizations charged with responding to environmental regulations and/or crises; decision- and policy-making processes within and around these organizations, especially as they related to conflicting interests and values. Cross-listed with UST 435. Writing. Return to top

**ENV 440 Environment and Human Affairs (4-0-4).** Challenges to decision-makers in environmental policy-making; strategies appropriate to various decision situations, analysis of decision-making, negotiation and mediation techniques. Cross-listed with UST 440. Return to top

**ENV 441 Environmental Planning (4-0-4).** Exploration of principles and processes of environmental planning focusing on urban and regional levels; presentation of frameworks and techniques in areas such as site plan review, urban design, urban environmental restoration, open space and habitat preservation, water quality, bioregionalism, and growth management. Cross-listed with UST 441. Return to top

**ENV 442 Environmental Finance and Capital Budgeting (4-0-4).** Introduces students to natural resource economics theory, financial decision-making processes, and public policy relevant to environmental protection, urban sustainability, and natural resource development and management; examination of public goods and pricing theory, public sector involvement, regulation, market solutions, capital planning, and budgeting for environmental infrastructure. Return to top

**ENV 443 Environmental Regulatory Compliance (4-0-4).** Examination of occupational safety and health requirements placed on industry and urban institutions; utilizes training modules that meet federal standards and guidelines. Return to top

**ENV 489 Senior Project (4-0-4).** Prerequisite: Senior standing or permission of instructor. Capstone course coordinating knowledge and skills gained through fulfillment of the requirements for a major in Environmental Studies. Return to top

**ENV 490 Environmental Internship (Credit as arranged) Prerequisite: Permission of instructor.** Work experience in environmental agencies for Environmental Studies majors. Return to top

**ENV 496 Environmental Research (Credit as arranged).** Prerequisite: Permission of instructor. Independent research for Environmental Studies majors. Return to top
Engineering Science courses are common courses available to the departments of Chemical, Civil and Environmental, Electrical and Computer, Industrial and Manufacturing, Mechanical Engineering and Engineering Technology. The courses are taught in cooperation with the departments involved.

ESC 100 New Student Orientation (1-0-1). Strategies for a successful college experience, including study habits, time management, learning styles, and the many rules and regulations to consider when working toward a degree. A major portion of the course is an in-depth look at the differences between the five majors offered in the engineering college.

ESC 101 Graphical Concepts/CAD (2-2-3). Fundamentals of mechanical drafting and an introduction to computer-aided drafting (CAD). Both manual- and computer-engineering drawings are produced. The drafting fundamentals include orthographic projection, isometric and oblique pictorials, auxiliary and sectional views, descriptive geometry, dimensioning and working drawings.

ESC 150 FORTRAN (2-2-3). Prerequisites: MTH 168 or equivalent background. Fundamentals of problem-solving using computers; covers FORTRAN 90 and concepts of accuracy and efficiency in programming solutions to engineering problems.

ESC 151 C Programming (2-2-3). Prerequisite: MTH 168 or equivalent background. Fundamentals of scientific and engineering problem-solving using computers; covers ANSI C and concepts of accuracy and efficiency in programming solutions to engineering problems.

ESC 201 Statics (3-0-3). Prerequisites: MTH 181, PHY 241 or 243. Mechanics of forces and force systems; static equilibrium, forces in structures and machines, friction, centroids, moments of inertia, radii of gyration, and virtual work.

ESC 202 Dynamics (3-0-3). Prerequisite: ESC 201. Motion of particles and rigid bodies subjected to unbalanced force systems; the kinematics of plane motion, relative motion, coriolis acceleration; the concept of force, mass and acceleration; work and energy, and impulse and momentum.

ESC 203 Statics and Dynamics (4-0-4). Prerequisites: MTH 181, PHY 241 or 243. Statics-mechanics of forces, friction, moment of a force, free body diagrams, 2D static equilibrium. Dynamics-kinematics of particles, kinetics of particles in 2D, force and acceleration, work and energy, impulse and momentum.

ESC 211 Strength of Materials (3-0-3). Prerequisite: ESC 201. Study of stress, strain and stress-strain relations; stress-load and load-deformation relationships for axial, torsion and bending members; buckling of columns; combined stresses, inelastic behavior.

ESC 250 Differential Equations for Engineers (3-0-3). Prerequisite: MTH 182 or permission of instructor. Pre- or co-requisite: ESC 150 or ESC 151. First-order differential equations, and linear, and nonlinear differential equations. Laplace transform techniques. Applications to engineering problems.

ESC 270 Materials Science and Engineering (3-0-3). Prerequisites: CHM 261 and MTH 168 or equivalent. Structure of materials and their relationship to the mechanical and physical properties of materials, applications and uses.

ESC 282 Engineering Economy (3-0-3). Prerequisite: Sophomore standing. Course focuses on the coupling of technical analysis and economic feasibility to determine the best course of action among alternatives competing for scarce resources in both public and private sector projects. Studies the principles, concepts, and methodology of the time value of money as applied to governmental, industrial, and personal economic decisions. Topics include benefit-cost analysis, inflation, depreciation, taxes, tax abatements, risk and sensitivity analysis, and the comparison of alternatives. Discussion includes the ethical and social responsibilities of engineers as they apply to project decisions affecting job creation and loss, personnel placement, and capital expenditure.

ESC 301 Fluid Mechanics (3-0-3). Prerequisite: ESC 250. Study of fluid properties, hydrostatics, friction loss, dimensional analysis, statics, and dynamics of compressible and incompressible fluids; continuity, energy, and
momentum principles; laminar and turbulent flow; general concepts of boundary layer flow. **Return to top**

**ESC 310 Engineering Statistics and Probability (3-0-3).** Prerequisite: **MTH 182.** Concepts of statistics and probability for engineers. Probability distributions of engineering applications; sampling distributions; hypothesis testing; parameter estimation; response surface methodology. **Return to top**

**ESC 315 Electrical Engineering Concepts (3-0-3).** Prerequisite: **PHY 242;** Prerequisites or corequisites: **MTH 182, ESC 250.** Solutions of linear DC and AC circuits, impedance, power, power factor correction, operational amplifiers and rotating DC and AC machines; applications to engineering situations. **Return to top**

**ESC 321 Thermodynamics I (3-0-3).** Prerequisite: **MTH 182.** Classical thermodynamic approach to systems and to control volumes containing simple compressible substances; establishment of important thermodynamic properties and their application to the zeroth, first and second laws analysis of systems and control volumes; analysis of ideal and actual gas cycles. **Return to top**

**ESC 350 Linear Algebra and Numerical Methods in Engineering. (2-2-3).** Prerequisites: **ESC 150 or ESC 151, or equivalent computer programming language, MTH 182.** Prerequisite or co-requisite: **ESC 250.** Vectors and vector operations, matrices and determinants, eigenvalues and eigenvectors, systems of linear and non-linear equations, applications and numerical methods. MATLAB for linear algebra applications. **Return to top**
ESE 400 Introduction to Special Education (4 credits).
An introduction to the profession of special education with information regarding the characteristics of persons with the various disabilities included in IDEA. Students learn historical and legal issues regarding special education; to identify, plan, and implement a variety of instructional strategies; and information on the concepts of Praxis II and to the profession. Return to top

ESE 402 Introduction to Individuals with Mild/Moderate Educational Needs (4 hours). Prerequisites: EDB 301, EDB 302, EDC 300, ESE 400, PSY 220, PSY 221, and SPH 229. History, theoretical foundations, and practices related to the social, emotional, and learning characteristics of individuals with mild/moderate disabilities. Includes presentations of diagnostic approaches and educational and social policies relative to these exceptionalities. Required for licensure as an Intervention Specialist for Students with Mild/Moderate Educational Needs. Return to top

ESE 403 Introduction to Individuals with Moderate/Severe Educational Needs (4 hours). Prerequisites: EDB 301, EDB 302, EDC 300, ESE 400, PSY 220, PSY 221, and SPH 229. Examination of the learning and behavioral characteristics of individuals with moderate and severe disabilities from birth through adulthood; exploration of implications for a comprehensive service delivery system and trends in best practices, both current and historical. Required for licensure as an Intervention Specialist for Students with Moderate/Severe Educational Needs. Return to top

ESE 404 Teaching Students of Varying Abilities (3 hours). Prerequisites: EDB 200, EDB 301, EDB 302, EDC 300, PSY 220, and PSY 221. Survey of educational issues related to serving individuals with disabilities as well as those considered to be gifted and talented. Includes an introduction to the characteristics, etiology, classification, incidence, and learning potential of students with special needs, as well as the legal aspects involved in teaching these students. Addresses methods for accommodating learners of varied ability within the regular classroom through alteration of the environment, curriculum, and instruction. Satisfies Writing Across the Curriculum requirement. Return to top

ESE 410 Diagnostic Assessment and Multifactored Evaluation for Students with Moderate and Severe Disabilities (2 credits). Prerequisites: ESE 400 and ESE 403. Students will acquire competencies associated with norm and criterion-referenced assessment and understand the conditions under which assessments should be planned and conducted. Students will gain competency with the interpretation and analysis of assessment information. Return to top

ESE 411 Classroom Management and Intervention for Severe Behavior Problems (4 hours). Prerequisites: ESE 400 and ESE 402 or ESE 403. Includes approaches to classroom management that foster productive social interactions and are most compatible with instructional goals. Also examines the characteristics and causes of various severe behavior problems and research-based techniques for intervention. Required for licensure as an Intervention Specialist for Students with Mild/Moderate and Moderate/Severe Educational Needs. Return to top

ESE 412 Collaboration and Partnerships Among Parents and Professionals in Special Education (4 hours). Prerequisites: ESE 400 and ESE 402 or ESE 403. Highlights research and productive strategies for establishing successful collaborative relationships with parents of children with disabilities, paraprofessionals, and other professionals. Fosters sensitivity to the needs of culturally and linguistically diverse families. Emphasis on collaboration and partnerships with other professionals, paraprofessionals, and parents as team members designing, implementing, and evaluating appropriate educational experiences for persons with disabilities. Required for all Intervention Specialist licenses in special education. Recommended to be taken with Student Teaching in all Special Education Programs. Return to top

ESE 413 Supporting Medical and Intensive Educational Needs (4 hours). Prerequisites: ESE 400 and ESE 403. Overview of medical disabilities and the educational implications for children with medical- and/or health-care needs. Analysis of strategies for cross-disciplinary assessment, planning, technology use, and program implementation, including such disciplines as physical, occupational, and speech therapy; psychology; and other health-related fields. Return to top

ESE 415 Assessing Young Children (4 hours). Prerequisites: ECE 402 and ECE 403. Provides a basic understanding of the components of developmental screening, child assessment, child identification, and program evaluation for children “at-risk” and those with disabilities from birth through age 8. Assessment and evaluation focus on child and family variables. Construction of Individualized Education Programs (IEPs) and Individualized Family Service Plans (IFSPs) are stressed. Return to top

ESE 416 Life Skills and Career Planning in Special Education (2 hours). Prerequisites: ESE 400 and ESE 402. Study of appropriate curriculum, instructional techniques, methods, and materials for the development of vocational, career, and functional living skills in students with mild/moderate disabilities. Addresses planning for the transition from secondary education to work, postsecondary education, and community involvement. Required for licensure as an Intervention Specialist for Students with Mild/Moderate Educational Needs. Return to top
ESE 417 Assessment, Curriculum, and Instruction for Students with Mild/Moderate Educational Needs (4 hours). Prerequisites: ESE 400 and ESE 402. Examination of principles, procedures, and instruments of assessment used in the diagnostic process, as well as the development and utilization of appropriate curriculum, materials, and instructional strategies for individuals with mild/moderate educational needs. Explores academic, social, and functional skills development; and instructional accommodations for students with mild/moderate educational needs in the regular education setting. Required for licensure as an Intervention Specialist for Students with Mild/Moderate Educational Needs. Return to top

ESE 419 Life Skills Assessment, Curriculum, and Instruction (4 hours). Prerequisites: ESE 400 and ESE 403. Exploration of issues related to assessment, functional curriculum theory, Individualized Education Program (IEP) development, choice of teaching objectives, use of technology, and procedures for implementation of quality functional programs for individuals with mental retardation, multiple disabilities or emotional disturbance. Topics include task analysis, prompting procedures, classroom structure, and monitoring of ongoing progress. Required for licensure as an Intervention Specialist for Students with Moderate/Severe Educational Needs. Return to top

ESE 420 Assessment, Curriculum, and Instruction to Meet the Academic and Behavioral Needs of Students with Moderate/Severe Educational Needs (4 hours). Prerequisites: ESE 400 and ESE 403. Exploration of issues related to assessment, curriculum theory, Individualized Education Program development, and academic and behavioral approaches for individuals with emotional disturbance or multiple disabilities. Emphasis on teaching academic skills, and social and emotional behaviors. Required for licensure as an Intervention Specialist for Students with Moderate/Intensive Educational Needs. Return to top

ESE 421 Assessment for Instructional Needs (four credits). Prerequisites: ESE 400 and 402. The focus of this course is the administration and interpretation of formal and informal assessment tools for students with mild/moderate disabilities. The course emphasizes the direct link between assessment and the design of appropriate instruction. Course assignments will require students to make decisions in selecting and administering assessments as well as developing appropriate educational plans for children with disabilities based on assessment outcomes. Clinical or field experience required. Return to top

ESE 422 Assessment-Based Curriculum and Instruction for Students with Mild/Moderate Disabilities (four credits). Prerequisites: ESE 400, 402, and 421. The focus of this course is on the development and utilization of appropriate assessment-based curriculum and instruction for individuals with mild/moderate educational needs. Participants in this course will develop an understanding of the relationships among assessment issues, learning environments and instructional practices employed in learning environments for students with disabilities. Clinical or field experience required. Return to top
Without exception, appropriate authorization for enrollment in any course with an EST prefix must be obtained prior to registration. Moreover, failure to adhere to the following policies and deadlines may result in the delay of graduation by one or more semesters.

**Student Teaching and Practicum Requirements:** At least two full semesters prior to anticipated registration for any field experience, students should consult their faculty advisor or the Office of Field Services, Rhodes Tower 1344, (216) 687-4616 to determine the required due date for submitting a practicum or student teaching placement application. Please note that these deadlines are strictly enforced and that placements will only be given students who have achieved a overall 2.50 cumulative grade point average and a minimum grade point average of 2.75 in the professional education sequence, with no grades below a C. Candidates for secondary and multiage practicum and student teaching placements must also have at least a 2.50 grade point average in their major field.

**EST 370 Practicum in Early Childhood Education (3 hours).** Prerequisites: Prior application and approval of the Office of Field Services. Requires four half-days per week for one semester, typically in a preschool setting observing and teaching under the direction of a cooperating teacher and a university supervisor; includes seminar. Practicum and/or student teaching (EST 480) placement may be made in a setting that provides for the inclusion of children with special needs. Required for early childhood teaching license. Return to top

**EST 371 Practicum in Middle Childhood Education (3 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with methods courses as specified by program. Structured field experience designed to accompany specific methods courses and to prepare Middle-Childhood-Education majors for student teaching; stresses practical application of methods and theory with emphasis on the various roles of a teacher. Students begin formulating a personal philosophy for teaching while working four half-days per week in an upper elementary, middle-, or junior-high school classroom under the direction of a cooperating teacher and a university supervisor; includes seminar. Required for middle childhood teaching license. Return to top

**EST 372 Practicum in Secondary Education (3 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with EDS 313, EDS 315, EDS 316, or EDS 317. Structured field experience designed to accompany secondary methods courses in English, science, mathematics, or social studies education. Prepares Secondary Education Minors for student teaching; stresses the practical application of theory and research to the planning, delivery, and evaluation of instruction. Students explore the various roles of a teacher and begin formulating a personal philosophy for teaching while working four half-days per week in a middle-, junior-high, or senior-high school classroom under the direction of a cooperating teacher and a university supervisor; includes seminar. Required for secondary teaching license. Return to top

**EST 373 Practicum in Teaching English as a Second Language (3 hours).** Prerequisites: Prior application and approval of the Office of Field Services. University-supervised field experience designed to provide guided practice in the application of current theory and research in ESL/EFL instruction. Students spend four half-days per week in a classroom that serves ESL students under the direction of a cooperating teacher; includes seminar. Required for TESOL endorsement. Return to top

**EST 374 Practicum in Foreign Language Education (3 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with EDC 312 and EDC 313. Structured field experience designed to prepare modern-language majors for student teaching; stresses the practical application of theory and research to the planning, delivery, and evaluation of instruction. Students explore the various roles of a teacher and begin formulating a personal philosophy for teaching while working four half-days per week in a school under the direction of a cooperating teacher and a university supervisor; includes seminar. Placement must be different than that received for EST 484 so that students gain both PreK-8 and 9-12 classroom experience. Required for multiage foreign language teaching license. Return to top

**EST 377 Practicum in Special Education: Mild/Moderate Educational Needs (4 hours).** Prerequisites: Prior application and approval of the Office of Field Services. University-supervised field placement that provides extended, firsthand experience in working with students who need specially designed instructional programs. Requires four
half-days per week for one semester in a state-approved unit serving students with mild/moderate disabilities; includes seminar. Required for licensure as a Mild/Moderate Intervention Specialist. Return to top

**EST 378 Practicum in Special Education: Moderate/Severe Educational Needs (4 hours).** Prerequisites: Prior application and approval of the Office of Field Services. University-supervised field experience designed to provide extended, guided practice in working with students with mental retardation, multiple disabilities, and/or emotional disturbances. Requires four half-days per week in a state-approved unit that serves students with moderate/intensive educational needs working under the direction of a cooperating teacher; includes seminar. Required for licensure as a Moderate/Intensive Intervention Specialist. Return to top

**EST 480 Student Teaching in Early Childhood Education (10 hours).** Prerequisites: Prior application and approval of the Office of Field Services. Five full days a week in a university-supervised student-teaching experience, typically in a kindergarten or primary-grade classroom. Practicum (EST 370) and/or student teaching placement may be made in a setting that provides for the inclusion of children with special needs. Required for early childhood teaching license. Return to top

**EST 481 Student Teaching in Middle Childhood Education (10 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with EDB 400. Five full days a week for one semester in an upper-elementary, middle-, or junior-high school classroom observing and teaching under the direction of a cooperating teacher and a university supervisor. Required for middle childhood teaching license. Return to top

**EST 482 Student Teaching in Secondary Education (10 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with EDB 400. Five full days a week for one semester in a secondary school classroom observing and teaching under the direction of a cooperating teacher and a university supervisor. Required for secondary teaching license. Return to top

**EST 483 Multiage Student Teaching for Physical Education, Music, and Art Majors (10 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with PED 445 or EDB 400. University-supervised student-teaching experience in two separate educational settings to provide both PreK-8 and 9-12 classroom experience. Involves observation and teaching physical education, music, or art under a cooperating teacher's direction, five full days per week for one semester. Required for multiage teaching licensure in physical education, music, or visual arts. Return to top

**EST 484 Student Teaching in Foreign Language Education (10 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with EDB 400. Five full days a week for one semester observing and teaching under the direction of a cooperating teacher and a university supervisor. Placement must be different than that received for EST 374 so that students gain both PreK-8 and 9-12 classroom experience. Required for multi-age teaching license in foreign language education. Return to top

**EST 487 Student Teaching for Mild/Moderate Educational Needs (12 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with ESE 412. University-supervised student-teaching experience in a state-approved unit serving students with mild/moderate disabilities; five days a week for one semester observing and teaching under the guidance of a cooperating teacher. Successful completion requires demonstration of competencies necessary for licensure as a Mild/Moderate Intervention Specialist. Return to top

**EST 488 Student Teaching for Moderate/Severe Educational Needs (12 hours).** Prerequisites: Prior application and approval of the Office of Field Services; must be taken concurrently with ESE 412. University-supervised student-teaching experience in two separate education settings: one for students with mental retardation and multiple disabilities, and one for students with emotional disturbance. Five days a week for one semester observing and teaching under a cooperating teacher's direction. Successful completion requires demonstration of competencies necessary for licensure as a Moderate/Intensive Intervention Specialist. Return to top

**EST 493 Special Topics in Curriculum and Instruction (1 to 4 hours).** Prerequisite: May require permission of instructor. Opportunity to explore in depth, with a group having similar interest, a topic of a special nature; individual and group work in the classroom, library, or community under the direct supervision of at least one faculty member and other resource persons as necessary. In many instances, the topic explored may be under consideration as a new course or program to assure student participation in this process and will be included in the seminar title. May be repeated for a maximum of nine hours. Return to top
**EST 496 Independent Study in Education (1 to 4 hours)**. Prerequisites: Permission of instructor and department chairperson. Independent project in a selected area of education; approval by and arrangements made with permission of the supervising instructor and the department chairperson. Independent study hours may not exceed six hours in a degree program. [Return to top](#)
Environmental Sciences

Note: Environmental Sciences is a subdepartment of the Department of Biological, Geological, and Environmental Sciences.

**EVS 206 Introduction to Environmental Science (4-0-4).** An introduction to the interlinkages of nature, with substantive materials from geology, biology, chemistry, physics, economics, anthropology, political sciences and many other areas. The role of humans as destroyers and conservationists in nature will be studied. Natural- and human-caused hazards and prevention will be investigated. Natural Science. [Return to top]

**EVS 454 Conservation Biology (3-0-3).** Prerequisite: BIO 304. This course will examine the causes and scientific responses to the current worldwide crisis of declining biodiversity. Scientific principles underlying conservation biology are emphasized, but students also will explore the role that culture, societal values, politics, and economics play in conservation issues. [Return to top]

**EVS 455 Conservation Biology Laboratory (0-4-2).** Prerequisite: BIO 304. Examination of central principles of conservation biology through field studies and computerized analyses of data for actual endangered and threatened species. This laboratory course provides students with experience in quantification and an analysis of biodiversity, environmental monitoring, mathematical modeling, risk assessment, and other methods used in conservation biology, ecology, and natural resource management. [Return to top]

**EVS 490 Internship in Environmental Science (0-8-4).** Prerequisite: Permission of instructor. Independent study related to work experience for majors in Environmental Sciences. [Return to top]

**EVS 493 Special Topics in Environmental Science (3-0-3).** Prerequisite: Permission of instructor. Study of a particular topic in environmental science. Topics to be announced in semester course schedule. May be repeated for credit with a change of topic. [Return to top]

**EVS 494 Special Topics in Environmental Science (4-0-4).** Prerequisite: Permission of instructor. Study of a particular topic in environmental science. Topics to be announced in semester course schedule. May be repeated for credit with a change of topic. [Return to top]

**EVS 496 Independent Study in Environmental Science (0-8-4).** Prerequisite: Permission of instructor. Independent study of material of special or timely interest which is not likely to be appropriate for, or covered in, regular course offerings. May be repeated for credit with change in topic. [Return to top]

**EVS 497 Research in Environmental Science (0-8-4).** Prerequisite: Permission of instructor. Undergraduate research carried out by special arrangement. The student may work independently or as an assistant to a faculty investigator. [Return to top]
**Finance**

**Professors:** Lawrence A. Kreiser (Interim Chairperson); Ravindra R. Kamath, Alan K. Reichert, James R. Webb; **Associate Professors:** Chencuramaiah T. Bathala, Michael T. Bond, Kenneth A. Borokhovich, F.C. Neil Myer, Jandhyala L. Sharma.

**FIN 201 Personal Financial Planning.** *(3-0-3)*. Introduction to concepts in finance (risk, return, liquidity, inflation, and taxation) applied to personal financial planning; impact of career choice on discretionary income; basic financial planning; investing at low risk; aggressive investing; investing in real assets, commodities, and related topics. **No business background is required. BBA students can take this course only as a free elective. Effective Fall semester 2003.** Return to top

**FIN 351 Introduction to Financial Management.** *(4-0-4).* Prerequisites: ACT 222, ECN 201, ECN 202. A study of the basic tools and concepts of financial management and their application to the areas of financial statement analysis, leverage, short-term and long-term financing, financial forecasting, time value of money, working capital management, investment banking, cost of capital, capital budgeting, capital structure, valuation, dividend policy, mergers and acquisitions, and multinational finance. Return to top

**FIN 352 Special Topics in Finance** *(4-0-4).* Prerequisite: FIN 351. A survey of topics of special interest to finance majors. Possible themes, topics, or issues include working capital management, forecasting, financial engineering, mergers and acquisitions, financial risk management, financial theory and other topics of a timely nature. Return to top

**FIN 353 Introduction to Investments** *(4-0-4).* Prerequisite: FIN 351. An introduction to the factors affecting changes in prices of securities and their relation to objectives of personal and institutional investors. The course introduces functions, operations, and workings of various securities markets; stock, bond, option and futures. It covers factors affecting the security prices, risk, and fundamental valuation principles of security prices. Its primary focus is on the understanding of the mechanics and terminology of various security markets, and the risk and fundamental valuation principles of security prices. Return to top

**FIN 354 Advanced Investments** *(4-0-4).* Prerequisite: FIN 353. A more detailed consideration of factors studied in FIN 353, with particular emphasis on comprehensive industry analysis and common stocks, bonds, and options; portfolio theory and the portfolio management process. Course focuses upon detailed qualitative and fundamental valuation models for various financial securities; stocks, bonds, options and futures; and risk-return analysis. Emphasis is on institutional investors such as mutual funds and pension funds, and will include coverage of international investing. Return to top

**FIN 360 Financial Markets and Institutions** *(4-0-4).* Prerequisite: FIN 351. An analysis of the financial instruments (including derivative securities) of both domestic and international institutions of the money and capital markets; plus the operations of financial intermediaries such as commercial banks, savings and loan associations, and insurance and investment companies. Return to top

**FIN 361 Bank Management** *(4-0-4).* Prerequisite: FIN 351. A study of management of bank funds and the organization and structure of the commercial banking industry. Topics include the management of liquidity, investments, loans, liabilities, and capital; the impact of bank regulatory agencies and the changes in money and capital market conditions on the management of bank funds; evaluation of the performance of bank holding companies; and international banking. Return to top

**FIN 365 International Finance and Investment** *(4-0-4).* Prerequisite: FIN 351. A survey of international trade, foreign exchange markets, balance of payments, exchange rate determination, and official reserves; international corporate finance, capital budgeting, cash management, capital structure, cost of capital, transfer pricing, and tax management; accounting translation, hedging and international banking. Return to top

**FIN 370 Introduction to Risk and Insurance** *(4-0-4).* Prerequisite: FIN 351. An examination of risk, methods of handling risk, the insurance mechanism, characteristics of insurance, legal concepts underlying insurance contracts, risk management, captives, types of insurers, and insurance company operations. A variety of insurance products are covered, including homeowners' insurance, automobile insurance, umbrella coverage, title insurance, workers' compensation, life insurance, annuities, and health insurance. The emphasis of the course is on property and liability insurance. Return to top

**FIN 371 Life and Health Insurance** *(4-0-4).* Prerequisite: FIN 370. A study of principles and practices of providing personal and family security against the risks of death and ill health. The course also covers topics involving life insurance products, costs, pricing, settlement options, replacement, premium and costs computations, saving for retirement, annuity products and their costs, and social insurance. Return to top

**FIN 377 *Real Estate Finance** *(4-0-4).* Prerequisite: FIN 351. A discussion of major instruments of real estate financing, the mortgage market and key financial institutions, governmental involvement in mortgage markets, credit analysis, the methodologies for appraising residential properties, and other relevant topics. The course will emphasize the use of creative financing tools and their payment patterns by analyzing detailed examples. *Approved by the Ohio Association of Real Estate Boards Inc., as partial fulfillment of the Real Estate License requirements.* Return to top
FIN 379 Real Estate Investment (4-0-4). Prerequisite: FIN 351. An analysis of factors which determine the investment returns and value of real estate vs. alternatives. The course introduces methodologies for appraising income-producing properties. Decision-making from the perspective of institutional, as well as individual investors, is examined. Estimation of risk and return is explored in an individual property and portfolio context. Return to top

FIN 380 Case Problems in Finance (4-0-4). Prerequisite: FIN 351. Case studies relating to long-term financing requirements, operating and financial leverage, dividend policy, cash budgeting, risk, working capital management, capital budgeting, cost of capital, management of earnings, valuation of the firm, and mergers and acquisitions. Return to top

FIN 384 Capital Budgeting Decisions (4-0-4) Prerequisite: FIN 351. A study of the theory and practice of capital budgeting in the global arena. Topics include capital budgeting techniques; and decisions involving replacement, make or buy, plant location, risk and uncertainty, lease evaluation, bond refunding, project abandonment, inflation, mergers and acquisitions, cost of capital, capital structure decisions, executive compensation, dividend policy and valuation. Return to top

FIN 490 Professional Internship (1 to 4 credits). Prerequisites: FIN 351, junior standing, permission of chairperson. Requires professional finance work experience in an organizational environment which extends the curriculum and provides meaningful experience related to the student's area of interest. Term report required. Return to top

FIN 491 Special Problems in Finance (1 to 4 credits). Prerequisites: Senior standing, department approval, approval of sponsoring faculty. A flexible content/structure course to enable qualified students to pursue special areas of interest and competency. It is an opportunity for independent study, field research, or other special assignments. Return to top
French

Professor: Anita K. Stoll (Chairperson); Associate Professor: Tama Lea Engelking; Assistant Professor: Annie Jouan-Westlund.

Students with native experience of French may not enroll for credit in 100-level courses in French. All students with training or experience in French other than a previous course in that language at CSU must consult a counselor in the Department of Modern Languages for assistance in deciding where to enter the French sequence. Failure to seek counseling may result in schedule shifts during the first week of class.

FRN 100 200-300-400 Practicum in French (1 to 6 Credits). Prerequisites: Permission of instructor, departmental approval. Specially arranged projects or supervised experiences for non-native speakers in French conducted in the university and in the community. Examples: special work in the Instructional Media Laboratory, participation in a French play, tutorial activity in a basic French course, a study, or service project involving fieldwork in one of the French communities. Projects arranged between individual students and instructors; title of the project will appear on the student's transcript. May be repeated for credit with change of topic. S/U only. Return to top

FRN 101 102 French Language Skills, I,II (4-2-5). Prerequisites: for FRN 102: FRN 101 or the equivalent course with C or better. Development of proficiency in speaking, understanding, reading, and writing French. Lab fee. Return to top

FRN 196 296-396-496 Independent Study in French (1 to 6 Credits). Prerequisite: Student must have sophomore, junior, or senior standing. Proposed projects must be approved by a full-time department faculty member who will serve as the project advisor, and the department chairman. Student-initiated supervised projects involving French language or literature. Such as in-depth study of a particular writer, or special readings in linguistics. Independent study may be used to cover the materials of a listed course not offered in a given year. Projects arranged between individual students and instructor; title of the project will appear on the student's transcript. May be repeated for credit with change of topic. Return to top

FRN 201 Culture and Civilization (4-0-4). Prerequisite: FRN 102 or 210. The study of francophone culture and cross-cultural interactions. Ongoing development of French language skills of hearing, speaking, reading, and writing French using authentic cultural materials. Arts and Sciences Foreign Culture course. Return to top

FRN 202 Francophone Perspectives on World Affairs (4-0-4). Prerequisite: FRN 102. Emphasis on cross-cultural communication and the practical application of French language skills in world affairs, building on the basic skills of speaking, listening, reading, writing, and cultural acumen. Return to top

FRN 203 Readings in French (4-0-4). Prerequisite: FRN 201 or 202. An introduction to the study of literary texts that serves as a bridge between the 200-level (intermediate) and 300-level (advanced) courses. Students develop reading skills and strategies to prepare them for upper-division French literature and civilization courses. A number of genres are studied, and students are introduced to basic critical tools of literary analysis including explication de texte. Course may be organized around a theme. Highly recommended for students preparing to enter graduate school where reading proficiency in a second language is required. Return to top

FRN 210 Basic Oral Skills (3-0-3). Prerequisite: FRN 102 or equivalent. Practice in listening comprehension; exercises designed to improve fluency, pronunciation, and vocabulary. Return to top

FRN 240 340-440 Field Study (1 to 6 Credits). Prerequisites: Permission of instructor, departmental approval. The amount of language preparation necessary to participate in any given field experience is to be determined by the department and the instructor. Specially arranged field experience abroad provides intensive exposure to students target countries and languages. May be preceded by a special preparatory course, such as supervised individual or group work-study experience in the target country followed by a period of travel; supervised two- to six-week group travel for students interested in a language- or culture-oriented project in the target country. See semester course schedule. A field study trip to France will be offered periodically. For further information, contact the Department of Modern Languages. Western Culture and Civilization. Return to top

FRN 255 Translation and Interpretation (3-0-3). Prerequisites: two intermediate French courses (FRN 201, 202, 203, or 210). Introduction to theory and practice of translation from French to English. Workshop approach involving class discussion of students' work-in-progress. Work required varies according to students' level of preparation. Return to top
FRN 293 393-493 Readings in Special Topics in Culture and Civilization (1 to 6 credits). Prerequisites for FRN 293: FRN 102; for FRN 393, FRN 301 or permission of instructor. Topics to be announced in semester course schedules. This course is regularly offered as part of the university's Study Abroad Program in France or Canada. May be repeated with a change in topic. Return to top

FRN 301 Composition and Conversation (4-0-4). Prerequisite: FRN 202 or permission of instructor. Practice in speaking and writing on an advanced level, including grammar review. Return to top

FRN 310 Advanced Oral Styles (3-0-3). Prerequisite: FRN 301 (FRN 345 or FRN 402 recommended). This course is designed to provide a contemporary proficiency-based format which advanced undergraduate students and teachers can use. The use of authentic recorded materials such as television commercials, telephone messages, radio game shows, and traffic reports work with a variety of language and role models. Sometimes cross-listed with FRN 534. Return to top

FRN 315 French Phonetics and Diction (4-0-4). Prerequisite: FRN 301 or permission of instructor. Description of the French sound system and study of the phonetic alphabet and its usage. Extensive practice in pronunciation in class and in the Instructional Media Laboratory. Required for majors seeking teaching licensure. Return to top

FRN 344 French Civilization from the Middle Ages to the Empire (4-0-4). Prerequisite FRN 301 or permission of instructor. This course is a study of the social, political, economic and cultural history of France from the Middle Ages through the Napoleonic Empire. Through a chronological study of distinctive historical periods up to 1870, students will trace the origins of French culture as we know it today. Western Culture and Civilization. Return to top

FRN 345 French Civilization from 1870 to the Present (4-0-4). Prerequisite FRN 301 or permission of instructor. This course is a study of the social, political, economic and cultural history of France from 1870 to the present. Beginning with the end of the 19th century, focus will be on the major historical and cultural events that shaped the image of modern France. Western Culture and Civilization. Return to top

FRN 355 Translation and Interpretation (3-0-3). Prerequisite: FRN 301 or the equivalent or permission of instructor. Introduction to theory and practice of translation from French to English. Workshop approach involving class discussion of students' work-in-progress. Work required varies according to students' level of preparation. Return to top

FRN 365 Readings in French Literature (3 credits). Prerequisite: FRN 301. Reading and writing assignments are in the original French. Lectures may be in English if cross-listed with ENF 212/213, 214/215. Writing. Return to top

FRN 371 Literature Survey I (4-0-4). Prerequisite: FRN 301. Introductory sequence surveys the major literary movements and genres from the Middle Ages to the Revolution. Writing, Western Culture and Civilization. Return to top

FRN 372 Literature Survey II (4-0-4). Prerequisite: FRN 301 (FRN 371 or FRN 345 recommended). Introductory sequence surveys the major literary movements and genres from the 19th century to the present. Writing, Western Culture and Civilization. Return to top

FRN 375 Readings in Francophone Literature (4-0 4). Prerequisite: FRN 301. An introduction to literature written in French from Francophone countries outside of France. May be organized as a survey touching on works drawn from a number of French-speaking countries, or around one or two regions such as North Africa and the Caribbean. Texts are situated in their historical context with an emphasis on identity as it relates to language, tradition and the influence and/or rejection of a colonial past. Lectures may be in English if cross-listed with ENF 210. Return to top

FRN 402 Advanced Composition and Conversation (4-0-4). Prerequisites: FRN 301 and one 300-level French literature course. Continuation of FRN 301 on a more advanced level; development of style and accuracy. Writing. Return to top

FRN 434 Studies in French Linguistics (3-0-3). Prerequisites: FRN 402 and one 300-level French course or permission of instructor. Topics to be announced in semester course schedules. May be repeated for credit with change of topic. Linguistic Studies course. Return to top

FRN 491 Senior Honors Project (3-0-3). Prerequisite: For MLA Honors Students only. Project must be preapproved by project advisor who is a full-time faculty member, department chair, and department curriculum committee. An independent research project developed in cooperation with faculty advisor. Completed projects will be submitted in written form and presented in a public forum. Return to top

FRN 494 Special Topics in French Literature (3-0-3). Prerequisites: FRN 301 and one 300-level French literature course. Study of a particular period, theme, or author, such as "Aim, C,saire," "Diderot and Women," or French Symbolist Poetry." Topics to be announced in semester course schedules. May be repeated for credit with change of topic. Writing. Return to top
The following graduate courses are offered in French for candidates of the master of education in curriculum and instruction with a concentration in French (may be repeated with change of topic):

FRN 534 Studies in Language and Linguistics (3-0-3) Return to top
FRN 540 Field Experience Abroad (1 to 6 credits) Return to top
FRN 593 Special Topics in Culture and Civilization (4-0-4) Return to top
FRN 594 Special Topics in Literature (1-6) Return to top
FRN 596 Independent Study (1 to 6 credits) Return to top
Professors:
Bruce Beatie, Edward Haymes, John Hunter, Donald Ramos, Samuel Richmond, Alan Rosenbaum, Brian Scott, Robert Sollod, Mary Ellen Waithe, John P. Wilson; **Associate Professors:** Austin Allen (Interim Director), Michael Baumer, Elizabeth Cagan, Adrienne Gosselin, Ronald M. Haybron, Dennis Keating, Robert Klein, Harry Margulis, Diana Orendi, Ronald Reminick, James Royster, Robert Wheeler; **Adjunct Faculty:** Dorothy Salem, J. Low-Beer, Julius Simmons; **Lecturers:** Paula Bloch, Neal Chandler, Leo Coach, Lana Conley, Laine Goldman, Arleen Hartman, Douglas Hoston, Nancy McMahon, Prester Pickett, Joseph J. Reed-Mundell, Max Stanford, Mary Weems, Melodie Yates, Richard Yates.

First College classes are open to any CSU student. However, because enrollment is limited, First College students are given priority. Most First College courses are given a discipline designation (i.e., PHY, ENG, SWK). Those that are more interdisciplinary in nature are given a subject area designation (HUM - Humanities, SSC - Social Science, NSC - Natural Science).

Many First College courses count toward university General Education Requirements, as indicated in the descriptions below. However, the GenEd descriptions below are not complete. Therefore, students should consult the comprehensive GenEd listings of FST courses available from the First College.

First College courses serve as an area of innovation for a variety of professors within the university. Therefore, the content of First College courses under the same course number may vary within a semester, from year to year or semester to semester. Many non-core course descriptions below are deliberately general. Students should consult current course schedules for updated listings and check in the First College office or at [http://www.csuohio.edu/first_college/](http://www.csuohio.edu/first_college/) for full descriptions of each course offered in a given term.

- **Language Skills**
- **Lower-Division Courses**
- **Upper-Division Courses**

### Language Skills

**FST 090 Grammar of Written English (4-0-4).**
An intensive review of sentence grammar intended to provide students with a command of English sentence structure in preparation for college composition courses. Satisfactory/Unsatisfactory grading system. Fulfills academic skill level deficiency. Upon successful completion of this course, students are eligible to enroll in **FST 101**. No credit toward graduation.

### Lower-Division Courses

Normally workshops at the 100 level are open only to freshmen. Others may receive permission to enroll in a 100 level workshop if the course is needed to fulfill a specific curriculum requirement.

Workshops at the 200 level are open to freshmen depending on the nature of the course and background of the student.

Freshmen-level 4-credit lecture courses are intended to provide a coherent viewpoint of basic fields in the disciplines indicated. Content, emphasis, and theme may vary. Course titles will be changed to reflect such differences. A course may be repeated for credit with a change in topic.

Freshmen-level 6-credit workshops are intended to provide intensive introductory work focused on selected topics in the disciplines indicated.

Different offerings of workshops having the same number may vary in content. Course titles will be changed to reflect such differences. A course may be repeated for credit with a change in topic.

**FST 100 SSC-Introduction to College Life (1-0-1).** An orientation course intended for entering freshmen. Freshman Orientation.

**FST 101 ENG-English I (4-0-4).**
The fundamentals of expository writing and the reading of expository prose. Instruction will focus on thesis development; paragraph structure, transition, and logical relations; syntax, appropriate and flexible sentence structure; an introduction to stylistic and rhetorical devices, figurative language; and lexical choice, and the use of the dictionary. Satisfies first part of university English requirement.
FST 102 ENG-English II (3-0-3).
Practical experience in writing expository essays; emphasis on learning correct academic style for particular disciplines. Students should have completed FST 101 or its equivalent. Satisfies second part of university English requirement. Return to top

FST 104 PHY-Physics Lecture (3-0-3).
Exploration of the comparatively few fundamental concepts that underlie our understanding of the physical universe from its largest to smallest components. Return to top

FST 105 Computer Studies Unit (1-0-1). Introduction to First College computer lab and word processing. Return to top

FST 106 Computer Studies Unit (1-0-1). Continued introduction to First College computer lab and digital media. Return to top

FST 109 HUM-Foundations of Modern Society I (4-0-4). Interdisciplinary examination of the evolution of the modern world. Critical issues such as the relationship of individuals to society, evolution of economic systems, and cultural change. Western Culture and Civilization, Arts and Humanities, Writing. Return to top

FST 110 HUM-Foundations of Modern Society II (4-0-4). Continuation of Foundations I. Return to top

FST 121 ENG-Great Books Workshop (6-0-6).
Study of the basic techniques of imaginative literature with special emphasis given to developing the student's ability to read and discuss literature. Recent courses have focused on the great books of the Middle Ages and the Renaissance. Western Culture and Civilization, Arts and Humanities, Writing. Return to top

FST 122 ENG-Creative Writing Workshop (6-0-6).
Examination of a particular literary form through its work and through the student's creative writing in that form. Recent courses have focused on the short story or poetry. Writing. Return to top

FST 123 ENG-Literature Workshop (6-0-6).
Study of basic techniques of imaginative literature in the works of a genre, period, or theme. Recent courses have focused on the detective story and drama. Arts and Humanities, Writing. Return to top

FST 138 BIO-Biology Workshop (5-2-6).
Introduction into biological investigations. May focus on a single overriding concept such as evolution. Return to top

FST 140 PSC-Political Science Workshop (6-0-6).
Analysis of American social and political relationships. Recent courses have focused on the nature of power relationships and political life. Writing. Return to top

FST 145 COM-Communication Workshop (6-0-6).
Study of the nature and role of interpersonal or mass communication in contemporary society; analysis of selected communication systems. May include an additional focus on a specific medium of communication. Return to top

FST 149 ART-Art Workshop (6-0-6).
Development of an aesthetic basis for critical consideration of our environment. Recent courses have included "Creativity." Return to top

FST 151 HIS-American History Workshop (6-0-6).
Introduction to history as method, research and change. Utilizing primary source materials, students learn to evaluate the validity of secondary works based on their own reading of diaries, letters, etc. Recent course offerings have included "The Western Reserve," "Cleveland," and "The Town." Writing. Return to top

FST 152 HIS-American History Workshop (6-0-6).
Introduction to history as method, research, and change. Focus on the experiences in American history of minority peoples including Native Americans, African-Americans, Asians and Chicanos. Recent course offerings have included "The Other Americans." Arts and Humanities, Writing, Western Culture and Civilization. Return to top

FST 158 HIS-History Workshop (6-0-6).
Introduction to the history and present culture of a Non-Western country or group of countries. Recent course offerings have included "Brazilian History and Culture." Non-Western Culture and Civilization; Arts and Humanities; Writing. Return to top

FST 159 ECN-Economics Workshop (6-0-6).
Topics may include economic problems of production and consumption, money supply, fiscal policies, and analyses of economic variables associated with particular social institutions. Return to top

FST 162 PHL-Philosophy Workshop (6-0-6).
Studies in a particular field of philosophy, with extensive practice in the art of philosophical inquiry. Arts and Humanities. Return to top
FST 164 PSY-Perspectives in Psychology (6-0-6).
Introductory course in psychology designed to acquaint the student with major theoretical principles and orientation of psychology as a social and behavioral science. Social Science. Return to top

FST 167 SSC-Geography Lecture (4-0-4).
Provides an overview of the discipline of geography, demonstrating ways of applying geographic concepts to studying regions and their populations and integrating physical and human geography. Social Science. Return to top

FST 170 SSC-Social Science Workshop (6-0-6). Topics of interest in the social sciences. Return to top

FST 171 SSC-Social Science Workshop (6-0-6).
Topics of interest in the social sciences. Focus on issues concerning the Non-Western world. Return to top

FST 172 SSC-Social Science Workshop (6-0-6).
Topics of interest in the social sciences. Focus on issues involving the African-American community. Return to top

FST 173 HUM-Humanities Workshop (6-0-6).
Topics of interest in the humanities. African-American Experience, Human Diversity. Return to top

FST 174 HUM-Humanities Workshop (6-0-6).
Topics of interest in the humanities. Focus on culture of the African-American community. Arts and Humanities. Return to top

FST 175 FNA-Fine Arts Workshop (6-0-6). Topics of interest in the fine arts. Return to top

FST 176 NSC-Natural Science Workshop (5-2-6). Topics of interest in the natural sciences. Return to top

FST 184 MLA-Culture in Perspective (4-0-4 or 6-0-6).
Introduction to the history and present culture of the people who speak a particular language, and to the language itself; may include development of some basic conversational skills in the language. When feasible, courses are taught by professors from the countries being featured. Return to top

FST 195 SSC-Contemporary Issues (2-0-1 or 2-0-2).
A faculty-student seminar dealing with critical problems of contemporary society and world affairs. Recent topics have included "Alternatives to Violence," "World Poverty and Economic Justice," and "Growing Beyond Prejudice." Return to top

FST 197 Independent Study (Credit as arranged).
Credit and topics to be arranged with instructor. Approval by director of the college is required. Return to top

FST 206 HIS-History Lecture (4-0-4).
Introduction to the study of history through the development of basic conceptual, research, and writing skills. Recent courses have included the "History of the Family." Return to top

FST 221 ENG-English Workshop (6-0-6).
Explorations of imaginative literature through the works of a single author, or of a period, genre, or theme. May be offered as a Women's Studies course. Recent course offerings have included "Women's Detective Fiction," "Women and Literature," and "English Drama." Arts and Humanities, Writing, Western Culture and Civilization. Return to top

FST 222 ENG-Creative Writing Workshop (6-0-6).
Examination of a particular literary form through its work and through the development of the student's creative writing in that form. Recent course offerings have included "Creative Writing: The Short Story," and "Writing About the City." Writing. Return to top

FST 223 ENG-World Literature (6-0-6).
Contemporary fiction with books read to be representative of different regions of the world. Recent course offerings have included "The World Novel." Non-Western Culture and Civilization, Arts and Humanities, Writing. Return to top

FST 224 ENG-World Literature (4-0-4).
Contemporary fiction with books read to be representative of different regions of the world. Recent course offerings have included "Asian American Literature." Return to top

FST 239 CHM-Chemistry Lecture (3-0-3).
Introduction into the methodology and methods of conceptualization in chemistry. Recent course offerings have included "Chemistry Inquiry Method." Return to top

FST 240 PSC-Political Science Workshop (6-0-6).
Analysis of American social and political relationships. Recent courses have focused on an examination of the politics of urban America in general and of Cleveland in particular. Writing. Return to top
FST 242 PSC-Political Science Workshop (6-0-6).
Analysis of American social and political relationships as evidenced in the politics of urban America. Specific focus on the African-American community. Recent course offerings have included "African-American Politics." African-American Experience, Social Science, Writing, Human Diversity. Return to top

FST 243 MLA-Modern Language Workshop (6-0-6).
Comparative study of particular aspects of literature on culture, including cultural phenomena such as myths, rituals and holy days associated with different language communities and their related value systems, or the theory and practice of folk-lore studies. May be offered as a Women's Studies course. Recent course offerings have included "Myths of the Goddess/Heroine," "Guinevere's Sisters," "Myth of Atlantis," "King Arthur," and "Wagner." Arts and Humanities. Return to top

FST 244 MTH-Introduction to Statistical Concepts (6-0-6). An introduction to descriptive and inferential statistics, including design of experiments, histograms, box models and the normal approximation, sampling theory, estimation of parameters, hypothesis testing, regression and correlation, and elementary probability. The emphasis is on concepts rather than manipulation and statistical algorithms. (Offered in the Spring Semester.) Mathematics and Logic. Return to top

FST 245 MTH-Liberal Arts Mathematics (6-0-6).
An introduction to noncomputational mathematics in which students explore some important mathematical concepts that can be understood without an extensive technical background, in the process getting some idea of how mathematicians look at mathematics. The topics, chosen from areas of mathematics not usually seen in elementary courses, have been chosen to be accessible to students with minimal technical background. (Offered in the Fall Semester.) Mathematics and Logic. Return to top

FST 246 PHY-Physics Workshop (5-2-6).
Introduction into the methodology and methods of conceptualization in physics. The mathematical language and skills needed to represent, describe, and understand physical reality are developed concurrently within the course. No mathematics background needed beyond that of high-school algebra. Recent course offerings include "Space, Matter and Motion," and "Astrophysics." Natural Science with Lab. Return to top

FST 247 SWK-Race, Poverty and Welfare (6-0-6 or 4-0-4). An interdisciplinary examination of the complex intersection of race (i.e., racism), poverty, and welfare. In seeking to understand how these three variables interact, students engage in original quantitative and qualitative research in Cleveland-area communities. Social Science, African-American Experience, Writing, Human Diversity Return to top

FST 250 MUS-Music Workshop or Lecture (6-0-6 or 4-0-4). Topics related to the nature of music, music as a communicative medium, and aspects of musical style. Courses also may include introduction to a compositional medium, such as electronic music. Recent course offerings have included "Black Music Across the Atlantic," and "Music as a World Phenomenon." Non-Western Culture and Civilization. Return to top

FST 251 HIS-American History Workshop (6-0-6).
Introduction to historical method, research, and change. May be offered as a Women's Studies course. Topics chosen from American history have included "The Town," "The '60s," and "American Women: Famous and Not So Famous." Arts and Humanities; Writing. Return to top

FST 252 HIS-American History Workshop (6-0-6).
Introduction to historical method, research, and change. Focus on topics from the African-American Experience in American history. May be offered as a Women's Studies course. Recent course offerings have included: "African-American History," "Black Women's History" and "The Civil Rights Movement." African-American Experience, Arts and Humanities, Human Diversity. Return to top

FST 254 SOC-Sociology Workshop (6-0-6).
Introduction to basic theoretical principles of sociology as applied to the study of contemporary social problems. Social Science. Return to top

FST 256 ANT-Anthropology Workshop (6-0-6).
Theories of human thought, culture, and behavior; an examination of patterns of adaptation among various societies of the world and the study of universal human processes. Return to top

FST 257 SWK-Social Work Workshop (6-0-6 or 3-0-3). Drawing from many disciplines, including sociology, psychology, economics, and law, the course provides students with an opportunity to take part in activities and investigations intended to add to understanding of social problems and how they can be resolved. May be offered as a Women's Studies course. Recent course offerings have included "The Women's Movement," "The Social Work of Re-Entry from Prison," and "Domestic Violence." Social Science, Writing. Return to top

FST 258 HIS-History Workshop (6-0-6).
Consideration of issues related to the development of foreign societies; examination of political, social, and economic institutions, with emphasis on use of primary source materials. Recent course offerings have included "Contemporary China," "Modern Japan," and "Brazilian History and Culture." Writing. Return to top
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tr>
<td>FST 261 PHL-Philosophy Workshop (4-0-4) or (6-0-6).</td>
<td>Studies in a particular field of philosophy with extensive practice in the art of philosophical inquiry. Focus on thought of major Western philosophies or philosophical inquiry in literature. Recent course offerings included &quot;Intermediate Philosophy: Aristotle, Hildegard, Kierkegaard and Nietzsche,&quot; and &quot;Philosophy and Science Fiction&quot; (Writing). Western Culture and Civilization, Arts and Humanities.</td>
<td>4-0-4 or 6-0-6</td>
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<tr>
<td>FST 262 PHL-Philosophy Workshop (6-0-6).</td>
<td>Studies in a particular field of philosophy, with extensive practice in the art of philosophical inquiry. Fields in which this course may be offered include foundations of ethics in psychology; social and political philosophy; philosophy of art, community, science, and the future; or periods in the history of philosophy. Recent course offerings include &quot;Philosophy of Law,&quot; and &quot;Philosophy of Psychology.&quot; Arts and Humanities, Writing.</td>
<td>6-0-6</td>
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<tr>
<td>FST 263 PHL-Symbolic Logic (6-0-6 or 4-0-4).</td>
<td>Introduction to the use of canonical notation to represent arguments and to assess their validity; sentential and predicate logic through identity.</td>
<td>6-0-6 or 4-0-4</td>
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<tr>
<td>FST 264 PSY-Psychology Workshop (6-0-6).</td>
<td>Basic course in psychology designed to acquaint the freshman student with major theoretical orientation to psychology as a science. Topics typically covered include human personality, motivation, learning, cognition, human sexuality, social influence processes, and dreaming. Recent course offerings have included &quot;Learning and Memory,&quot; &quot;Theory of Personality,&quot; and &quot;Child Psychology-Focus on the Urban Child.&quot; Social Science.</td>
<td>6-0-6</td>
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<tr>
<td>FST 265 UST-Urban Studies Workshop (6-0-6).</td>
<td>Studies of current urban problems. Recent course offerings have included &quot;Struc-ture of the City,&quot; and &quot;Changing Neighborhoods.&quot;</td>
<td>6-0-6</td>
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<tr>
<td>FST 266 REL-Religious Studies Workshop (6-0-6) or (8-0-8).</td>
<td>Exploration of religious concepts, principles, and processes as related to individuals and to society. Recent course offerings have included &quot;Sexual Ethics,&quot; and &quot;Religion and Personal Transformation.&quot; Writing.</td>
<td>6-0-6 or 8-0-8</td>
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<tr>
<td>FST 267 SSC-Geography Workshop or Lecture (6-0-6) or (4-0-4).</td>
<td>Application of the principles and methodology of geography to the study of settlement patterns and community development; adaptation of physical structures to technological change and the global economy; interplay among spatial, areal, environmental, and economic systems. Recent course offerings have included &quot;City Builders,&quot; &quot;Ethnicity and Settlement Geography,&quot; &quot;Cities in a Changing Global Society,&quot; and &quot;Economic Geography.&quot; Social Science, Writing.</td>
<td>6-0-6 or 4-0-4</td>
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<tr>
<td>FST 270 SSC-Social Science Workshop (6-0-6).</td>
<td>Topics of interest in the social sciences. Writing.</td>
<td>6-0-6</td>
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<tr>
<td>FST 271 SSC-Social Science Workshop (6-0-6).</td>
<td>Focus on issues concerning the Non-Western world. May be offered as a Women's Studies course. Recent course offerings include &quot;Women and Change in the Non-Western World.&quot; Non-Western Culture and Civilization, Social Science, Writing.</td>
<td>6-0-6</td>
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<tr>
<td>FST 272 SSC-Social Science Workshop (6-0-6).</td>
<td>Topics of interest in the social sciences. Focus on issues involving the African-American community. Recent course offerings include &quot;African-American,&quot; and &quot;Hispanic-American Experience.&quot; African-American Experience; Writing, Human Diversity.</td>
<td>6-0-6</td>
<td>Return to top</td>
</tr>
<tr>
<td>FST 273 HUM-Humanities Workshop (6-0-6).</td>
<td>Topics of interest in the humanities.</td>
<td>6-0-6</td>
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<tr>
<td>FST 274 HUM-Humanities Workshop (6-0-6).</td>
<td>Topics of interest in the humanities. Focus on culture of the African-American community. Recent course offerings include &quot;Black Experience in the Arts.&quot; African-American Experience, Human Diversity, Writing.</td>
<td>6-0-6</td>
<td>Return to top</td>
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<tr>
<td>FST 275 FNA-Fine Arts Workshop (6-0-6).</td>
<td>Topics of interest in the fine arts.</td>
<td>6-0-6</td>
<td>Return to top</td>
</tr>
<tr>
<td>FST 276 NSC-Natural Science Workshop (5-2-6).</td>
<td>Topics of interest in the natural sciences. Recent course offerings include &quot;Field Ecology.&quot; Natural Science with Lab.</td>
<td>5-2-6</td>
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<tr>
<td>FST 297 Independent Study (Credit as Arranged).</td>
<td>Credit and topics to be arranged with instructor. Approval by director of the college is required.</td>
<td>Credit as Arranged</td>
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**Upper-Division Courses**

Upper-division workshops are intended to provide intensive advanced work focused on selected topics in the disciplines indicated. Workshops at the 300- or 400-level usually include an extensive research paper, creative project or other independent
student work. When cross-listed with a 200-level course, the 300-level course will always include additional work sufficient to justify upper-division credit.

Different offerings of workshops having the same number may vary in content. Course titles will be changed to reflect such differences. A course may be repeated for credit with a change in topic.

Minimum prerequisite for any upper-division seminar is sophomore class standing. Extended course descriptions available during the registration period at the First College office will indicate if any further background is needed by the student. Students are encouraged to consult with the instructor if there is any question as to the expected background for any course.

FST 321 ENG-English Workshop (6-0-6).
Study of a particular period, a single author or literary group, a literary genre or theme, or a series of classics from different periods. May be offered as a Women's Studies Course. Recent topics have included "Women's Detective Fiction," "Women in Literature," "English Drama," and "The Literature of Latin America." Arts and Humanities, Writing, Western Culture and Civilization. Return to top

FST 322 ENG-Creative Writing (6-0-6).
Examination of a literary form through its work and through the development of the student's writing in that form. Recent course offerings have included "The Short Story," "Writing About the City," and "Feminist Poetry." Writing. Return to top

FST 323 ENG-World Literature Workshop (6-0-6).
Focus on literature from all parts of the world. Recent course offerings include "The World Novel." Non-Western Culture and Civilization, Writing, Arts and Humanities. Return to top

FST 324 ENG-World Literature Workshop (4-0-4).
Focus on literature from all parts of the world. Recent course offerings include "Rhetoric, Literature and Film," and "Amazons in World Literature." Arts and Humanities. Return to top

FST 340 PSC-Political Science Workshop (6-0-6).
Analysis of American, comparative, or international political relationships. Recent courses have focused on an analysis of the politics of Cleveland, the politics of the Middle East; the political novel, or on an examination of and participation in campaign politics. Writing. Return to top

FST 342 PSC-Political Science Workshop (6-0-6).
Analysis of American social and political relationships as evidenced in the politics of urban America. Specific focus on the African-American community. African-American Experience, Writing, Human Diversity. Return to top

FST 343 MLA-Modern Language Workshop (6-0-6).
Comparative study of particular aspects of literature or culture, including cultural phenomena such as myths, rituals and holy days associated with different language communities and their related value systems; or the theory and practice of folk-lore studies. May be offered as a Women's Studies course. Recent course offerings have included "Myths of the Goddess/Heroine," "Guinevere's Sisters," "Myth of Atlantis," "King Arthur," and "Wagner." Arts and Humanities. Return to top

FST 345 COM-Communications Workshop (6-0-6).
Detailed study of creativity in communication or specific communication issues and problems. Intensive reading, discussion, and creative projects. Recent course offerings have included "Film Production as Media Art," "Communication and Conflict," and "Media Persuasion." Return to top

FST 346 PHY-Physics Workshop (6-0-6).
Topics involving the interface of physics with other fields or problems. Recent topics have included "Energy and the Environment," and "Astrophysics." Return to top

FST 347 SWK-Social Work Workshop (6-0-6).
An interdisciplinary examination of problems confronting American society in which race and racism are significant factors. African-American Experience, Human Diversity. Return to top

FST 349 ART-Art Workshop (4-0-4) or (6-0-6).
Development of an aesthetic basis for critical consideration of our environment. May be offered as a Women's Studies course. Recent course offerings have included "Italian Renaissance," "Architectural Plan for First College," "Creativity in the Arts," "Sculpture and Space," "Art as Expression," and "Feminist Art." Return to top

FST 350 MUS-Music Workshop (6-0-6).
Topics related to the nature of music, music as a communicative medium, aspects of musical style, and introduction to a compositional medium. Recent course offerings have included "Electronic Music." Return to top

FST 351 HIS-American History Workshop (6-0-6).
Consideration of issues related to the development of American civilization; emphasis on primary sources and the use of
quantitative analysis of historical information. May be offered as a Women's Studies course. Recent course offerings have included "American Women, Famous and Not So Famous," and "Women and Ethnicity." Writing, Arts and Humanities. Return to top

FST 352 HIS-American History Workshop (6-0-6).
Topics in American history with focus on the African-American experience. May be offered as a Women's Studies course. Recent course offerings have included "African-American History," "Black Women's History," and "The Civil Rights Movement." African-American Experience, Writing, Arts and Humanities, Human Diversity. Return to top

FST 354 SOC-Sociology Workshop (6-0-6).
Topics in sociology. Return to top

FST 355 ANT-Black Culture and Character (6-0-6).
Examination of African-American society and culture from an anthropological perspective. African-American Experience, Human Diversity. Return to top

FST 356 ANT-Anthropology Workshop (6-0-6).
Focus on a particular subfield of anthropology and the development of data theory that has contributed significant understanding of an aspect of human thought, culture, and social organization. Recent course offerings include "Anthropology of the Elderly," and "Child Abuse." Return to top

FST 357 SWK-Social Work Workshop (6-0-6).
Detailed examination of a social problem area or field of practice; may deal with the use of law as a tool for advocacy, the position of women in society, or other special issues of concern. Some topics are offered as Women's Studies courses. Recent course offerings have included "The Women's Movement and Domestic Violence." Writing. Return to top

FST 358 HIS-History Workshop (6-0-6).
Topics in the historical evolution of institutions or problems in foreign societies, often comparing related developments in the United States. Recent topics have included "History of Race Relations in the Americas," "Conquest and Settlement in Latin America," "Contemporary China," and "Contemporary Japan." Non-Western Culture and Civilization, Writing, Arts and Humanities. Return to top

FST 361 PHL-Philosophy Workshop (6-0-6).
Investigation of a particular theme in Western thought. Recent course offerings have included "Intermediate Philosophy: Aristotle, Hildegard, Kierkegaard and Nietzsche," "Philosophies of War and Peace," and "Philosophy and Literature." Western Culture and Civilization. Return to top

FST 362 PHL-Philosophy Workshop (6-0-6).
In-depth examination of a specialized topic in philosophy, with opportunities for individual research and practice in writing and presenting philosophical papers. Recent course offerings have included "Olivia Sabuco: 15th-Century Philosophy of Medicine," "Philosophy of Psychology," and "Philosophy of Law." Writing. Return to top

FST 364 PSY-Psychology Workshop (6-0-6).
In-depth explorations of selected topics in psychology; including the development of self-esteem, human and animal aggression, moral development, personality and interactional psychology, human sexuality, and small group dynamics. Recent course offerings have included "Transpersonal Psychology," "Perspective on Social Behavior," "Post Traumatic Stress Disorder," and "Theory of Personality." Return to top

FST 365 UST-Urban Studies Workshop (6-0-6).
Investigation of some aspect of current urban problems usually focusing on Cleveland as a laboratory setting. Topics may include the impact of governmental structures; policy formation; and political, economic and social structures of society. Recent course offerings have included "Changing Neighborhoods," and "Structure of the City." Return to top

FST 366 REL-Religious Studies Workshop (6-0-6) or (8-0-8).
Exploration of religious processes as they are presented in selected films, literature, art, and music; study of religious language and symbols; the religious dimensions of reality; the relevance of religious principles in contemporary society. Recent course offerings have included "Sexual Ethics," "Personal Transformation," and "Mystery of Evil." Writing. Return to top

FST 367 GEO-Geography Workshop (6-0-6).
Application of the principles and methodology of geography to the study of settlement patterns and community development; adaptation of physical structures to technological change and the global economy; interplay among spatial, areal, environmental, and economic systems. Recent course offerings have included "Ethnicity and Settlement Geography," "Cities in a Changing Global Society," and "Economic Geography." Writing. Return to top

FST 370 SSC-Social Science Workshop (6-0-6).
Topics of interest in the social sciences. Recent course offerings have included "AIDS: Principles, Practices and Politics." Writing, Western Culture and Civilization. Return to top
FST 371 SSC-Social Science Workshop (6-0-6). Topics of interest in the social sciences. Focus on issues concerning the Non-Western world. May be offered as a Women’s Studies course. Recent course offerings have included "Women and Change in the Non-Western World," and "Contemporary Asian-Indian Culture." Non-Western Culture and Civilization, Writing, Social Science. Return to top

FST 372 SSC-Social Science Workshop (6-0-6). Topics of interest in the social sciences. Focus on issues involving the African-American community. Recent course offerings have included "The African-American and Hispanic-American Experience." African-American Experience, Writing, Human Diversity. Return to top

FST 373 HUM-Humanities Workshop (6-0-6). Topics of interest in the humanities. Return to top

FST 374 HUM-Humanities Workshop (6-0-6). Topics of interest in the humanities. Focus on culture of the African-American community. Recent course offerings include "The Black Experience in the Arts." African-American Experience, Writing, Human Diversity. Return to top

FST 375 FNA-Fine Arts Workshop (6-0-6). Topics of interest in the fine arts. Return to top

FST 395 SSC-Contemporary Issues (2-0-2). A faculty-student seminar dealing with critical problems of contemporary society and world affairs. Recent course offerings have included "World Poverty and Economic Justice," "Alternatives to Violence," and "Growing Beyond Prejudice." Return to top

FST 396 PDM Evaluation (1-0-1). Final evaluation project required of all students completing a Personally Designed Major. Return to top

FST 445 COM/DRA-Communication/Drama Workshop (6-0-6). Advanced detailed study of creativity in communication or drama. Intensive reading, discussion, and creative film, digital media and drama projects. Return to top

FST 481 COM/DRA-Communication/Drama Workshop (8-0-8). Final creative projects for Personally Designed Majors requiring creative senior practicum film, digital media art and drama projects. Return to top

FST 497 Independent Study (Credit as Arranged). Credit and topics to be arranged with instructor. Approval by director of the college is required. Return to top
Professor Emerita: Margaret H. Bahniuk; Associate Professors: Kenneth R. Mayer, Marion S. Webb; Instructor: Debra Ghosh (Term).

GAD 250 Business Communications (3-0-3). Prerequisites: ENG 101, ENG 102, or equivalent. To develop an understanding of the principles of effective communication and to apply them to the solution of management problems in the form of written reports, memoranda and letters, and oral presentations. Writing. Return to top

GAD 493 Current Topics (1 to 4 credits). Prerequisite: Permission of chairperson. Explores current topics and techniques in written and oral communications for general or specialized business and professional environments. Topics will vary based on the needs and skill levels of students. Return to top
Professors: W.B. Clapham, Jr., Howard H. Lo, Michael J. Tevesz; Associate Professor: Abbed Babaei

NOTE: Geological sciences is a subdepartment of the Department of Biological, Geological, and Environmental Sciences.

GEO 100 Introductory Geology (3-0-3). Corequisite: GEO 101. Basic instruction concerning the composition of the earth, with a detailed discussion of the physical and chemical processes that bring about its continual evolution. Natural Science. Return to top

GEO 101 Introductory Geology Laboratory (0-2-1). Corequisite: GEO 100. Selected exercises designed to reinforce concepts covered in GEO 100. Natural Science Laboratory. Return to top

GEO 106 Introduction to Meteorology (3-0-3). Introduction to weather and weather systems, with a detailed discussion on the nature of the atmosphere, air motions, precipitation, storms, weather patterns, and weather analysis. Natural Science. Return to top

GEO 140 Development of Continents and Oceans (3-0-3). Introduction to the structure and history of continents and ocean basins; examination of geological provinces of North America, and the sequence of events through geological time that created the North American continent. Natural Science. Return to top

GEO 150 Geological History of the Earth (4-0-4). Introduction to the history of the earth. Examination of the biochemical and geological evidence for the origin of life and the mechanisms and patterns of evolution, evaluating the most significant events in the evolutionary history of plants and animals through geological time. Introduction to the structure and history of continents and ocean basins, concentrating on the events through geological time that created the North American continent. Natural Science. Return to top

GEO 170 Origin and History of Life (3-0-3). Biochemical and geological evidence relating to the origin of life and the mechanisms and patterns of evolution; significant events in the evolutionary history of plants and animals. Natural Science. Return to top

GEO 202 Principles of Paleontology (3-0-3). Corequisite: GEO 203. Presentation of the underlying principles concerning the preservation, description, classification, paleoecology, evolution, and stratigraphy of fossil organisms. Natural Science. Return to top

GEO 203 Paleontology Laboratory (0-4-2). Corequisite: GEO 202. Systematic survey of invertebrate fossils using preserved specimens. Topics include functional morphology, taxonomy, paleoecology, and geological history. Natural Science Laboratory. Return to top

GEO 210 The Earth and Human Affairs (3-0-3). Examination of geologic hazards, such as earthquakes, landslides, floods, and shoreline erosion, including class discussion of current events of this type; examination of development of society. Natural Science. Return to top

GEO 223 Map Interpretation and the Visualization of Space (1-4-3). Prerequisite: GEO 100 or permission of instructor. Introduction to the uses of topographic, geologic, and specialized maps. Practicum on using maps to interpret and communicate information of landforms, geologic hazards, and land-use planning. Natural Science. Return to top

GEO 230 Natural Resources (3-0-3). Examination of our natural resources with emphasis on nonrenewable mineral resources; discussion of the effect of population growth and technology on rates of consumption, mineral economics, and the concept of "reserves"; the future outlook with regard to alternative sources of energy, substitutes, and recycling. Natural Science. Return to top

GEO 293 Special Topics in Geology (1 to 4 credits). Prerequisite: Permission of instructor. Topics reflect material of special or timely interest which is not likely to be appropriate for regular, continuing course offerings. May be repeated for up to 16 credits with a change in topic. Return to top

GEO 304 Mineralogy (3-0-3). Prerequisite: GEO 100 or permission of instructor. Corequisite: GEO 305. Study of
elementary crystallography, crystal chemistry, mineral chemistry, and mineral classification; with emphasis on the identification of important minerals using physical properties. Return to top

**GEO 305 Mineralogy Laboratory (0-2-1).** Corequisite: GEO 304. Selected exercises designed to reinforce concepts covered in GEO 304. Return to top

**GEO 306 Petrology (3-0-3).** Prerequisite: GEO 304. Corequisite: GEO 307. Study of mineralogical and chemical composition; occurrence; classification; origin of igneous, sedimentary, and metamorphic rocks; emphasis on interpretation of phase diagrams and the application of experimental and field studies to the origin of rocks. Return to top

**GEO 307 Petrology Laboratory (0-2-1).** Corequisite: GEO 306. Selected exercises designed to reinforce concepts covered in GEO 306. Return to top

**GEO 312 Sedimentation and Stratigraphy (3-0-3).** Prerequisites: GEO 100 and GEO 223, which may be taken concurrently with GEO 312, or permission of the instructor. Corequisite: GEO 313. Study of the origin, dispersal, deposition, and lithification of sediments; variation of sedimentary parameters; discussions of facies, correlation, use of sedimentary structures, and paleographic reconstruction; regional stratigraphy of North America. Return to top

**GEO 313 Sedimentation and Stratigraphy Laboratory (0-2-1).** Corequisite: GEO 312. Selected exercises designed to reinforce concepts covered in GEO 312. Return to top

**GEO 314 Paleoecology (3-0-3).** Environmental reconstruction using fossils; particular attention given to organism-sediment interrelations, organism diversity, distribution adaptive morphology, and community structure. Return to top

**GEO 320 Structural Geology (3-0-3).** Prerequisites: GEO 100 and GEO 223 or permission of the instructor. Corequisite: GEO 321. Study of the forces involved in the deformation of the earth's crust, with emphasis on the recognition, interpretation, and illustration of the resultant geologic structures. Return to top

**GEO 321 Structural Geology Laboratory (0-2-1).** Corequisite: GEO 320. Selected exercises designed to reinforce concepts covered in GEO 320. Return to top

**GEO 350 Introduction to Oceanography (3-0-3).** Prerequisites: Minimum of two science courses. Examination of the interrelated physical, chemical, biological, and geological processes operating in sea water and ocean basins; selected topics relating to the geologic interpretation of the marine rock record, factors regulating growth and environmental habitat of organisms, and the geophysics of ocean basins. Return to top

**GEO 354 Geochemistry (4-0-4).** Prerequisites: At least one course at the 300 level or higher in both Geology and Chemistry. Study of geochemical principles and their application to geologic processes. Topics include radiometric dating, element abundance, water chemistry, sedimentary geochemistry, and the geochemistry of invertebrate skeletons, particularly their isotopic and trace element compositions. Return to top

**GEO 358 Field Geology of the Cleveland Area (2-0-2).** Prerequisites: Two courses in science or permission of instructor. Corequisite: GEO 359. This course describes the geological history of the Cleveland area and illustrates its relation to the physical, economic, and social development of Cleveland. The course will include laboratory exercises but will emphasize field trip studies. Return to top

**GEO 359 Field Geology of the Cleveland Area Laboratory (0-2-1).** Corequisite: GEO 358. Selected exercises designed to reinforce concepts covered in GEO 358. Return to top

**GEO 404 Environmental Science for Teachers (3-0-3).** Prerequisites: At least three courses in the College of Education at the 300-level or above, or equivalent, or permission of the instructor. Application of environmental science to the classroom. Substantive materials from geology, biology, chemistry, and other sciences will be integrated to create a coherent picture of the functioning of the complex systems underpinning the natural world and human society; and the ability for students to understand how society can manage these systems. This course is intended for students working toward school certification. A significant part of the course will be the development of curricular materials based on course content for use in participants' own classes. Return to top

**GEO 408 Environmental Geology for Teachers (3-0-3).** Prerequisites: At least three courses in the College of Education at the 300-level or above, or equivalent, or permission of the instructor. Detailed examination of geologic hazards and the constraints placed by regional geology and geography on the problems facing modern, urban industrial
societies. This course is intended for students working toward school certification. A significant part of the course will be the development of curricular materials based on course content for use in participants' own classes. Return to top

GEO 410 Geological History of the Cleveland Area (3-0-3). Prerequisites: At least three courses in the College of Education at the 300-level or above, or equivalent, or permission of the instructor. This course provides a basis of illustrating the relation of regional geology to the physical, economic, and social development of the Cleveland area. The course will emphasize laboratory experimentation and field trip studies. Return to top

GEO 420 Rivers and Watersheds of Northeast Ohio (2-0-2). Prerequisite: GEO 223 or permission of instructor. Corequisite: GEO 421. Introduction to the study of watersheds. Return to top

GEO 421 Rivers and Watersheds Laboratory (0-4-2). Corequisite: GEO 420. Students will examine chemical, biological, and habitat aspects of area streams; study the watersheds of those streams; and carry out limited watershed-modeling exercises designed to help understand the dynamics of watersheds and the streams that drain them. Return to top

GEO 424 Introduction to Geographic Information Systems and Remote Sensing (2-0-2). Prerequisite: GEO 223. Corequisite: GEO 425. Introduction to Geographic Information Systems and the use of computerized techniques for assessing geographically distributed data. The course will include the use of techniques to analyze data and present those analyses. It will concentrate on the use of satellite imagery and aerial photography, as well as standardized data sets available from commercial sources and the WorldWide Web. Return to top

GEO 425 Geographic Information Systems Laboratory (0-4-2). Corequisite: GEO 424. Selected exercises designed to reinforce concepts covered in GEO 424. Return to top

GEO 427 Advanced Topics in Remote Sensing and Geographic Information Systems (1-6-4). Prerequisite: GEO 424. Intensive investigation of the techniques and problems associated with using remote-sensed data for Geographic Information Systems-based analyses in geology, biology, and environmental science. Return to top

GEO 444 Hydrogeology (3-0-3). Prerequisite: At least one course at the 300-level or higher in Geology (excluding GEO 404, 408, and 410). Corequisite: GEO 445. Study of the concepts and principles of ground-water flow in rocks, sediments, and soils. The course will deal with flow in both saturated and unsaturated zones, and will include issues related to ground-water use, pollution, and ground-water monitoring both for quality and quantity. Laboratory exercises will cover mathematical and computer solutions to equations and real life situations. Some field work will be required. Return to top

GEO 445 Hydrogeology Laboratory (0-2-1). Corequisite: GEO 444. Selected exercises designed to reinforce concepts covered in GEO 444. Return to top

GEO 451 Field Geology (Minimum of 4 credits). Geological mapping using aerial photographs and topographic maps; solution of field problems in stratigraphy, structure, and paleontology; written report required. Offered in summer quarter at selected universities. Return to top

GEO 460 Geomorphology (3-0-3). Prerequisite: GEO 223 or permission of instructor. Corequisite: GEO 461. Study of the surface forms of the earth, with emphasis on erosional or depositional processes in different climates and the forms they produce. Return to top

GEO 461 Geomorphology Laboratory (0-2-1). Corequisite: GEO 460. Selected exercises designed to reinforce concepts covered in GEO 460. Writing. Return to top

GEO 490 Internship in Geology (1 to 4 credits). Prerequisite: Permission of instructor. Independent study related to work experience for majors in Geology and Environmental Sciences. Return to top

GEO 493 Special Topics in Geology (1 to 4 credits). Prerequisite: Permission of instructor. Topics to reflect material of special or timely interest which is not likely to be appropriate for regular, continuing course offerings. Return to top

GEO 496 Independent Study in Geology (1 to 4 credits). Prerequisite: Permission of instructor. Independent study of material of special or timely interest which is not likely to be appropriate for or covered in regular course offerings. May be repeated for credit with change of topic. Return to top

GEO 497 Research in Geology (1 to 12 credits). Prerequisite: Permission of instructor. Undergraduate research carried out by special arrangement. The student may
work independently or as an assistant to a faculty investigator. May be repeated for up to 16 credit hours. Return to top
Professors: Anita K. Stoll (Chairperson), Bruce A. Beatie, Edward R. Haymes, Klaus-Peter Hinze; Associate Professors: Diana Orendi.

Students with native experience of German may not enroll for credit in 100-level courses in German. All students with training or experience in German other than a previous course in that language at CSU must consult a counselor in the Department of Modern Languages for assistance in deciding where to enter the German sequence. Failure to seek counseling may result in schedule shifts during the first week of class.

GER 100 200-300-400 Practicum in German (1 to 3 Credits). Prerequisites: Permission of instructor, departmental approval. Specially arranged projects or supervised experiences for non-native speakers in German conducted in the university and in the community, such as special work in the Instructional Media Laboratory, participation in a German play, tutorial activity in a basic German course, and a study or service project involving fieldwork in one of the German communities. Projects arranged between individual students and instructors; title of the project will appear on the student's transcript. May be repeated for credit with a change of topic. S/U only

GER 101 102 German I,II (4-2-5). Prerequisites: GER 101: No prerequisite; GER 102: GER 101 or the equivalent course with C or better. Essentials of German grammar; practice in speaking, understanding, reading, and writing. Lab fee.

GER 105 205-305 Directed Studies in German (1 to 4 Credits). Prerequisite: Permission of instructor. Teacher-Assisted Directed Studies (TADS) courses for those special needs of individual students not met by the regular course offerings in the areas of reading, vocabulary building, and phonetics. These TADS courses allow such students to begin or continue their study of the German language or of special aspects of it by working on their own with a detailed study guide. Specific topics, level, and number of credits vary according to student's needs and are decided in consultation with course instructor. Students completing one of these TADS courses in German as their first German course at CSU are not eligible for retroactive credit. GER 105 does not normally fulfill the language deficiency. GER 205 and 305 do not normally count toward a German major or minor. (Petitions will be decided by the department chair and the faculty of German.) Cross-listed with FST 205.

GER 196 296-396-496 Independent Study in German (1 to 6 Credits). Prerequisite: Student must have sophomore, junior, or senior standing. Proposed projects must be approved by a full-time department faculty member (who will serve as the project advisor) and the department chairman. Student-initiated supervised projects involving German language or literature, such as in-depth study of a particular writer, and special readings in linguistics. Independent study may be used to cover the materials of a listed course not offered in a given year. Projects arranged between individual students and instructor; title of the project will appear on the student's transcript. May be repeated for credit with change of topic.

GER 201 Culture and Civilization (4-0-4). Prerequisite: GER 102 or equivalent. Readings explore German customs, attitudes, history and values in comparison with the U.S. practice and expansion of skills development.

GER 202 Literature Survey (4-0-4). Prerequisite: GER 102 or permission of instructor. Reading of cultural and literary texts. Ongoing review and expansion of skills development.

GER 235 Germany Today (3-0-3). The course gives a current picture of the German-speaking countries of Germany, Austria, and Switzerland, stressing the period since 1945 and most recent developments since the reunification of East and West Germany. Topical emphasis may change each time offered. Topics include politics, the social and economic situation, education, women's questions, culture and literature, film and other media. May be repeated with change of topic. The course is regularly offered in conjunction with the university's Germany Abroad Program.

GER 240 340-440 Field Study (1 to 6 Credits). Prerequisites for GER 240: GER 102 or the equivalent; for GER 340: GER 301 or permission of instructor; for GER 440: 12 credits in German on the 300- or 400-level or permission of instructor. The amount of language preparation necessary to participate in any given field experience to be determined by the department and instructor; specially arranged field experience abroad providing intensive exposure to students' target countries and languages. May be preceded by a special preparatory course, such as supervised individual or group work-study experience in the target country followed by a period of travel; or supervised two- to six-week group travel for students interested in a language- or culture-oriented project in the target country. See course schedule. A field study trip to German-speaking countries will be offered periodically. Program and course content may vary. For example, Summer
Campus: Berlin takes place in alternate even-numbered years, and consists of two weeks of intensive preparation at Cleveland State University, four weeks in Berlin (including travel and stays in Germany), and one or two weeks of free travel. Studies concentrate on culture, civilization, and language; includes classes in music and/or political science. The program may also be taken on the graduate level. For further information, contact the Department of Modern Languages.

**GER 301 Composition and Conversation (4-0-4).** Prerequisite: GER 202 or equivalent. Practice in speaking and writing on an advanced level. Materials may include study of specialized usages, such as business or communication. Writing. Return to top

**GER 316 Translation Workshop (3-0-3).** Prerequisite: GER 301 or the equivalent. Introduction to the theory and practice of professional translation, normally from German to English; workshop approach involving class discussion of students’ work-in-progress. Work required varies according to students’ level of preparation. May be repeated for credit. Return to top

**GER 370 Introduction to the Study of Literature (3-0-3).** Prerequisite: GER 301 or permission of instructor. Introduction to the major concepts of literary study with application to masterworks of German literature. Writing, Western Culture and Civilization. Return to top

**GER 375 Poetry (3-0-3).** Prerequisite: GER 370 or permission of the instructor. Introduction to the formal aspects of the lyric genre and close readings of representative poems from 1700 to the present. Return to top

**GER 376 Novella (3-0-3).** Prerequisite: GER 370 or permission of the instructor. An introduction to the origins and formal elements of the German novella and the study of the most representative works of this literary genre from classicism to the present. Return to top

**GER 393 Topics in German Literature (3 to 9 Credits).** Prerequisite: GER 301 or equivalent. Specific topics to be announced in semester course schedule. Examples include Contemporary German Literature. May be repeated for credit with change of topic. Return to top

**GER 402 Advanced Composition and Conversation (4-0-4).** Prerequisite: GER 301. Continuation of GER 301 on a more advanced level. Development of style and accuracy. Writing. Return to top

**GER 415 Phonetics and Contrastive Structures (3-0-3).** Prerequisite: GER 301. Extensive practice of German pronunciation in class and in the laboratory. Study of crucial differences in the sounds and grammatical structures of German and English. Linguistic Studies course. Return to top

**GER 448 German Culture and Civilization (3-0-3).** Prerequisite: GER 301 or equivalent. A survey of 200 years of German culture and civilization from 1786 to present. Western Culture and Civilization. Return to top

**GER 471 Literature before 1750 (3-0-3).** Prerequisite: GER 370 or permission of the instructor. General survey of important works of German literature of the Middle Ages, the Reformation, and the Baroque period. Return to top

**GER 472 Eighteenth-Century Literature (3-0-3).** Prerequisite: GER 370 or permission of the instructor. Studies in the major authors of the Age of Enlightenment, Sturm und Drang, and Classicism. Return to top

**GER 473 Romanticism (3-0-3).** Prerequisite: GER 370 or permission of the instructor. Readings of the most important works of the Romantic movement (1798-1835). Return to top

**GER 474 Nineteenth-Century Literature (3-0-3).** Prerequisite: GER 370 or permission of the instructor. Major genres of German literature from the death of Goethe (1832-1900). Return to top

**GER 475 Twentieth-Century Prose (3-0-3).** Prerequisite: GER 370 or permission of the instructor. Masterpieces of German prose from the 20th century. Return to top

**GER 476 Twentieth-Century Drama and Poetry (3-0-3).** Prerequisite: GER 370 or permission of the instructor. Masterworks of dramatic and lyric literature from the 20th century. Return to top

**GER 491 Senior Honors Project (3-0-3).** Prerequisite: For MLA Honors Students Only. Project must be preapproved by project advisor (who is a full-time faculty member), department chair, and department curriculum committee. An independent research project developed in cooperation with faculty advisor. Completed projects will be submitted in written form, and presented in a public forum. Return to top

**GER 493 Special Topics in Culture and Civilization (3-0-3).** Prerequisites: GER 301 or equivalent, and one 300-level...
German literature course. Topics to be announced in semester course schedule. May be repeated for credit with change of topic. Return to top

GER 494 Special Topics in German Literature (3-0-3). Prerequisites: GER 301 and one 300-level German literature course. Study of a particular period, author, or theme, such as Romantic Poets, Goethe and Schiller, the Brothers Mann, Kafka, Brecht, and Medieval to Modern Love Songs. Topics to be announced in semester course schedules. May be repeated for credit with change of topic. Return to top

The following graduate courses are offered in German for candidates of the master of education in curriculum and instruction with a concentration in German (may be repeated with change of topic):

GER 534 Studies in Language and Linguistics (3-0-3) Return to top
GER 540 Field Experience Abroad (1 to 4 credits) Return to top
GER 564 Studies in Culture and Civilization (3-0-3) Return to top
GER 589 Studies in Literature (3-0-3) Return to top
GER 596 Independent Study (1 to 4 credits) Return to top
GET 310 Computer System Technology (3-0-3). Prerequisites: EET 315, EET 316. Data and computer communication principles, including structure and organization, protocols, linkages and interfacing, signal and media types, coding theory, local area networks (LANs), and industrial data communication standards. Return to top

GET 320 Robotics I (2-0-2). Return to top

GET 321 Robotics I Lab (0-4-2).
Prerequisites: associate-degree-level physics, statics, dynamics, algebra, trigonometry, and calculus; or ESC 203, or MET 300. Prerequisite or co-requisite: MTT 300. An overview of the technology, methods, and practices of robotics and mechatronics (the integration of mechanical, electrical, and computing elements), with basic details on key topics such as kinematics, mechanisms, actuators, sensors, motors, electronic hardware, controllers, and vision. Development of a math foundation in linear algebra and vectors to describe robotic configurations of various degrees of freedom. Laboratory projects to include construction of robots (e.g. LEGO Mindstorms Robots), which are driven by a microcontroller and exhibit various behaviors. Technical Elective. Return to top

GET 420 Robotics II (2-0-2). Return to top

GET 421 Robotics II Lab (0-4-2).
Prerequisites: GET 320, GET 321. Co-requisites: Pre-or-Co-requisite GET 430 or EET 440, EET 441. Continued study of the technology, methods, and practices of robotics and mechatronics, with emphasis on robots in computer integrated manufacturing. Topics include drive systems, control techniques, path control, end-of-arm tooling, automation sensors, and machine vision. Laboratory projects include sensor testing, experiments with actuators and mechanisms, control scheme simulations, projects and case study problems. Technical Elective. Return to top

GET 430 Electrical Power, Controls, and Instrumentation (3-0-3).
Return to top

GET 431 Electrical Power, Controls, and Instrumentation Lab (0-3-1).
Prerequisites: MTT 301, MET 330 and associate-degree-level electrical fundamentals. Fundamentals of electrical and electronic power, controls, and instrumentation for Mechanical Engineering Technology students. Electric machines and control. Sensors and actuators and interfacing to PLC and PC. Feedback control theory and implementation. Automated data collection. Return to top

GET 440 Applications of Programmable Logic Controllers (4-0-4).
Prerequisites: MTT 300, EET 330, and a high-level programming language. A practical course emphasizing the use of PLCs in a wide range of industrial applications. Topics include ladder logic concepts, data manipulation, timing, discrete and analog I/O, network configuration, sequencers, and shift registers. Technical Elective. Return to top

GET 444 HMI Applications of Programmable Logic Controllers (3-0-3).
Prerequisite: GET 440. Develop human-machine-interface for programmable logic controller's industrial applications. HMI includes dynamic graphics, operator station control, trending, data logging, and recipes. Technical Elective. Return to top

GET 455 Robotics System Design (3-0-3).
Prerequisites: GET 320, GET 321, GET 420, GET 421, and GET 431 or EET 440. Design of robotics systems, including concept development, modeling, simulation, selection, and optimization of equipment, sensors, and controllers. Economic consideration, reliability and safety, and documentation of final design. Examples of robotics systems designs to be chosen from industrial and non-industrial applications. Technical Elective. Return to top
Professor: Anita Stoll (Chairperson); Associate Professors: Michael Baumer, Derwood C. Smith.

Courses in linguistics, literature, and civilization having no prerequisites are listed under French, German, Modern Languages, and Spanish.

**GRK 301 302 Accelerated Classical Greek Language and Culture I, II (4-0-4).** Prerequisites: GRK 301; previous experience in a highly-inflected language like Latin or German, or permission of the instructor. GRK 302; GRK 301 with a grade of C or better; or permission of the instructor. An intensive introduction to Classical Greek. The emphasis will be on accelerated development of reading skills. Courses include a cultural component which emphasizes the civilization of the ancient Greek world and the history of Greek literature. Classical and Medieval Studies course. Return to top

**GRK 350 Accelerated Classical Greek Language and Culture III (4-0-4).** Prerequisite: GRK 302 or its equivalent with a grade of C or better; or permission of the instructor. Students should consult instructor for eligibility. A review of the grammar, syntax, and basic vocabulary for students who have had at least a year of Classical Greek in college or two years in high school. Intended to prepare students for reading both classical and koine Greek. Readings selected from classical authors and New Testament texts. Course includes a cultural component which emphasizes the civilization of the ancient Greek world and the history of Greek literature; a special unit on the place of Greek in the Indo-European family of languages, and principles of English word-borrowing is included. Classical and Medieval Studies course. Return to top

**GRK 351 Accelerated Classical Greek Language and Culture IV (4-0-4).** Prerequisite: GRK 350 or permission of the instructor. Selected readings from classical authors such as Plato, Xenophon, Euripides, Herodotus or the New Testament. Course emphasizes sight reading, vocabulary-building, and research skills. Course includes a cultural component which emphasizes the civilization of the ancient Greek world and the history of Greek literature. Classical and Medieval Studies course. Return to top

**GRK 396 496 Independent Study in Greek (1 to 4 credits).** Prerequisites: Student must have sophomore, junior or senior standing. Proposed projects must be approved by a full-time department faculty member, who will serve as the project advisor, and the department chair. Student-initiated supervised projects involving Greek language or literature, such as in-depth study of a particular writer; or special readings in linguistics. Independent study may be used to cover the materials of a listed course not offered in a given year. Projects arranged between student and instructor; project's title will appear on student's transcript. May be repeated for credit with change of topic. Classical and Medieval Studies course. Return to top
Professors Emeritus: Charles H. Brooks, Lawrence R. Walker; Associate Professor: Brenda Stevenson Marshall (Director).

HCA 301 The American Health Care System (3-0-3). Course introduces the student to the health-care system by concentrating on current arrangements for the organization, financing, and delivery of medical-care services in the United States. Emphasizes concepts of accessibility, quality, efficiency, and the effectiveness of medical care. Counts as nonbusiness elective for business students. Writing. Return to top

HCA 420 Management of Health Care Organizations (3-0-3). Course examines the internal organization and management of health-care facilities. The principles of organization and management will be applied to hospital and nursing-home structure, function, and internal control. The roles of management and professional services will be examined. Management's responsibilities for cost and quality control, as well as the development of proactive marketing strategies, will be discussed. Counts as nonbusiness elective for business students. Writing. Return to top
HED 200 First Aid and Emergency Care (2 hours).
American Red Cross Certification in Community First Aid, Cardiopulmonary Resuscitation, and OSHA standards. Return to top

HED 210 Personal Health (3 hours).
This course provides an understanding of the responsibility we have for our own health. The themes are personal decision-making and adaptation. Self-assessment inventories are used to involve students in many health issues and provide a means for applying health information in personal decision-making. Becoming a healthy older person is directly related to specific health choices an individual makes at the present time. Therefore the goal of this course is to explore major personal topics and to apply them in order to achieve, maintain, and promote high-level health. Return to top

HED 259 Principles of Health Education (4 hours).
Course examines the field of health education in terms of historical developments, professional standards, roles, theoretical foundations, ethics, application, and settings. Program planning, development, implementation, and evaluation will also be covered. Return to top

HED 450 Theories in Health Education and Health Behavior (4 hours).
Provides the student with a broad theoretical base for the analysis of healthy/unhealthy behaviors. The research and theoretical literature will be reviewed in areas such as socio-cultural and environmental factors associated with health behaviors, communications, and behavior change strategies in health education. It is hoped that this course will assist the student in the planning and development of effective health education and health promotion programs. An examination of health education and health promotion in terms of historical and philosophical development also will be included. Return to top

HED 460 Foundations of a Coordinated School Health Program (4 hours).
Designed to study the basic principles and practices underlying the organization and administration of a coordinated school health program. Involves an evaluation of the students’ chosen school system in order to compare practice with theory. The role of the school health program in relationship to the school, community, and the family will be explored. Writing. Return to top

HED 461 Methods and Materials for Health Education (3 hours).
Prerequisite: HED 460 or equivalent. Introduces the student to productive, creative, and innovative methods needed to implement comprehensive school health education. Students will become familiar with organizing and presenting health content, health materials, health curricula, community resources, and using technology. Return to top

HED 470 Pathophysiology of Disease (4 hours).
The study of the etiology of diseases, including progression, diagnosis, and treatment. Focuses on the body's immune defense mechanisms for both chronic and communicable disease; emphasis on basic principles to a variety of examples. Some anatomy and physiology recommended. Return to top

HED 471 Substance Abuse Education (3 hours).
Provides basic knowledge of the physiological, psychological, and sociological effects of substance use, misuse, and abuse. Examines factors that influence substance use, misuse, and abuse as well as attitudes and behaviors. Drug prevention and intervention programs are examined and evaluated. Return to top

HED 472 Consumer Health (3 hours).
Examines health products and services, advertising, marketing, quackery and government control, and guidelines for consumer action when deception, misrepresentation, or fraud is encountered. Students will become more informed consumers of health products and services. Implications for health education are considered. Return to top

HED 473 Teaching Human Sexuality (3 hours).
Course provides concepts and information about comprehensive sexuality-education including moral, physiological, psychological, and social aspects. Emphasis is placed on methodology and organization of human sexuality programs for school and community settings. Return to top

HED 474 Stress Management (3 hours).
Examines the role and function of stress in everyday life from a physiological, psychological, and sociological perspective. Personal, situational, and environmental sources of stress are explored along the continuum from distress to eustress. Stress management techniques are examined. Return to top
HED 475 Nutrition and Physical Activity (3 hours). Study of the relationship between nutrition, physical activity, and health. Topics include macronutrients, micronutrients, and water, role of proper nutrition for optimal physical performance; role of nutrition and physical activity for weight control; and prevention and treatment of disease. Return to top

HED 476 Teaching Nutrition (3 hours). Course explores various instructional materials and strategies available for teaching concepts of nutrition to learners in school and community settings; provides experience in designing and implementing appropriate instructional strategies. Previous knowledge of basic nutritional concepts is recommended. Return to top

HED 477 Social Issues and Needs in Nutrition (3 hours). Study of the relationship between nutrition and the socio-cultural environment. Topics include nutrition and mass media, cancer and diet, nutrients as chemo-preventive agents, drug/nutrient interactions, safety and adequacy of U.S. food supply, world hunger. Return to top

HED 480 Practicum in Health (6 hours). Prerequisite: Permission of instructor. A structured, supervised field experience designed to provide an extended, practical experience in a selected health setting; designed and executed by the student in consultation with a member of the faculty. Return to top

HED 496 Individual Projects in Health Education (1 hour). Prerequisite: Permission of department chair. Independent project in a selected area of health education. Project must be approved by and arrangements made with permission of project supervisor and department chair. May be repeated for a maximum of four hours. Return to top

HED 497 Individual Projects in Health Education (2 hours). Prerequisite: Permission of department chair. Independent project in a selected area of health education. Project must be approved by and arrangements made with permission or project supervisor and department chair. May be repeated for a maximum of four hours. Return to top
Professors: David Adams, Donald Ramos (Chairperson), William I. Shorrock; Associate Professors: David J. Goldberg, Thomas L. Hartshorne; Emeritus: Elizabeth Lehfeldt, Lee Makela, Joyce Mastboom, Deborah Pearl, Robert Wheeler; Assistant Professors: Mary Wren Bivins, Gregory Conerly, Thomas Humphrey, Robert S. Shelton, Karen Sotiropoulos, Mark T. Tebeau, Regennia Williams, Laura Wertheimer, Additional Program Faculty: Ron Haybron, Dillard Poole, Jose Sola.

HIS 101 Western Civilization I (4-0-4).
History of western civilization to 1648, with emphasis on Greek and Roman civilization, the medieval world, the Renaissance and Reformation, and the transition to the modern era. Western Culture and Civilization, Arts and Humanities. Return to top

HIS 102 Western Civilization II (4-0-4).
The history of modernization in the West, including the development of rationalism and scientific thought, and the upheaval of the French Revolution. Emphasis on the growing inter-relatedness of Europe with the rest of the world as a result of industrialization, the nation-state, and imperialism, culminating in the 20th century with World Wars and the search for an international order. Western Culture and Civilization, Arts and Humanities. Return to top

HIS 111 United States History to 1877 (4-0-4).
A study of the settlement of the Colonies and the transplanting of European institutions to the Western hemisphere, the achievement of American independence, the formation of the American government, the beginnings of industrialism, and the social and political conflicts leading to the Civil War. Arts and Humanities, Western Culture and Civilization. Return to top

HIS 112 United States History Since 1877 (4-0-4).
A study of principal developments in American history from reconstruction of the South to the present, including post-Civil War conflict; Western expansion; agricultural, and industrial development; progressive reform and the New Deal; and domestic and foreign policies since World War II. Arts and Humanities, Western Culture and Civilization. Return to top

HIS 165 Introduction to Latin American History (4-0-4).
Survey of Latin American history from its colonization to the present time. Examination of various facets of Latin America, including politics, economy, and culture. Non-Western Culture and Civilization, Arts and Humanities. Return to top

HIS 175 Introduction to African History (4-0-4).
Examination of the cultural history of African societies from before the present era through the past 2,000 years, with an emphasis on the ways in which Africans resisted European cultural hegemony and defined for themselves distinctive, modern African cultures. Non-Western Culture and Civilization. Return to top

HIS 200 Introduction to Geography (4-0-4).
A comprehensive survey of the field of geography as it relates to the study and teaching of social studies and history. Course provides a general overview of a number of approaches useful to the study of history such as Historical Geography, Economic Geography, Environmental Geography, and World Regional Geography. Course serves as an introduction to basic geographical concepts within the context of social studies. Return to top

HIS 215 History of African-Americans to 1877 (4-0-4).
A topical survey of the African-American experience from Africa through the enslavement in the Americas to the end of the post-Civil War reconstruction with special emphasis placed on the acculturation and enslavement processes, including a detailed study of the history of the institution of slavery. Black Studies, African-American Experience, Arts and Humanities. Human Diversity Return to top

HIS 216 History of African-Americans Since 1877 (4-0-4).
Further emphasis placed on the rise of African-American institutions in America; the church, the press, newly free African-Americans in the South; the aftermaths of the abolitionist movement, the Civil War, and Reconstruction. Black Studies; Human Diversity; African-American Experience; Arts and Humanities. Return to top

HIS 225 Power, Authority, and Society in Non-Western Communities (4-0-4).
An examination from an historical perspective of the way selected groups of Asian, African, and Latin American societies organize themselves with respect to power and authority to cope with a set of similar social problems. Attention will also be given to how changes take place in political organization and in political cultural identity, particularly at the mass level. The course makes extensive use of popular texts and stories, photographs and video, and other primary sources from the cultures studies. Non-Western Culture and Civilization. Return to top

HIS 284 History of Women (4-0-4).
Survey of the history of women in Europe and America from 1750 to the present, including the changing position of women in the family, at work, in politics, and in society. Includes comparative study of women at different times and in different cultures and integrates women's history and conventional history. Women's Studies, Arts and Humanities, Human Diversity. Return to top

HIS 300 Everyday Life in Early America, 1607-1865 (4-0-4). An exploration of how Americans lived and how they thought from the earliest settlements through the Civil War. Emphasis varies from year to year, but will consider such topics as religion, reform movements, transportation, education, architecture, Western expansion, foods, fads, and fashions. Western Culture and Civilization. Return to top

HIS 301 American Cultural History, 1865 to the Present (4-0-4). Study of the social and cultural history of the United States, emphasizing the ways in which the beliefs, values, and world views of the American people are related to prevailing social conditions. Writing, Western Culture and Civilization. Return to top

HIS 302 History of American Political Parties (4-0-4). Survey of the development of the American party system from 1800 to the present, including distinctions between party and faction, Federalist party, Jacksonian Democrats, Whigs and Republicans, third parties, party organization at local and national levels, voting behavior and election strategies. Western Culture and Civilization. Return to top

HIS 303 Recent U.S. Social History (4-0-4). Traces social change in the United States from the Civil War to the present with special emphasis on changes in social class formation, family, neighborhood, community, race, ethnicity, gender, and work. Traces major structural change in society, politics, and economy in relation to social transformations and impacts of technological change, urbanization and bureaucracy. Writing, Western Culture and Civilization. Return to top

HIS 304 U.S. Urban History (4-0-4). Analysis of U.S. urban development with focus on spatial development of U.S. cities and changing internal structure and institutions of cities from the Colonial period through the mercantile, industrial, and post-industrial city. Traces the city's impact on migrants and others and their responses. Writing, Western Culture and Civilization. Return to top

HIS 305 Social Thought of African-Americans (4-0-4). Historical inquiry into the major social, cultural, and intellectual developments among Black Americans, including such movements as antebellum abolitionism, African immigrationism cultural and political accommodation, and Pan-Africanism and Negritude as expressed in the writings of major authors. Black Studies, Human Diversity, African-American Experience. Return to top

HIS 306 History of Ohio (4-0-4). The early development of Ohio as a territory and a state, transportation problems and economic development, industrialization and urbanization and their economic and social consequences, ethnic composition. Return to top

HIS 307 History of Cleveland (4-0-4). Origins and early development of Cleveland and the Western Reserve, emergence of Cleveland as a major industrial city, emphasis upon social economic, technological, cultural, and political developments with special attention given to the role of ethnic and minority groups. Return to top

HIS 308 20th-Century American Labor History (4-0-4). A general survey of American labor history with particular emphasis on the impact that industrialization had on work itself. Topics will include the varying strategies adopted by management to control labor; the history of labor unions; and the special role played by African-Americans, women, and immigrants within the workforce. Western Culture and Civilization. Return to top

HIS 309 American Immigration History (4-0-4). A survey of immigration to America from the 1830s until the present day. The course focuses on the religious, work, political, and cultural life of various immigrant groups as well as the process of adaptation and Americanization. The rise of anti-immigrant movements and efforts to restrict immigration are also emphasized. Western Culture and Civilization. Return to top

HIS 310 Indians in American History (4-0-4). A study of Native American White contact since the Colonial period, emphasizing differences in cultural outlook, dispossession from Indian lands, changing political status of Native Americans, and the nature of missionary and governmental assimilation efforts. Attention will be given to the dynamics of cultural conflict and Indian response to assimilation policies. Human Diversity. Return to top

HIS 311 Introduction to Public History (4-0-4). An introduction to the applied uses of history in such areas as museums, archives, labor, historical societies and community, as well as corporate and oral history. Considers ethical and professional issues, grant writing, evaluation of popular and professional history presentations, and careers in public history. Will involve practicum working on-site on a public history
HIS 312 17th-Century America (4-0-4).
Analysis of the European background of the Age of Discovery; comparative settlement patterns in the New World of the French, Spanish, and English; and the social, political, economic, and intellectual changes which took place in the mainland colonies to 1740. Emphasis is on family and community development. Writing.

HIS 313 18th-Century America (4-0-4).
Study of the American Enlightenment, the causes of the American Revolution, aspects of the War for Independence, the Confederation, and the Constitution of 1787. Western Culture and Civilization.

HIS 314 Introduction to American Studies (4-0-4).

HIS 317 Civil War and Reconstruction, 1848 to 1877 (4-0-4). This course examines the causes, course, and consequences of the American Civil War and Reconstruction. Particular emphasis is given to slavery and sectional differences leading to the conflict; military and political events; the impact of the Civil War and Reconstruction on American society; the emancipation experiences of African-Americans; and the struggle to redefine freedom, nationalism, and citizenship during Reconstruction. Western Culture and Civilization.

HIS 318 History of the Family in America (4-0-4).
Survey of family life and family structure from the 17th century to the present, including roles of women and children, sexual attitudes, and ethnic and minority contributions. Research project will consist of either a term paper or a reconstruction of the student's family history. Women's Studies course. Writing.

HIS 320 U.S. Foreign Policy Since 1900 (4-0-4).
This course covers U.S. foreign policy from the Spanish-American-Cuban-Filipino War through the Vietnam War. The greatest attention is paid to U.S. relations with European and East Asian nations through all the parts of the world including "realist" and "idealist" interpretations of U.S. foreign policy. All students are given an opportunity to conduct an independent research project of their own.

HIS 321 United States 1901 to 1939 (4-0-4).
Rise and fall of the progressive spirit at home; the impact of World War I on the world and on the American people; economic, social, political, and literary survey of the Jazz Era; the economic consolidation and social fragmentation of the 1920s; the Great Depression. Western Culture and Civilization.

HIS 322 American People in the 20th Century (4-0-4).
Survey of economic, social, cultural, and political developments of the American nation from the turn of the century to the present; the progressive movement; domestic and foreign policies between the wars, including the New Deal, World War II, the Cold War; developments since the end of World War II, including civil rights issues, the rise of industrial unionism, and urban problems. Not open to students who have taken 321. Writing, Western Culture and Civilization.

HIS 323 Recent American History (4-0-4).
Study of the major social, political, economic, and cultural events and their interactions in the United States since 1939. Major topics include World War II, the origins and impact of the Cold War, Vietnam, the civil rights movements, and other movements for social change in the 1960s. Writing, Western Culture and Civilization.

HIS 324 Black Is/Black Ain't: Defining Black America (4-0-4).
Explores the ways in which Americans of African descent have been defined historically by themselves and by whites. The social and political consequences of adopting these definitions are also examined. Topics covered include representations in law and popular/elite culture; racial thought and the rise and fall of slavery/Jim Crow; and self-definitions grounded in, among others, political and class differences. Black Studies, Human Diversity, African-American Experience.

HIS 325 African-America Since 1945 (4-0-4). Beginning where HIS 216 ends, this course deals with the Civil Rights movement; the sit-ins; the development of Black Nationalism; the urban condition; and the changes in African-American political, social, and economic life during the last 40 years. Black Studies, Human Diversity, African-American Experience.

HIS 327 American Sexual Politics and Communities (4-0-4).
Explores attempts by various groups to (re)define, regulate, and/or form communities around sexuality. The course's central theme differs each year. Topics include gay, lesbian, and bisexual histories and sexuality in the U.S. Writing, Human Diversity.

HIS 328 History of Business (4-0-4).
Surveys the evolution of American business and growth of capitalism in the U.S., focusing on several themes including the
evolution of the firm, business-government relations, management-labor relations, business and society interactions, and
general developments in economic thought. Return to top

HIS 329 Black Resistance in the Age of Jim Crow (4-0-4). African Americans challenged white supremacy long before the
emergence of the modern movement for civil rights. This course studies the politics of black resistance during the era of legal
segregation—from Plessy vs. Ferguson (1896) to Brown vs. Board of Education (1954). Topics will include anti-lynching, the
impact of rural to urban and southern to northern migration, unionization, Garveyism, communism, the roots of black power,
and the ways that African Americans confronted the rise of a racist commercial culture. Human Diversity, African-American
Experience. Return to top

HIS 330 History of Greece (4-0-4).
A study of the development of civilization in ancient Greece from prehistoric beginnings until the death of Alexander the
Great. Special emphasis will be given to the rise of democracy and its expression in Athens during the Age of Pericles. The
nature, extent, and interpretation of ancient evidence for historical research will receive careful attention. Classical and
Medieval Studies course, Western Culture and Civilization. Return to top

HIS 331 History of Rome (4-0-4). A study of the development of civilization in ancient Italy from prehistorical beginnings until
the establishment of the Roman Empire by Augustus. Special emphasis will be given to the foundation legends of the city,
and the civil disorders of the final century of the Republic to Empire. The nature, extent, and interpretation of ancient evidence
for historical research will receive careful attention. Classical and Medieval Studies course, Writing, Western Culture and
Civilization. Return to top

HIS 336 Tudor and Stuart England 1450-1688 (4-0-4). The legacy of late-medieval feudal, and social disorder, the
emergence of a sovereign state, the Reformation, the religious and constitutional settlements, the Wars of the Three
Kingdoms, the Restoration, and the Glorious Revolution, are studied in the context of social and economic change. Writing,
Western Culture and Civilization. Return to top

HIS 337 Britain 1688 to 1832 (4-0-4).
The Glorious Revolution, the military-fiscal state, the conquest of empire, the Industrial Revolution, and the age of democratic
revolutions are studied in the context of political, social and economic change. Writing, Western Culture and Civilization.
Return to top

HIS 339 Great Britain: Empire to Welfare State (4-0-4). History of the British people since 1867, including the problems
created by total war, the dissolution of empire, the coming of political democracy, the establishment of the Welfare State,
industrial decline, and the search for international order. Writing, Western Culture and Civilization. Return to top

HIS 340 The Roman Empire (4-0-4).
The rise and decline of the Roman Empire from the age of Augustus to the end of the fifth century, including the development
of Roman government, culture and society. Examines the growth of Christianity and the interaction of the later Empire with
the “barbarian” nations, and their effects on the transformation of the western Empire into the late antique world and the early
Middle Ages. Classical and Medieval Studies course, Writing, Western Culture and Civilization. Return to top

HIS 341 Early Middle Ages (4-0-4).
Study of the political, social, economic, and intellectual life of Europe from the Fall of Rome to A.D. 1000, with emphasis on
the Germanic invasions, the rise of Christianity, feudal society, and manorialism. Classical and Medieval Studies course,
Writing, Western Culture and Civilization. Return to top

HIS 342 Late Middle Ages (4-0-4).
European society and culture from 1000 to 1450, including patterns of thought, the founding of the universities, and the rise of
cities and the feudal monarchies. Classical and Medieval Studies course, Writing, Western Culture and Civilization. Return to
top

HIS 343 Social History of the Black Death (4-0-4).
Examination of the changes created by the introduction and spread of the Bubonic Plague in a large population. Begins with
examination of how diseases are socially, culturally, and historically constructed, then charts the impact of the plague in the
first three centuries of its spread. Course analyzes social history of the period and how responses to disease intersected with
other Europeanwide developments. Writing, Western Culture and Civilization. Return to top

HIS 344 The Renaissance (4-0-4).
Study of the cultural life of western Europe from the 14th through the 16th centuries in its historical setting, with emphasis on
Petrarch, Machia-velli, Galileo, and Erasmus through a study of their works; and a special concentration on Italy. Classical
and Medieval Studies course; Writing, Western Culture and Civilization. Return to top

HIS 345 Church, State, and Society in Reformation Europe (4-0-4). Examines lay piety and institutions of the Catholic
Church during the late Middle Ages, the rise of Protestant doctrines and faiths in 16th- and 17th-century Europe; analyzes
impact among various social groups, cultural manifestations of religious upheaval, religious and political ambitions, and
current movements of Christian humanism and Catholic and Counter-Reformations. Covers late 15th-century until 1648. Writing, Western Culture and Civilization. Return to top

**HIS 346 17th- and 18th-Century Europe (4-0-4).**
Examination of Absolutism and the European state system; the social and economic system of preindustrial Europe; and the rise and decline of the principal powers, including Spain, the Low Countries, France, and Prussia. Writing, Western Culture and Civilization. Return to top

**HIS 349 France and the French Revolution (4-0-4).**
This course introduces students to the history of France in the 18th century and the Revolution of 1789. Examines social classes, the economy, intellectual changes, and various interpretations of the French Revolution and the debates surrounding them. Will also survey the Revolutionary and Napoleonic eras and their impact on Europe. Writing, Western Culture and Civilization. Return to top

**HIS 350 Golden Age Spain (4-0-4).**
This course examines the history of Spain from the late-medieval period through the 17th century from social, cultural, political, economic, and religious perspectives. Addresses key developments in Iberian peninsula including encounters with Americas, the rise of absolutism, and the Catholic and Counter-Reformations. Evaluates implications of historical interpretations of both Spain's "Golden Age" and its reputed "decline." Writing, Western Culture and Civilization. Return to top

**HIS 351 Social and Economic History of 19th-Century Europe (4-0-4).** A study of economic change and social upheaval precipitated by the French Revolution and the industrialization and urbanization of Europe. Emphasis on social class structure, urban life and problems, workers' and middle-class responses to industrialization, and imperialism. Writing, Western Culture and Civilization. Return to top

**HIS 352 Political History of 19th-Century Europe (4-0-4).** A study of economic change and social upheaval precipitated by the French Revolution and the industrialization and urbanization of Europe. Emphasis on social class structure, urban life and problems, workers' and middle-class responses to industrialization, and imperialism. Writing, Western Culture and Civilization. Return to top

**HIS 353 20th-Century Europe 1914 to the Present (4-0-4).** Lecture and group discussion approach to some of the major cultural, social, political, and economic developments in Europe since 1914; social and cultural impact of two world wars; totalitarianism and the decline of empire; emphasis is placed on the Cold War and events since 1945. Writing, Western Culture and Civilization. Return to top

**HIS 354 European Women's History (4-0-4).** Course will analyze variety of life experiences of European women from 1300 to 1700. Will consider methodological issues that have shaped recent practice of women's history, and will examine the variety of women's roles in late medieval and early modern society including religion, economy, culture, and politics. Writing, Western Culture and Civilization. Return to top

**HIS 355 War and Society, 1500 to 1870 (4-0-4).** The impact of the military revolution and standing armies upon the changing nature of land and naval warfare studied in the context of the emergence of sovereign dynamic and national states, European expansion overseas, the breakdown of traditional societies and the emergence of mass societies in the age of democratic revolutions. Western Culture and Civilization. Return to top

**HIS 356 History of European Fascism. (4-0-4).** Course will examine social, cultural, economic, and racial aspects of radical Right Wing politics which made the Fascist movements such pervasive phenomena in Europe between the two world wars. The bulk of the course will be devoted to the Nazi and Fascist movements in Germany and Italy and to the development of racial ideology culminating in the Holocaust. Western Culture and Civilization. Return to top

**HIS 357 Maritime History (4-0-4).** An examination of the history of ships and seafaring, and the societies to which they relate. Focus is on the Western tradition from the ancient world to the modern age. Special attention is given to the maritime history of the Great Lakes. Writing, Western Culture and Civilization. Return to top

**HIS 358 Science and Society (4-0-4).** Evolution of scientific thought and method and relation of these developments to other aspects of the developing Western world view, particularly religious and philosophical components to help students achieve science literacy. Return to top

**HIS 359 Technology and Society (4-0-4).** Review the role of technology in the cultural evolution of humans and in our contemporary society. Develop insight into the role tools played in the evolution of hominids. Gain an appreciation of the distinction between science and technology. Return to top
HIS 360 History of Russia to 1900 (4-0-4).
Survey of political, social, economic, and cultural developments in Russia from the ninth century through the 19th century. Topics include the growth of the Russian autocratic state, evolution of institution of serfdom, position of the nobility, the emancipation of the serfs, formation of the intelligentsia, and the beginnings of the revolutionary movement. Western Culture and Civilization. Return to top

HIS 361 History of Modern Russia (4-0-4).
History of modern Russia and the Soviet Union, including the development of capitalism and industrialization, the revolutions of 1905 and 1917, the formation and evolution of the Soviet Union, Stalinism, the collapse of the Soviet Union, and recent developments. Western Culture and Civilization. Return to top

HIS 362 Modern Eastern Europe (4-0-4).
Social, political, and economic history of the peoples of Eastern Europe, excluding the former Soviet Union, from the late 18th-century to the present. Topics include nationalism, modernization, cultural diversity, significance in world history, Communism, and Eastern Europe after 1989. Western Culture and Civilization. Return to top

HIS 365 Comparative Slavery (4-0-4).
Examines the slave system which developed in the U.S. within the context of the Americas with particular attention to Brazil. Uses comparative approach to enrich understanding of ourselves and our society. Topics include slave trade, nature of the slave community and family life, relationship of slavery to race, religion and human and physical geography, and escape, rebellion and other forms of rebellion. Writing, African-American Experience, Human Diversity. Return to top

HIS 366 Colonial Latin America (4-0-4).
Examination of Latin American societies covering pre-Columbian civilization to the Wars for Independence in the 19th century; the development of plural societies, economic organization, and culture. Writing, Non-Western Culture and Civilization. Return to top

HIS 367 Modern Latin America (4-0-4).
Development of Latin American republics with emphasis on the 20th century; development of political and cultural nationalism, polarized societies, dependent economic systems, mechanisms of change, and relations with the U.S. Writing, Non-Western Culture and Civilization. Return to top

HIS 370 World History (4-0-4).
A general introduction to the study of global history focusing on the evolution of those factors such as immigration, disease, nationalism, religion, and the economic and political systems which have served to connect societies. The geographic and/or thematic focus may vary from term to term. Primarily aimed at students interested in social studies teaching. Return to top

HIS 371 History of Japan (4-0-4). A survey of political, economic, social, cultural, religious and intellectual life in Japan from the third century to the present day. Emphasis on the origin and development of traditional Japanese civilization before the impact of the modern West and the subsequent Japanese quest for international acceptance. Asian Studies course; Non-Western Culture and Civilization. Return to top

HIS 372 Early Modern Japan (4-0-4).
A consideration of historical change during the Tokugawa Period (1600-1868) in Japanese history, an era considered both "late traditional" and "early modern." Examines the processes of urbanization and the growth of a monetary economy, changes in social organization, major cultural innovations, intellectual movements, and the emergence of a sense of national identity. Asian Studies course, Non-Western Culture and Civilization. Return to top

HIS 373 Contemporary Japan in Historical Perspective (4-0-4). Assesses aspects of contemporary Japanese civilization and culture from the perspective of historical influences on the philosophies, institutions, and values of modern society and culture. Asian Studies course, Non-Western Culture and Civilization. Return to top

HIS 374 Revolutionary Movements in Modern China (4-0-4). Chronologically arranged consideration of topics in the political, economic, social, cultural, religious, and intellectual life of China since the late 19th century; designed to provide an understanding of contemporary China in historical perspective. Asian Studies course, Non-Western Culture and Civilization. Return to top

HIS 375 Pre-Colonial Africa to 1800 (4-0-4).

HIS 376 Modern Africa Since 1800 (4-0-4).
Survey of sub-Saharan African civilizations from the demise of the Atlantic slave trade through the periods of European conquest and colonial rule, the nationalist struggle for independence, and postcolonial African states. Includes African perspectives on colonialism and neocolonialism, including social, economic, political, and cultural initiatives toward independence, modernity and an emerging role in global affairs. Black Studies, Non-Western Culture and Civilization. Return to top

HIS 377 History of Islamic Civilizations (4-0-4).
A survey of the main themes of the development of religious, cultural, social, and political patterns in central Islamic areas from the seventh century A.D. to the present. Particular emphasis on development and spread of Islam, interactions with the West, and problems of modernization. Classical and Medieval Studies course; Non-Western Culture and Civilization. Return to top

HIS 382 Origins and Consequences of Total War (4-0-4). Examination of the diplomatic history of the period 1870-1945 within the larger framework of European international relations surrounding the first and second world wars; special consideration is devoted to the role of domestic pressures in the formulation of foreign policy and the historical debates about the origins of both world wars. Writing, Western Culture and Civilization. Return to top

HIS 390 Introduction to Social Studies (4-0-4).
This course introduces students to content issues in teaching social studies by exploring the theme of "migrations," culminating in discussion of the "Great Migration" of African Americans to Cleveland. The course will not examine issues of pedagogy, but of content. Return to top

HIS 393 Special Topics in History (4-0-4).
Analysis of crucial problems in history; topic will vary from semester to semester depending on the instructor. Course may be taken for credit more than once, but no single topic may be repeated. Topics will appear in semester course schedule. Return to top

HIS 400 Local History Seminar (4-0-4).
The course explores the social, economic, political, and cultural history of Cleveland and northeastern Ohio from 1800 to the present. It uses primary materials to generate student research projects on a variety of selected topics. Specific topics vary from term to term. Return to top

HIS 497 Readings in History (1 to 4 credits).
Prerequisites: Written permission of instructor and chair. Tutorial or seminar work in special areas and subjects not part of the department's regular course offerings; arranged with an instructor on an individual or group basis for 1 to 4 credit hours. May be repeated for credit in a different subject area. History majors may not exceed a total of 8 hours in this course. Return to top

HIS 499 Internship (1 to 4 credits). Written permission of internship coordinator. Return to top
HPR 101 Wellness As A Lifestyle (1 hour).
Introduction to lifestyle behaviors over which people can exert some control; emphasis is on benefits of exercise and
fitness, proper diet, and stress reduction, along with management of lifestyle behaviors important for good health
and lifetime wellness; personal wellness goals are developed. Wellness course. Return to top
Professor: Bette R. Bonder (Interim Chairperson); Associate Professors: John Bazyk, Susan Bazyk, Vanina DalBello-Haas, Beth A. Ekelman, Glenn Goodman (Director, Occupational Therapy Program), John Jeziorowski, Mary K. Milidonis, Marilyn Wagner (Director, Physical Therapy Program); Assistant Professors: Rosanne Higgins, M. Ann Karas, James Landis; Adjunct Assistant Professors: Susan Levy Wayne, Karen O'Loughlin.

HSC 200 Introduction to Health Sciences (3-0-3).
This course will address health sciences as a coherent group of disciplines concerned about the functional health of the individual, areas of concern and study, service delivery, the nature of the services provided, opportunities within selected fields, and the relationship of each field with other related fields within the health sciences; and the impact of changes in health-care delivery on these fields. Return to top

HSC 201 Culture and Human Sexuality (3-0-3).
This course examines the influence of cultural values and beliefs on sexual practices, provides an overview of sexual biology, and considers the ways in which culture affects sexuality, sex education, and reproductive practices. Cross-listed with ANT 221. Social Science. Return to top

HSC 203 Medical Terminology (1-0-1).
This course offers a systematic approach to understanding medical terminology. The focus is to enable students to use this specialized language in a professional health care environment and in scholarly and professional writing. The course is designed to meet the prerequisite requirement for admission to professional programs in the health sciences. Return to top

HSC 205 Culture and Health (3-0-3).
This course examines the relationship between culture and health with a focus on the experiences of communities in the United States who represent non-Anglo cultural backgrounds, exploring the ways in which culture defines health and sickness, and how cultural diversity affects diagnosis, treatment, and healing. Human Diversity. Return to top

HSC 220 Infant Health and Development (4-0-4).
This course will focus on human development in the first three years of life. It will examine normal development and health-promoting factors for the prenatal and 0-to 3-year periods. Among the developmental processes covered are intellectual, social, emotional, and physical growth. The course will explore the psychological, social, and cultural influences on infant development, including risk and protective factors for infant health. The class will examine factors related to optimal infant development, and discuss the broader social implications of development in the first three years of life. Return to top

HSC 345 Child Abuse and Neglect (3-0-3).
This course examines current theory and research on the causes and consequences of child maltreatment. Using an interdisciplinary approach, the course will explore the history and definition of child maltreatment, parental and contextual influences on maltreatment, and the short- and long-term effects of child maltreatment. Contemporary medical, social, psychological, and legal issues in child maltreatment are discussed. Return to top

HSC 346 Women's Health (3-0-3).
This course will examine psychological, social, and behavioral influences on women's health. The course will focus on the interplay of lifestyle factors, and mental and physical health in women. Topics covered include high-risk health behaviors, stress, weight, sexuality, fertility, and promoting health and wellness among women. Emphasis is on understanding women's health from an interdisciplinary perspective. Return to top

HSC 381 Pathology (4-0-4).
Prerequisite: A physiology course or permission of instructor. This course provides a survey of health conditions as well as the management of common disorders. The continuum from optimum to compromised health states will be discussed relative to specific conditions. Common models of conditions, which affect health, will be explored as related to medical management. A discussion of specific disorders and related management will be organized according to their etiology, epidemiology, pathophysiology, clinical manifestations, and management as applicable to patients with commonly occurring disorders. Return to top

HSC 393 Selected Topics in Health Sciences (1 to 6 Credits). Selected, variable topics in health sciences will be
investigated. Return to top

**HSC 422 Physiology for the Clinical Sciences (3-1-4).** Prerequisites: A biology course with lab at or above the 200 level and upper-class standing, or permission of instructor. An in-depth study of the fundamental molecular, cellular, and systems-based physiologic concepts as they apply to homeostasis; and as they relate to aspects of health, adaptation, and rehabilitation. Physiologic principles applicable to testing, evaluation, and therapeutic intervention across the lifespan and in altered states of wellness are considered. Return to top

**HSC 475 Human Gross Anatomy (3-3-6).**
Prerequisites: A biology course with lab at or above the 200 level and upper-class standing, or permission of instructor. Detailed dissection and examination of the back, upper extremity, lower extremity, trunk, and internal structures with an emphasis on function. Return to top

**HSC 476 Neuroscience Systems (4-2-5).**
Prerequisites: A biology course with lab at or above the 200-level, or permission of instructor. This course is a study of the structure and function of the human central and peripheral nervous system including vascular components and special senses. Laboratory sessions include human nervous system material in the course atlas, human brain dissections, slides, overheads, and anatomical models. Return to top
Industrial and Manufacturing Engineering

Professors: Chittaranjan Jain, L. Kenneth Keys, Theodore J. Sheskin; Associate Professors: Andrew Liou, Taysir H. Nayfeh, Paul Petersen, Joseph A. Svestka (Chairperson); Assistant Professors: Tugrul Ozel.

IME 250 Material Processing and Metrology (3-0-3). Prerequisite: ESC 270. A manufacturing engineering course emphasizing the fabrication of materials from the processing and equipment viewpoint. This course presents a broad study of the many manufacturing processes utilized in the production of a wide variety of products and components. Return to top

IME 251 Material Processing and Metrology Laboratory (0-3-1). Must be taken concurrently with IME 250. Application of the manufacturing process to the transformation of parts. Use of simple production equipment to production of simple parts. Return to top

IME 304 Work Measurements and Methods (3-0-3). Prerequisites: ESC 310. The analysis measurement and design of efficient work, work place, and procedures using motion economy principles, time-study, work sampling, predetermined time systems, and other work measurement techniques. Return to top

IME 305 Work Measurements and Methods Laboratory (0-3-1). Must be taken concurrently with IME 304. Application of work measurement techniques, presented in IME 304, to real-world problems. Return to top

IME 320 Engineering Experimental Design (3-0-3). Prerequisite: ESC 310 or equivalent. Practical application of statistical methods to engineering experimental design. Topics include fundamentals of experimental design, two-level multivariable experiments, multilevel multivariable experiments (ANOVA), validation testing methods, and estimation of variance. Return to top

IME 330 Operations Research I (3-0-3). Prerequisite: MTH 284. Formulation, analysis, interpretation, and computer implementation of deterministic optimization model in engineering, including linear programming, transportation, assignment, and network models. Writing. Return to top

IME 331 Operations Research II (3-0-3). Prerequisite: ESC 282 and ESC 310 or equivalent. Formulation, analysis, and interpretation of probabilistic models including stochastic processes, and Markovian and queuing models. Writing. Return to top

IME 405 Industrial Ergonomics (3-0-3). Prerequisite: IME 304/305 or equivalent. The study of the physical capabilities, limitations and physiology of the worker in the design and analysis of occupational activities and products designed for human use. Use of biomechanical modeling in the analysis of manual materials handling, tool design, and repetitive motion trauma. Return to top

IME 410 Statistical Quality Control (3-0-3). Prerequisite: IME 320 or equivalent. Statistical aspects of quality control including acceptance sampling plans, control chart methods for attribute and variables, adaptive quality control, and basic reliability concepts. Return to top

IME 440 Applications of Programmable Logic Controllers (4-0-4). Prerequisites: Calculus concepts, circuit analysis, and a high level programming language. A practical course emphasizing the use of PLC's in a wide range of industrial settings. Topics include ladder logic concepts, data manipulation, timing, discrete and analog I/O network configurations, sequencers, and shift registers. Return to top

IME 450 Industrial Automation (3-0-3). Broad introduction and analysis of the basic building blocks of modern automated manufacturing and quality inspection systems. Topics covered include sensors, actuators, machine vision, programmable logic controllers, and PC-based data acquisition and control. Cross listed with IME 550. Return to top

IME 451 Industrial Automation Laboratory (0-3-1). Must be taken concurrently with IME 450. Application of sensors and control interfaces for manufacturing systems. Design setup, implementation, gathering, and analysis of collected data on real process control. Cross-listed with IME 551. Return to top

IME 465 Manufacturing Systems Engineering (3-0-3). Prerequisite: IME 477. Principles and analysis of manufacturing systems; transfer machines, machining centers, flow line systems, and group technology systems; robotics and integrated manufacturing systems; computer-aided programming; robotics applications. Return to top
IME 470 Production Planning and Control (3-0-3). Prerequisites: IME 331 and senior standing or permission of instructor. Principles of demand forecasting, production planning and control, master production scheduling, job sequencing, classical inventory control, Materials Resource Planning, and Just-In-Time. Return to top

IME 471 Operational Level Scheduling (3-0-3). Prerequisite: Senior standing or permission of instructor. Sequencing and scheduling definitions, concepts and scheduling methods most often used in practice. Includes the study of scheduling objectives and performance measures; Gantt charts; resource constraints; and the scheduling of flow shops, job shops, and personnel staffing. Scheduling software is used for instruction, homework and student projects. Return to top

IME 474 Expert Systems for Engineers (3-0-3). Prerequisite: Senior standing or permission of instructor. Study of Expert Systems with particular application to engineering problems. The study of the concepts, theory and development of Expert Systems, knowledge bases and the PROLOG computer language. Includes a project in which students develop a rule based Expert System in the PROLOG language. Return to top

IME 475 Systems Simulation (3-0-3). Prerequisite: IME 331. The application of discrete event computer simulation to analyze manufacturing and service problems. Use of commercial computer simulation software to program and solve problems. Return to top

IME 476 Law for Engineers (3-0-3). Prerequisite: Senior standing. The engineer’s relations with the law, the public, and the ethics of the profession. Includes contracts, property rights, patents, copyrights, and engineering specifications. Return to top

IME 477 Facility Planning (3-0-3). Prerequisite: IME 330 or permission of instructor. Analysis and synthesis of production and service facilities and systems with focus on system requirements, flow analysis, activity analysis, and the integration of appropriate material handling systems. Evaluation of facilities designs using qualitative, economic, functional performance measures, and computer-based analytical and design tools. Return to top

IME 478 Facility Planning Laboratory (0-3-1). Prerequisite: ESC 101. Must be taken concurrent with IME 477. Application of material taught in IME 477, including AutoCAD and visFactory software for the planning, drawing and design of manufacturing and service facilities. Return to top

IME 480 Engineering Design (1-3-3). Prerequisite: Industrial Engineering major scheduled to graduate at the end of the next semester in attendance. Integration of Industrial Engineering methods and analytical techniques into a design project. Writing Course. Return to top

IME 481 Senior Design (1-3-2). Prerequisite: IME 480. Completion and presentation of design project started in IME 480. Writing Course. Return to top

IME 497 Internship in Industrial Engineering (3 credits). Return to top

IME 498 Internship in Manufacturing Engineering (3 credits). Return to top

IME 499 Special Topics (3 credits). Return to top
For Professors, see listing for CIS.

**IST 203 Software Tools for Personal Productivity (3-0-3).** Enables students to acquire skills as knowledge worker through effective and efficient use of packaged software. Emphasis is on learning the features of a suite of software including Windows operating environment, word processing, spreadsheets, presentation graphics, Internet, electronic mail, and external database searching. 

**IST 211 Fundamentals of Systems Development (3-0-3).** Prerequisite: IST 203. Provides an introduction to system development concepts. Emphasis on small systems that knowledge worker may develop to enhance personal productivity. Introduces corporate databases and their use in small systems. Topics include event-driven programming using Visual Basic, graphical user interfaces, developing solutions using databases, formal system design, programming and testing principles.

**IST 221 Information Systems in the Organization (3-0-3).** Prerequisite: IST 203. Co-requisite: OMS 201. Introduces concepts of information technology, covering both hardware and software. Also introduces roles of information in an organization, information as a resource, and how information systems manage organizational information. Contents include basic computer hardware, O/S functions, file management; basic network components, procedural versus nonprocedural programming, object-oriented programming, types of Information Systems, IS planning, and IS career paths. Personal productivity software, such as spreadsheets and statistical analysis tools, are used to enhance business problem-solving.

**IST 305 Information Technology for Competitive Advantage (3-0-3).** Prerequisite: IST 203. Presents changing role of information technology in organizations. Discusses role of IT in securing competitive advantage. Contents include groupware, Web authoring tools, electronic commerce, data warehousing and mining. May not be used to satisfy BBA-IS major field requirements.

**IST 311 Systems Development for the Organization (3-0-3).** Prerequisites: IST 211, IST 221. Introduces development of systems to be used by multiple users in an organization. Includes concepts of algorithms, use of data from multiple sources, use of shared data, and multi-media. Extension of IST 211. Topics include advanced Visual Basic programming; ODBC and OLE; use of multiple database tables; Internet and Intranet considerations; development of object-oriented design specifications and control structures; testing and validation; documentation.

**IST 321 Systems Analysis Methods (4-0-4).** Prerequisites: IST 211, IST 221. Introduces basic systems principles and concepts; logical analysis, design, and modeling of software systems; the organization as a system; dataflow diagrams, data dictionaries, process specification; prototyping, Joint Application Design, Rapid Application Development, use of CASE tools.

**IST 331 Design and Implementation of DBMS (4-0-4).** Prerequisite: IST 311. Design and implementation of databases. Data modeling and modeling tools. Models for databases; relational, hierarchical, network, object oriented. Integrity, concurrency, normalization, and SQL. Data warehouses and mining. GUI interfaces to databases. System implementation using database and graphical tools, testing, conversion, and post-implementation reviews.

**IST 341 Networks and Telecommunications (3-2-4).** Prerequisite: IST 311. Basic knowledge of data communications and networking requirements, including appropriate technologies. Emphasis on analysis and design of networking applications in organizations. Management of telecommunications networks, cost-benefit analysis, and evaluation of connectivity options are also covered. Students learn to evaluate, select, and implement different communications options within an organization. Contents: telecommunication devices, media systems, network hardware and software: network configurations; network applications; acquisition of network resources; distributed vs. centralized systems; architectures, topologies and protocols; installation and operations of bridges, routers and gateways; network administration; performance analysis; privacy, security, reliability; Installation and configuration of LAN and WAN; Internet and intranet.

**IST 410 Object-oriented Programming for Information Systems (4-0-4).** Prerequisite: IST 311. The concepts of object-oriented methodologies and programming are presented and reinforced through the Java and the C++ programming languages. Language syntax, error handling, object creation/destruction and memory allocation strategies are explored. Java GUI components, event handling and web-based programming are introduced.

**IST 420 Project Management for Information Systems (3-0-3).** Prerequisite: IST 321. Focuses on models used in a
software development project, including tools that improve project productivity. Topics include concepts of project management, task scheduling, cost estimation models, risk assessment and software maturity framework. Students will be using tools and cases to gain depth in software project management principles and practice. **Return to top**

**IST 450 Web-Based Programming (3-0-3).** Prerequisite: **IST 331.** Covers Web publishing and Web-based applications development with emphasis in accessing server databases. Web site design concepts and tools are introduced, including HTML, JavaScript, Cascading Style Sheets, VBScript, XML, and Active Server Pages. The course objective is to prepare students with skills for designing, programming, and publishing Web sites, as well as developing applications on the Web. **Return to top**

**IST 461 Electronic Business (3-0-3).** Prerequisite: **IST 221 or IST 305.** Examines issues associated with electronic businesses and the Internet such as business models, technology requirements for these businesses and issues such as security. Students also get an exposure to business practices by visiting corporations in Germany. **Effective Fall semester 2003. Return to top**

**IST 465 Enterprise Integration Systems (3-0-3).**
Prerequisite: Completion of all 200 and 300 level courses from the common body of knowledge, completion of the IST core, Senior standing. Role of IS in transforming organizations and industries. Integrated view of organization from external and internal perspective. IS role in integrating the enterprise internally and externally through a cohesive set of business processes and functional applications to meet business needs. Enterprise resource planning, enterprise functionality, Collaborative systems. Consideration of external relations with suppliers, outsourcers, customers. **Effective Fall semester 2003. Return to top**

**IST 490 Professional Internship (1-0-1).**
Prerequisite: Junior Standing and Permission of a CIS Department faculty advisor. Work experience in a professional environment. The work performed must extend the academic curriculum and provide a meaningful learning experience in the student's area of interest. Term paper required. **Effective Fall semester 2003. Return to top**
Professor: Anita Stoll (Chairperson).

Students with native experience in Italian may not enroll for credit in 100-level courses in Italian.

**ITN 101-102 Italian I, II (4-2-5).** Prerequisites: ITN 101: None; ITN 102: Completion of ITN 101 with a C or better or permission of instructor. Essentials of Italian usage; practice in hearing, speaking, reading, writing. [Return to top](#)

**ITN 201 Culture and Civilization (4-0-4).** Prerequisite: ITN 102 or equivalent. Readings explore Italian customs, attitudes, history and values in comparison with the U.S. Ongoing review and expansion of Italian skills development. [Return to top](#)

**ITN 210 Intermediate Italian (4-0-4).** Prerequisite: ITN 102 or equivalent. Practice in hearing, speaking, reading, and writing based on selections from contemporary, informal Italian materials. [Return to top](#)
Latin

Professors: Anita Stoll (Chairperson), Bruce A. Beatie, Edward R. Haymes.

Courses in linguistics, literature, and civilization having no prerequisites are listed under French, German, Modern Languages and Spanish.

**LAT 101 -102 Latin I, II (4-0-4).** Prerequisite LAT 101: none; Prerequisite LAT 102: LAT 101 with a grade of C or better or permission of the instructor. Introduction to Latin with emphasis on reading skills; based on classical and medieval texts. Classical and Medieval Studies course. Return to top

**LAT 111 -112; 113-114 Latin FLEX IA-B; IIA-B (0-3-2).** Prerequisites: LAT 111: None. LAT 112 through 114: a grade of C or better in the preceding level; or permission of the instructor. The first-year Latin sequence offered in a modular Directed Studies format. The course content is the same as that of LAT 101-102, but students in LAT 111-114 are not required to attend classes. Scheduled tutorial sessions are required. Students may normally register for up to two courses in a given semester, Classical and Medieval Studies course. Return to top

**LAT 193 -293-393-493 Special Topics in Latin Literature (1 to 4 credits).** Prerequisite: Two years of college Latin or equivalent or permission of the instructor. Readings and research dealing with topics in Roman literature, culture, and history. May be repeated for credit with change in topic. Classical and Medieval Studies course. Return to top

**LAT 196 -296-396-496 Independent Study in Latin (1 to 4 credits).** Prerequisites: Student must have sophomore, junior, or senior standing. Proposed projects must be approved by a full-time department faculty member, who will serve as the project advisor, and the department chair. Student-initiated supervised projects involving Latin language or literature, such as in-depth study of a particular writer, or special readings in linguistics. Independent study may be used to cover the materials of a listed course not offered in a given year. Projects arranged between student and instructor. Project's title will appear on student's transcript. May be repeated for credit with change of topic. Classical and Medieval Studies course. Return to top

**LAT 200 /300 Latin Bridge (1 to 2 credits).** Prerequisite for LAT 200: Completion of LAT 102 or 114 with a grade of C or better; or permission of the instructor; for LAT 300 Completion of LAT 201 or 202 with a grade of C or better; or permission of the instructor. The course provides an informal "bridge" over the summer term between the first-year and the second-year Latin sequences (LAT 200), and between the second year and upper-level Latin courses (LAT 300). Through reading and translation of selections from classical and/or medieval Latin literature, it provides students who have completed the first-year or the second-year course with an opportunity to maintain their Latin skills over the summer, and to enhance their reading skills. LAT 200 and LAT 300 will normally be offered together. Classical and Medieval Studies course. Return to top

**LAT 201 Culture and Civilization (4-0-4).** Prerequisite: Completion of LAT 102 or LAT 114 with a grade of C or better; or permission of the instructor. An introduction to some aspects of Latin culture and civilization through close reading and analysis of significant works of classical Latin prose; specifically the "Cupid and Psyche" story from Apuleius' "The Golden Ass." Other readings, including texts on English on Latin culture, will be assigned as appropriate. A secondary goal is to build upon the skills gained in first year Latin through grammatical topics appropriate to the intermediate course. Classical and Medieval Studies course, Arts and Humanities. Return to top

**LAT 202 Vergil (4-0-4).** Prerequisite: LAT 201 or permission of the instructor. Study of selections from the Eclogues, Georgics and the Aeneid in their historical and literary contexts; rules of scansion and prosody; literary criticism and research. Classical and Medieval Studies course, Arts and Humanities. Return to top
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Professors:

Linguistics, available as a major (33 credits) and a minor (18 credits), is based on courses in Anthropology, Education, English, Modern Languages, Philosophy, and Speech and Hearing. For details about the program, contact John Greppin, Fenn Tower 1002; (216) 687-3967 or the English Department Rhodes Tower 1815; phone (216) 687-3951 or the Anthropology Department, Chester Building 1110; phone (216) 687-2386.

**LIN 260 Language, Society, and Culture (3-0-3).** Interdisciplinary introduction to language in its social and cultural contexts. Cross-listed with ANT 260, ENG 260, MLA 260. Elective course in the Linguistics major and minor. Social Science, Writing.

**LIN 310 Traditional Grammar (2 or 4 credits).** Survey of traditional grammar, its history and present use in the schools. Cross-listed with ENG 310. Return to top

**LIN 311 Elements of Linguistics (4-0-4).** Survey of phonology, morphology, syntax, semantics, pragmatics, and psycholinguistics with reference to modern English. Cross-listed with ENG 311. Return to top

**LIN 312 Modern English Grammar (4-0-4).** Systematic description of English sentences according to structuralist and transformational-generative principles. Cross-listed with ENG 312. Return to top

**LIN 313 Studies in Linguistics (2 to 4 credits).** Core course in a mainstream linguistic topic, such as American English dialects, historical linguistics, history of the English language, semantics, or socio-linguistics. May be repeated with change of topic. Cross-listed with ENG 313, with ANT 344 Sociolinguistics, and with courses in other departments as appropriate. Return to top

**LIN 314 Applied Linguistics (2 to 4 credits).** Course in the professional application of linguistics, such as language diversity and teaching English, Lexicography, or English as a Second Language. May be repeated with change of topic. Cross-listed with ENG 314. Return to top

**LIN 315 Phonetics (3 to 4 credits).** Principles of phonetics studied with reference variously to American English, French, Spanish, or German. Cross-listings include FRN 315, SPN 315, and GER 415. Return to top

**LIN 318 Language Analysis (2 to 4 credits).** Prerequisite: Introductory linguistics course or strong background in a foreign language. Topics may include Sanskrit, Hittite, Classical Armenian, Old English, Old Norse, or Gothic, studied with an emphasis on grammar and linguistic issues. May be repeated as the continuing study of one language, or with a change of topic. A two-semester sequence of one language (such as Sanskrit I and II), or a semester of Old English followed by a semester of Old Norse or Gothic, may satisfy the Arts and Sciences foreign-language requirement. Students who take Sanskrit I and II (4 credits each) may take second year Sanskrit III and IV (2 credits each). Linguistics course; Classical and Medieval Studies course (with appropriate language). Cross-listed with ENG 318 and MLA 310. Return to top

**LIN 340 Phonology (4-0-4).** Introduction to the scientific study of the sound systems of the world's living languages. Includes discussion of the basics of phonetic transcription and phonemic analysis and the development of formal models in phonology. Topics include articulatory and acoustic phonetics, the phoneme, phonological rules and representations, nonlinear models, harmony processes, prosodic morphology, and sound symbolism. Cross-listed with ANT 340. Return to top

**LIN 341 Morphology and Syntax (4-0-4).** Introduction to the description and analysis of word formation processes and sentence structure from a crosslinguistic perspective. Instruction in basic morphemic analysis and constituent testing using data drawn from languages outside the Indo-European family. Also includes an introduction to typological analysis in the study of morpho-syntax. Cross-listed with ANT 341. Return to top
LIN 342 Languages in Contact (4-0-4). Introduction to the study of linguistic responses to culture contact in a variety of socio-historical contexts. Topics include language and trade, language and colonialism, pidgins and pidginization, creoles and creolization, dialect contact, and the formation of koines. Cross-listed with ANT 342. Return to top

LIN 438 Seminar in Urban Language Patterns (4-0-4). Study of certain aspects of urban language patterns with special attention to linguistic features of those persons described as culturally different. Investigation and discussion of literature on oral language variations as related to listener attitudes, social and economic consequences, school success, and questions concerning approaches to the problem of speech and language specialists. Analysis and evaluation of language samples. Cross-listed with SPH 438. African-American Experience. Return to top

LIN 480 Special Topic in Linguistics (2 to 4 credits). Prerequisite: Introductory Linguistics course or permission of instructor. Focus on an advanced linguistic topic such as lexicography, contrastive linguistic systems, or semantics. Return to top

LIN 490 Linguistic Internship (1 to 2 credits). Prerequisites: Introductory Linguistics course and permission of the faculty anchor and field supervisor. Internships are available in three fields: Teaching Adult English as a Second Language, Computer-Assisted Accent Reduction, and Lexicography. Return to top

LIN 496 Independent Study in Linguistics (1 to 3 credits). Prerequisites: Linguistics major, senior standing, completion of at least two Linguistics core courses, and permission of supervising professor and Linguistics director. Specialized research project of particular interest to the student. May be repeated, but no more than 4 credits count toward the Linguistics major. Return to top
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Return to the [Cleveland State University home page](https://www.csuohio.edu/).
Professors:

MCE 102 Technical Writing & Professional Communication (2-0-2). Prerequisite: ENG 101. Technical writing as a process for organized expression of ideas and knowledgeable opinion; oral presentation and writing of letters, reports, memos, and proposals for effective communication; utilization of word-processing software to assist in the writing process. Equivalent to ENG 102. Return to top

MCE 255 Computer Aided Engineering Design (3-0-3). Prerequisites: ESC 101, IME 250, IME 251. Integration of computer-aided design with computer-aided manufacturing and engineering; introduction to optimum design. Return to top

MCE 305 Kinematics (3-0-3). Prerequisite: ESC 202. Displacements, velocities, accelerations in mechanisms; cam design; gear trains. Return to top

MCE 322 Thermodynamics II (3-0-3). Prerequisite: ESC 321. Selected thermodynamic cycles applied to real machines and systems, chemical reaction, dissociation phenomena, selected topics in classical thermodynamics. Return to top

MCE 324 Heat Transfer I (3-0-3). Prerequisites: ESC 321, ESC 301. Steady and unsteady conduction in one- and two-dimensions; forced convection, internal and external flows; heat exchangers; introduction to radiation; elements of thermal system design. Return to top

MCE 355 Design of Machine Components (4-0-4). Prerequisite: ESC 211. Design of machine elements under static and fatigue loading; design of fasteners, shafts, springs, welded joints, clutches and brakes, and flexible elements. Return to top

MCE 366 Machine Design I (3-0-3). Prerequisite: MCE 365. Design and application of gearing; force analysis of spur, helical, bevel and worm gears; design of gears for static and fatigue loading; use of keys, pins, and splines to attach gears to shafts. Return to top

MCE 371 Vibrations (3-0-3). Prerequisite: ESC 250. Study of vibration and shock problems in machinery and machine design. Return to top

MCE 380 Instrumentation and Measurements Laboratory (2-3-3). Prerequisites: ESC 211, ESC 315. Introduction to engineering measurements, standards and calibration, sensors and measurement system characteristics, signal conditioning and digital signal processing, instrumentation interfacing concepts, and measurement errors. Return to top

MCE 424 Heat Transfer II (3-0-3). Prerequisite: MCE 324. Convective heat and mass transfer analogies, free convection, phase change, radiation in enclosure and gaseous media, mass diffusion, thermal systems analysis and design (including heat exchangers, heat pipes, solar systems, humidifiers). Return to top

MCE 425 Heating, Ventilating, and Air Conditioning (3-0-3). Prerequisites: ESC 321, MCE 324. Design of heating, air-conditioning, and total-energy systems to provide thermal environments for building structures ranging in scope from single residence to integrated commercial, apartment, or industrial complexes. Course includes factors affecting human comfort, psychrometrics, heating and air-conditioning systems, heat pumps, geothermal systems, and utilization of solar energy; computer simulation of transient and steady-state heating and cooling loads in buildings; the selection of controls and appropriate equipment size. Return to top

MCE 430 Fluid Mechanics II (3-0-3). Prerequisite: ESC 301. Navier-Stokes equations and boundary layer analysis; introduction to compressible flow; fundamentals of turbomachinery; propulsion systems; fluid systems analysis and design. Return to top

MCE 441 Introduction to Linear Control Systems (3-0-3). Prerequisites: ESC 350, MCE 371. Introduction to mathematical modeling and design of systems using one- and two-port devices; controller design; stability analysis; root locus techniques; Bode diagrams; transient and steady-state response and design of closed loop control systems. Return to top

MCE 444 Applied Combustion Processes (4-0-4). Prerequisites: MCE 322, MCE 324. Review of chemical kinetics; conservation equations for multicomponent reacting systems; premixed laminar and turbulent flames. Return to top
MCE 445 Modern Controls (3-0-3). Prerequisites: ESC 350, MCE 371. Classical design of control systems; state space analysis; state space design of regulator systems; linear quadratic regulator problem; optimal observer design; computer simulation of control systems. Return to top

MCE 450 Design Project I (2-0-2). Prerequisite: Completion of junior year program in mechanical engineering. Course requires the preparation of an engineering system design or project proposal covering problem identification, conceptual design, and the schedule of work required to carry out the project. (Projects are carried out in MCE 451 in a subsequent term.) Concurrent seminars on methodology, decision-making, and design evaluations. Writing. Return to top

MCE 451 Design Project II (0-4-3). Prerequisite: MCE 450. Execution of engineering system project planned in MCE 450, Engineering Design Seminar. Formal report required. Writing. Return to top

MCE 456 Advanced Machine Analysis (4-0-4). Prerequisite: MCE 365. Finite Element analysis of stresses and deflections in complex mechanical systems under static and dynamic loading. Integrating modeling techniques with 2D- and 3D-CAD systems for inputting geometric data. Comparisons of finite element results with theoretical and empirical results. Return to top

MCE 466 Machine Design II (3-0-3). Prerequisite: MCE 365. Design of bearings for hydrodynamic, hydrostatic, and elastohydrodynamic lubrication regimes. Return to top

MCE 467 Dynamics of Machinery (3-0-3). Prerequisite: MCE 305. Study of force and moment in rotating and reciprocating mechanisms, dynamics of gear trains, balancing of rotors and mechanisms. Return to top

MCE 473 Design of Thermal Systems (3-0-3). Prerequisite: MCE 324. Analysis, optimal design, and computer simulation of thermal systems and components; applications in fluid flow and heat transfer. Return to top

MCE 482 Machine Systems Laboratory (2-3-3). Prerequisites: MCE 371, MCE 380. Vibration, sound, and dynamic behavior of machine systems. Return to top

MCE 483 Thermal Systems Laboratory (2-3-3). Prerequisites: ESC 321, MCE 324, MCE 380. Experimentation and analysis of thermal/fluid systems, energy balances, performance measurements of devices and systems, data analysis and correlation, elements of experimental design. Return to top

MCE 493 Special Topics in Mechanical Engineering (3-0-3). Prerequisites: Senior standing and course work as determined by instructor. Special offering of course material in an area of current interest to students, faculty, and the professional community. Return to top

MCE 496 Independent Study (3-0-3). Prerequisites: Senior standing, GPA of 3.0, and departmental approval. Independent research of a topic not previously studied in other mechanical engineering courses. Offered under the supervision of a faculty member. A formal report is required. Return to top
MET 300 Fundamentals of Engineering Mechanics (4-1-4). Prerequisites: associate-degree-level algebra, trigonometry, and geometry. Bridge course for associate-degree holders without familiarity with introductory level statics, dynamics, and strength of materials. Analysis of static equilibrium of trusses and frames including forces in members and joints. Section and mass properties. Static and dynamic friction. Dynamic of particles and bodies in translation or rotation. Fundamental properties of ductile and brittle metals for stress and strain. Direct stress and shear, bending stress, and torsional shear in components. Laboratory tensile test and bending deflection demonstrations. Return to top

MET 320 Advanced Mechanics of Materials (3-0-3). Prerequisites: associate-degree-level calculus, statics, and strength of materials courses or MET 300 and MTT 300. Stress under combined loading, stress concentration factors, design stresses, Mohr’s circle, endurance limit and fatigue life, and deflection of variable section beams, method of superposition, bucking. Temperature changes and press fits. Combined stress failure theories. Selection and processing of engineering metals, plastics, and composites. Heat-treating, cold working, and residual stresses. Temperature effects on strength, creep, and ductility. Return to top

MET 330 Advanced Dynamics (4-0-4). Prerequisites: associate-degree-level calculus, statics, and strength of materials courses or MET 300 and MTT 300. Displacement, velocity and acceleration of particles and rigid bodies with combined translation and rotation. Reaction and inertia forces and mass and polar moments of inertia. Analysis by equations of motion, force-acceleration, work-energy, and impulse-momentum. Conservative and non-conservative forces and moments. Free and forced vibrations, natural frequency, and fundamentals of damping and vibration isolation. Return to top

MET 345 Thermodynamics (4-0-4). Prerequisites: associate-degree-level calculus, dynamics, and fluid power. Co-requisites: MTT 300, MET 320. The study of classical thermodynamics approach to system and control volumes, properties and processes of gases and vapors, zeroth, first, and second laws of systems and control volumes. Vapor and gas power systems. Refrigeration and heat pumps systems. Ideal gas mixtures and psychometrics, reacting gases and combustion. Return to top

MET 350 Fluid Mechanics (3-0-3). Prerequisite: MTT 300. Co-requisite: MTT 301. The fundamentals of fluid mechanics, including the properties of fluids, pressure, hydrostatics and dynamics of fluid flow. Laminar and turbulent flow, friction losses, and sizing of pipes. Pump selection and application. Selected course topics are included as computer programming projects. Return to top

MET 351 Thermal Fluids Lab (0-3-2). Prerequisite: MET 345. Co-requisite: MET 350. Laboratory experiments in selected topics in fluids flow, heat transfer, and thermodynamics. Introduction to validity of measurements, statistical analysis, error and uncertainty analysis. Writing Course. Return to top

MET 410 Design of Machine Components (3-0-3). Return to top

MET 411 Design of Machine Components Lab (0-3-2). Prerequisites: MET 320, MET 330, MTT 301. Design, analysis, and selection of components used in machines, including shafts, gears, clutches, brakes, bearings, fasteners, springs, and bolted and welded frames. Determination of appropriate design stresses and deflections for strength, durability, and function. Selection of materials and processing and manufacturing considerations. MET 411 Writing Course. Return to top

MET 420 Heat Transfer (3-0-3). Prerequisites: MET 345, MET 350, MTT 301. The mechanisms of heat transfer, including conduction in one and two dimensions, forced and free convection, internal and external flows, heat exchangers, and introduction to radiation. Return to top

MET 425 Thermal Sciences for Electronic Engineering Technology (4-0-4). Prerequisites: associate-degree-level physics, MTT 301. Thermodynamics, heat transfer, and fluid flow principles and their applications to electronic equipment and digital devices. Topics include heat generation in printed-circuit boards and power transmission mediums, thermal resistance concepts, junction temperature, cooling and heating loads, air and liquid cooled heat sinks, thermoelectric power generation and refrigeration, dielectric heating, heat pipes and vortex tubes and their applications in electronic cooling. Technical Elective. Return to top

MET 441 Finite Element Analysis (3-0-3). Prerequisites: MET 320, MET 330, MET 410. This course provides an introduction to the finite element method for analysis of trusses, frames, and various machines. A finite element software package will be used to perform forces, stress, and displacement analysis, which will be compared with rigorous solutions using methods presented in statics, mechanics of materials, and machine design courses. Technical Elective. Return to top

MET 445 Solid Modeling Applications (3-0-3). Prerequisites: MET 330, MET 410, MET 411. Development and application of solid models of components and assemblies in engineering design and analysis. Use of solid models in problems related to component design, stress analysis, fluid flow, heat transfer, machine dynamics, and assembly interference. Production of
engineering drawings, visual representations, and data files for machining and rapid prototyping. Accuracy and validity
considerations of solid models. Technical Elective. Return to top

MET 450 Mechanical System Design (3-0-3). Prerequisites: MET 330, MET 410, MET 411. Design and analysis of mechanical
systems made up of gears, clutches, brakes, bearings, bolted and welded frames, considering interactions among components.
Use of standard components. Determination of appropriate design stresses and deflections for strength, durability, and function.
Optimization of assembly for cost, weight, durability, etc. Consideration of professional responsibilities in design. Technical
Elective. Return to top

MET 460 Thermal System Design (3-0-3). Prerequisites: MET 345, MET 350. Corequisite: MET 420. Advanced topics of fluid
mechanics, properties of fluids, pressure, hydrostatic, and dynamics of fluid flow. Design of thermal systems. Synthesis and
sizing of a system design requirements. Synthesis of components of thermal systems under technical, economical, and social
constraints. Technical Elective. Return to top

MET 465 Heating, Ventilating, and Air-Conditioning (HVAC) (3-0-3). Prerequisites: MET 345, MET 350, MET 351.
Thermodynamics of gas mixture. Control of gas mixtures, heating, cooling, and humidity. Heating and cooling loads. Design and
selection of HVAC systems. Design project. Technical Elective. Return to top

MET 470 Senior Design A (1-0-1). Prerequisites: Senior standing and all required 300- and 400-level program courses. Planning for the capstone course, MET 480
Senior Design B, to demonstrate the ability to define a problem in engineering terms and develop a realistic plan to complete an
engineering project. A comprehensive written plan including budget, equipment requirements, time schedule, problem
description, design alternatives, and tentative design will be prepared. Students are expected to extend their knowledge through
self-study and research in developing and assessing design options. Ethical, legal, and environmental considerations are
included. Students are encouraged to propose team projects. Return to top

MET 480 Senior Design B (1-5-3). Prerequisite: MET 470 in previous semester. Capstone course to demonstrate mastery of
analysis and design techniques and engineering judgment applied to a realistic engineering problem. A comprehensive report
including research, testing, and analysis results will be required along with an oral presentation. Professional, ethical, social, and
legal considerations will be considered. Return to top

MET 485 Energy Conversion (4-0-4). Prerequisites: MET 345, MET 350. Introduction to global energy concerns, fossil and
nuclear fuels, energy consumption analysis, energy management and conservation techniques, renewable and alternative energy
sources. Modern energy conversion devices such as fuel cells, and power turbines. Technical Elective. Return to top

MET 494 Advanced Topics in Mechanical Engineering Technology (3-0-3). Prerequisite: Senior standing. Topics of current
technical interest, applying core concepts across the mechanical engineering technology curriculum. Return to top

NOTE: The content of this course changes periodically to provide the injection of recent technological topic areas and subject
material into the curriculum. May be repeated for credit under different course subtitles. Technical Elective.

MET 497 Special Topics in Mechanical Engineering Technology (1 to 6 credits). Prerequisite: Senior standing. Independent
study on a special topic or project under the guidance of a faculty member. May be repeated for credit. Technical Elective. Return
to top
Undergraduate Catalog 2002-2004

Marketing

Professors:

**MKT 301** Introduction to Marketing (3-0-3).
Prerequisite: Junior standing or permission of chairperson. Examines the role of marketing in business and nonprofit organizations from managerial as well as societal and ethical perspectives. Focuses on development and implementation of the marketing program by surveying relevant concepts from the social and behavioral sciences, examining trends in domestic and world markets; and exploring decisions related to market selection, strategic market planning; and the marketing mix areas of product, price, promotion, and distribution. Return to top

**MKT 305** Marketing Management (4-0-4). Prerequisite: **MKT 301**. Applies marketing principles, practices, and theories to the formulation of strategic marketing plans and solutions for U.S. and global markets. Builds analytical skills in diagnosing marketing problems, identifying opportunities, analyzing alternative courses of action, and recommending marketing strategies and action plans. Emphasizes decision-making, financial and ethical analysis, and individual and team assignments involving marketing cases, field projects, class discussions, written reports, and oral presentations. Return to top

**MKT 321** International Business (4-0-4). Prerequisite: **MKT 301**. Introduces concepts, theories, information, and issues that impact business strategies in global markets. Investigates the role of international institutions and the cultural, economic, legal, and geopolitical influences on world trade. Examines the nature of business decisions across such functional areas as human resources management, finance and accounting, marketing, and operations management. Return to top

**MKT 351** Business, Society, and Government (3-0-3).
Prerequisite: Junior standing. Investigates organizational, societal, regulatory, and ethical issues and challenges that businesses face in domestic and global environments. Introduces information and analytical tools for studying such issues as corporate power and influence, environmental pollution, corporate social responsibility, consumer protection, affirmative action, quality of worklife, and professional ethics. Writing. Return to top

**MKT 411** Retail Management (4-0-4). Prerequisite: **MKT 305** or permission of chairperson. Provides retail management and merchandising framework for all types of businesses. Includes store location; layout and design; merchandise offerings; assortments; pricing, and control, as well as focus on internal operations; including staffing and supervision; promotions; customer services; store operations, expense control; opportunities for small retailers; and legal and ethical considerations. Return to top

**MKT 420** Buyer Behavior (4-0-4). Prerequisite: **MKT 305** or permission of chairperson. Investigates consumer and organizational buying motives, buying influences, and buying decision-making processes and their implications for marketing strategies and public/social policy. Explores cross-cultural, ethical, and research issues in understanding consumer and industrial/organizational buying. Return to top

**MKT 431** Marketing Research (4-0-4). Prerequisite: **MKT 301** or permission of chairperson. Develops a managerial appreciation of the role of research in marketing practice and how results are used in decision-making. Emphasizes the total research process as well as specific research steps, stressing information needs, research formulation and design, and research procedure. Integrates and applies concepts through managerially-oriented marketing research cases and a field research project. Return to top

**MKT 440** Field Experience Abroad (4-0-4).
Prerequisite: Permission of the instructor and departmental approval. Specially arranged field experience abroad, providing intensive business exposure to the target country. This study abroad program provides students hands-on research skills, travel, and contact with many sectors of the business community in the target country. For example, students may form research teams, design research projects, write research proposals, conduct library research, and identify organizations, agencies, and target segments to interview during their stay in the target country. The course instructor will conduct orientation sessions with the students and supervise their research projects while students collect information for their project reports. Effective Fall semester 2003. Return to top

**MKT 441** Advertising and Promotion Management (4-0-4). Prerequisite: **MKT 305** or permission of chairperson. Explores the role of advertising and promotion in modern marketing strategy. Focuses on market analysis and target audience definition, message development, media strategy, the evaluation of advertising effectiveness, and budgeting. Intended both for those planning careers in advertising as well as general marketing management. Return to top
MKT 450 Professional Selling and Sales Management (4-0-4). Prerequisite: MKT 305 or permission of chairperson. Covers tasks and responsibilities of professional selling and the challenges of managing both the individual and team sales function. Stresses analytical and interpersonal skills, account management, proposal development, planning, organizing, directing, motivating, and controlling a sales organization. Examines legal and ethical dimensions of professional selling. Return to top

MKT 452 Business-to-Business Marketing (4-0-4). Prerequisite: MKT 305 or permission of chairperson. Explores concepts, analytical tools, management practices, and advances in marketing goods and services to industrial, commercial, institutional, and other business markets in domestic and global environments. Includes lectures, case analyses, discussion, oral presentations, written reports, and execution of a field project. Return to top

MKT 454 Internet Marketing (3-0-3). Prerequisite: MKT 305 or permission of chairperson. The course will provide an introduction to Internet technology and the marketing opportunities this technology presents. A multi-dimensional approach is used to combine practical application with marketing principles. Return to top

MKT 456 Global Marketing (4-0-4). Prerequisite: MKT 305 or permission of chairperson. Introduces students to the concepts and management tools of international marketing. Topics include evaluating the global environment economically, culturally, politically and legally, screening and researching international business opportunities; and formulating appropriate marketing strategies to enter global markets and build sustainable advantages. Return to top

MKT 490 Marketing Internship (2 to 4 credits). Prerequisites: Junior standing, MKT 305, MKT 431, and permission of chairperson. Designed to provide marketing students with practical experience in career paths in marketing management, marketing research, sales, retailing, advertising, and related fields. Students must have an overall GPA of 2.5 in their major, and must work three months (minimum of 15 hours per week) under the supervision of marketing professionals. After completion of the term, students must submit a term report incorporating theory, tools, and practical applications to the sponsoring organization(s) and the faculty coordinator in the Department of Marketing. Return to top

MKT 493 Current Topics (1 to 4 credits). Prerequisites: Senior standing and permission of instructor. A study of current topics in marketing. Emphasis will be placed on exploring current literature, advanced topics, and research tools applicable to the topic. Return to top

MKT 496 Independent Study (1 to 4 credits). Prerequisite: Senior standing. Written proposal approved before registration by sponsoring professor and chairperson. A flexible content/structure course designed to enable qualified students to pursue special areas of interest and competency; opportunity for independent study, field research, or other special assignments. Return to top
Professors:
Anita K. Stoll (Chairperson); Bruce A. Beatie, Edward R. Haymes, Klaus-Peter Hinze, Jos. J. Labrador, Laura Martin; Professors Emeriti: John M. Purcell; Associate Professors: Tama Lea Engelking, Delia V. Galván, Diana Orendi, Philippa Brown Yin; Associate Professors Emeriti: James A. Barthelmess, Mary M. Heiser, Richard B. Small; Assistant Professors: Antonio Medina-Rivera, Gabriela Olivarres-Cuhat, Annie Jouan-Westlund.

Courses numbered from 100 to 115 in the various languages offered by the Department of Modern Languages generally emphasize development of performance skills, as do those at higher levels, in courses numbered 200 to 215, 300 to 315, and 400 to 415. Courses numbered 116 to 134 (and corresponding numbers at the upper levels) generally emphasize the nature of language. Courses numbered 135 to 164 (and corresponding numbers at the upper levels) generally emphasize the culture and history of specific languages. Courses numbered 165 to 189 (and corresponding numbers at the upper levels) generally emphasize the literatures of the specific languages.

As performance skills develop through progression in the learning sequence, the skills are used increasingly to introduce students to subject matter in the areas of literature and culture.

All language skill courses require work outside of class time in the language laboratory. Students who are to some degree native speakers of a particular language or who have acquired a speaking ability in a particular language will generally not be permitted to enroll in 100-level courses for credit in that language.

English majors should talk with their English advisor for information on counting courses offered by the Department of Modern Languages toward their major.

Courses listed below cut across the boundaries of specific languages. For courses in specific languages, literatures, and civilizations, see the course listings under French, German, Greek, Italian, Latin, Russian, and Spanish.

**MLA 101 102 Modern Languages I, II (4-2-5).** Prerequisites: For MLA 101: None; For MLA 102 in a sequence: MLA 101 or permission of instructor. Development of proficiency in speaking, understanding, reading, and writing a foreign language (such as Chinese, Japanese, Portuguese) which are not regularly offered by the department. Specific languages announced in semester course schedule. May be repeated for credit with a change of language. Lab fee. [Return to top](#)

**MLA 115 Contemporary Western Cultures (3-0-3).**
Introduction to two contemporary cultures, for example: France and Germany, or Spain and Italy. Taught in English. Western Culture and Civilization. [Return to top](#)

**MLA 116 Contemporary Non-Western Cultures (3-0-3).**
Introduction to two or more non-Western cultures, for example: Franco-phone and Hispanic Caribbean. Taught in English. Non-Western Culture and Civilization. [Return to top](#)

**MLA 140 240-340-440 Field Experience Abroad (1 to 6 Credits).** Prerequisites: Permission of instructor, departmental approval. The amount of language preparation necessary to participate in any given field experience to be determined by the department and instructor; specially arranged field experience abroad providing intensive exposure to students' target countries and languages. May be preceded by a special preparatory course. Examples include supervised individual or group work-study experience in the target country followed by a period of travel; and supervised two- to six-week group travel for students interested in a language- or culture-oriented project in the target country. See semester course schedule and contact the department office for further information. [Return to top](#)

**MLA 196 296-396-496 Independent Study (1 to 4 Credits).** Prerequisites: Student must have sophomore, junior, or senior standing. Proposed projects must be approved by a full-time department faculty member (who will serve as the project advisor) and the department chairman. Student-initiated supervised projects involving non-native languages or literatures. Examples include in-depth study of a particular writer, special readings in linguistics or significance of Hungarian culture in Cleveland politics. Independent study may be used to cover the materials of a listed course not offered in a given year. Projects arranged between individual students and instructor; title of the project will appear on the student's transcript; abbreviation of the course will reflect the language area or be designated MLA. May be repeated for credit with change of topic. [Return to top](#)

**MLA 200 300-400 Practicum in Language (1 to 4 Credits).** Prerequisites: Permission of instructor, departmental approval. Specially arranged projects or supervised experiences using non-native languages conducted in the university
and in the community. Examples include special work in the Instructional Media Laboratory; participation in a foreign-language play; tutorial activity in a basic language skills course; a study or service project involving field work in one of the Cleveland ethnic communities. Projects arranged between individual students and instructors; title of the project will appear on the student's transcript; abbreviation of the course will reflect the language area or be designated MLA. May be repeated for credit. S/U only. Return to top

**MLA 201 Words: An Introduction to Etymology (3-0-3).** A study of the way English words came to have the meanings they do, with emphasis on the Greek and Latin roots of English words; increases both active and passive vocabulary and refines accuracy of understanding and use of English. Especially useful for students in the sciences and in law. Classical and Medieval Studies, Arts and Humanities course. Return to top

**MLA 204 Non-Western Literature (3-0-3).** Significant literary works representing cultures of Africa, Asia, Latin America, and the Caribbean. Includes such authors as Basho, Mo Yan, Mishima, Yosano, Rubén Darío, Borges, García Marquez, Vargas Llosa, the griot Kouyate, Maran, Achebe, and Soyinka. Non-Western Culture and Civilization, Arts and Humanities course. Return to top

**MLA 230 330 Introduction to Mythology (3-0-3).** Introduction to mythology, with emphasis on classical mythology. Study of texts, criticism, and interpretation of the classical myths, usually contrasted with a more modern mythic work or tradition. Also offered as FST 243/343. Classical and Medieval Studies course. Return to top

**MLA 243 343 Introduction to Urban Folklore (3-0-3).** An introduction to the subject matter and the methodology of folklore, with specific reference to the kinds of folklore prevalent in the Greater Cleveland area. Practice in field research methods. Also offered as FST 243/343. Return to top

**MLA 260 Language, Society, and Culture (3-0-3).** Interdisciplinary introduction to the study of linguistics and of language in its social and cultural contexts. Cross-listed with LIN 260, ANT 260, and ENG 260. Linguistics course, Social Sciences, Writing. Return to top

**MLA 273 373 King Arthur in History, Legend and Literature (4-0-4).** Development of the Arthurian legend from its historical roots in the sixth century, through the early-, high-, and late-middle ages; to the Arthurian revival in the 19th- and 20th-centuries, including versions of the legend on film. Focus of the course changes; may be repeated for credit with change of focus. Sometimes cross-listed with FST 243/343 and ENF 259. Classical and Medieval Studies course. Return to top

**MLA 310 Structure of Specific Languages (1 to 4 credits).** Prerequisites: At least two courses in linguistics or written permission of instructor. Study of the grammatical structure of uncommon languages. Title varies according to language; past offerings have included Albanian, Armenian, Mayan, and Sanskrit. May be repeated for credit with a change of title. Linguistic Studies course. Return to top

**MLA 325 Introduction to Linguistics (3-0-3).** Introduction to the scientific study of language; emphasis on languages other than English. Topics include principles of linguistic analysis, languages and culture, and linguistics in relation to other fields. Recommended for language majors. Cross-listed with ANT 325. Linguistic Studies course. Return to top

**MLA 332 Comparative Mythology (3-0-3).** A study of mythic texts in two or more cultural traditions. The course may consider both the common elements of these mythic traditions and/or the significance of their differences. Also offered as FST 343. Return to top

**MLA 341 Languages and Cultures in Contact (3-0-3).** Exploration of relationships between language usage and cultural behavior. Central issues include connections between linguistic and cultural categories, social and institutional effects of language variation, consequences of linguistic and cultural change, language and social role, and role of language in forming social policy. Seminar format emphasizing skills of analysis, synthesis, and problem-solving. Cross-listed with ANT 341. Linguistic Studies course. Return to top

**MLA 493 Special Topics in Linguistics (1 to 6).** Prerequisite: Permission of instructor. Topics to be announced in semester course schedule. May be repeated for credit with change of topic. Linguistic Studies course. Return to top

**MLA 494 Special Topics in Culture and Civilization (1 to 6).** Topics to be announced in semester course schedule. May be repeated for credit with change of topic. Return to top
Management and Labor Relations

Professors: Tim R.V. Davis, Nels E. Nelson; Associate Professors: Kenneth J Dunegan, Brian P Heshizer, Mary W. Hrivnak, Augustine Lado, Brenda Stevenson Marshall, Harry J Martin; Assistant Professors: Deborah Knapp, Raji Srinivasan.

MLR 301 Principles of Management (3-0-3).
Prerequisite: Junior standing or permission of instructor. Introduces students to managerial roles and functions; covers planning, organizing, controlling, leading, staffing, and problem-solving in contemporary organizations; reviews foundations of management thought and managerial processes that lead to organizational effectiveness. Return to top

MLR 302 Principles of Labor Relations (3-0-3).
Prerequisite: Junior standing or permission of instructor. Introduces students to labor relations and collective bargaining; covers the parties (union and management), the legal framework, union structure and administration, the employer role, union organizing, bargaining issues, the negotiation process, grievances and arbitration, and public sector labor relations. Return to top

MLR 321 Organizational Behavior (3-0-3).
Prerequisite: Junior standing. Analysis of situations involving individual and group behavior. Development of small and large group theory, interpersonal relations, and achievement of the goals of the enterprise with and through people as individuals and as groups. Areas of investigation include communications, direction, coordination, control leadership, and group dynamics. Return to top

MLR 340 Human Resource Management (3-0-3).
Prerequisite: Junior standing or permission of instructor. Current human-resource issues, policies, and practices. Includes study of legal environment, job analysis, planning, recruiting, selection, training, performance appraisal, compensation, and benefits; strategic and international HR issues are addressed throughout the course. Return to top

MLR 341 Personnel Compensation, Performance, and Job Evaluation (3-0-3). Prerequisite: MLR 340 or permission of instructor. Methods of work analysis and measurement used in industry; systems for compensation of both hourly and salaried personnel; performance standards, time rates, and wage incentive methods; salary determination and administration. Return to top

MLR 342 Staffing and Developing the Organization (3-0-3). Prerequisite: MLR 340 or permission of instructor. Detailed presentation of the recruitment, selection, testing, and development functions of a personnel manager. Includes organization and government constraints, current laws, learning, and training devices. Return to top

MLR 404 Organizational Theory and Design (3-0-3). Prerequisite: MLR 321 or permission of instructor. Nature and importance of organizational structure and design; functions and dysfunctions of traditional designs; how and why organizational designs change; effects of the environment, technology, information and control systems, power structures, and political behavior on organizational performance. Return to top

MLR 411 Labor History (3-0-3). Prerequisite: MLR 302 or permission of instructor Examination of the organized labor movement in the United States and its influence on political and legal institutions; analysis of legislation relating to labor, management, and the public; laws and regulations concerning wages, hours, collective bargaining, labor contracts, and arbitration. Return to top

MLR 421 Comparative Labor Systems (3-0-3). Prerequisite: MLR 302 or permission of instructor. American and foreign labor movements; trade unionism and industrial relations systems in different areas of the world, showing their roles in economic, social, and political developments; comparison of structure and functions of labor movements at various stages of economic development. Return to top

MLR 422 Labor Law (3-0-3). Prerequisite: MLR 302 or permission of instructor. The law of industrial relations with emphasis on the Labor-Management Relations Act, including unfair practices and representation cases. Return to top

MLR 423 Labor Relations in Public Employment (3-0-3). Prerequisite: MLR 302 or permission of instructor. Collective bargaining by federal, state, and local employees; differences between public and private employment; union
security, impasse procedures, and implications of collective bargaining for public management; impact of collective bargaining on wages and other conditions of employment in the public sector. Return to top

**MLR 431 Employment Practices Law (3-0-3).** Prerequisite: MLR 302 or permission of instructor. Analyzes employment-practices law and its impact on employment decision-making; equal employment opportunity and discrimination; occupational safety and health, pension and benefit regulations and laws that pertain to the employment relationship. Emphasis is on the impact of regulations on organization personnel and human resource policy. Writing. Return to top

**MLR 443 Entrepreneurship (3-0-3).**
Prerequisite: Senior standing or permission of instructor. Exploration of the business formation process, and the management and operation of new/smaller enterprises both within and apart from existing ventures. Students are required to develop a written business venture plan and may act as advisors to existing smaller enterprises. Return to top

**MLR 447 Cross-Functional Management (4-0-4).** Prerequisite: MLR 301 or permission of instructor. Analysis of issues involved in managing different functional departments, and examination of the types of interactions and conflicts that typically occur between departments. Methods of dealing with interdepartmental problems are considered along with current management techniques for improving strategic and operational performance. Return to top

**MLR 455 Trends in Employee Relations and the Quality of Working Life (3-0-3).** Prerequisite: MLR 321 or permission of instructor. Exploration of cooperative work systems and efforts by labor and management to work together to improve the quality of work life by increasing effectiveness of the organization, productivity, quality, and work satisfaction, and understanding the processes used to accomplish these ends. Return to top

**MLR 457 Human Resource Information Systems (3-0-3).** Prerequisite: MLR 321 or permission of instructor. A comprehensive analysis of human-resource information systems with exploration of major applications and use of systems to improve decision-making; emphasizes hands-on use of technology in human resource planning, selection, appraisal, and compensation. Return to top

**MLR 465 Management Strategy and Policy (3-0-3).** Prerequisites: Senior standing, all college core courses, at least three major field courses. A business capstone course: integration of the student's background, experiences, and previous core business curriculum through case studies and business decision simulation exercises; development of an effective conceptual approach to integrating administrative policy, strategies, and decision-making; diagnosis, analysis, and solution of interrelated administrative problems. Writing. Return to top

**MLR 477 Managerial Skill Development (3-0-3).** Prerequisite: MLR 321 or permission of instructor. Analysis of aspects of managing in which specific behavioral skills can be developed; focus on individual managers and skill development in such areas as goal-setting, time-management, conducting meetings, communication processes, delegation, training, and appraisal interviews. Return to top

**MLR 487 International Management (3-0-3).** Prerequisite: MLR 321 or permission of instructor. Strategic, managerial, and human-resource issues in international business management; cultural differences and managerial practices in different countries; planning and control of small businesses and global enterprises; evaluating the performance of overseas subsidiaries; coordinating operations in different countries; overseas decisions; career concerns with overseas assignments. Return to top

**MLR 490 Internship (1 to 4 credits).**
Prerequisites: Two MLR courses and permission of instructor. Provides students with an opportunity to gain practical experience in human resources, labor relations, and/or management; may be arranged at the initiative of the student or the faculty member; offers a maximum of three semester hours for a 14-hour-per-week internship with fewer semester hours offered for fewer hours of work. The course is graded on a Pass/Fail basis. Return to top

**MLR 493 Current Topics (3-0-3).**
Prerequisites: Senior standing and permission of instructor. A study of a selected current topic in management. Course topics will vary. Offered as demand warrants. Return to top

**MLR 496 Special Problems (1 to 3 credits).**
Prerequisites: Senior standing, approval of sponsoring professor and department chairperson, written proposal approved before registration. Flexible in content and structure, this course is designed to enable qualified students to pursue special areas of interest and competency; opportunity for independent study, field research, or other special assignments. Writing. Return to top
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Note: Enrollment in MSC 100- and 200-level courses are normally for freshmen and sophomores. The MSC 300- and 400-level classes require prior approval of the Military Science Department.

**MSC 101 Intro to Leadership I (1-0-1).**
One hour of class per week focusing on several topics including organization and role of the U.S. Army, customs and traditions of the military, branches of the Army. A performance-oriented program designed to develop those skills important for platoon leadership. [Return to top](#)

**MSC 102 Intro to Leadership II (1-0-1).**
One hour of class per week focusing on leadership development. Basic land navigation, preparation of wildlife foods, basic first-aid, emergency lifesaving, transporting the injured, and construction of expedient shelters will also be covered. Instruction largely through practical application after mastery of the theory. [Return to top](#)

**MSC 201 Team Leadership I (1-1-2).**
Two hours of classroom instruction per week focusing on map reading and leadership. MSC 299, a Military Science Lab, is a corequisite for contracted cadets only. [Return to top](#)

**MSC 202 Team Leadership II (1-1-2).**
Two hours of classroom instruction per week focusing on positive leadership. MSC 299b, Military Science Lab, is a corequisite for contracted cadets only. [Return to top](#)

**MSC 250 Leadership Training Course (4 Weeks-0-9).** Prerequisite: Permission of Professor of Military Science. Exposes students to basic military skills focusing on practical hands-on experience in map reading, physical training, weapons, tactics, organization, and leadership, and is conducted at Fort Knox, Kentucky, each summer. Successful completion of Camp Challenge affords the student the opportunity to enter the Corps of Cadets and the Advanced ROTC Program. Travel and all expenses are paid by the ROTC Department. [Return to top](#)

**MSC 299 a, b, and c Intermediate Military Science II Lab.** Prerequisite: Concurrent enrollment in MSC 201, 202, or 203. Lab stresses practical experience in basic soldierly skills while preparing cadets for Advanced Military Science. [Return to top](#)

**MSC 301 Leading Small Organizations I (2-2-2).** Prerequisite: Prior approval of Military Science Department. Two classroom hours in seminar format with practical exercises. Course covers the principles of modern warfare, small unit tactics, leadership, operations orders. Class in concert with the MSC 399 Lab, a corequisite, will also provide preparation for the Advanced Summer Camp. [Return to top](#)

**MSC 302 Leading Small Organizations II (2-2-2).** Prerequisite: Prior approval of Military Science Department. Two classroom hours in seminar format with practical exercises. Course covers small unit tactics, patrolling, leadership, communications, and navigation. Class in concert with the MSC 399 Lab, a corequisite, will also provide preparation for the Advanced Summer Camp. [Return to top](#)

**MSC 399**
Junior Military Science Lab. Prerequisites: Prior approval of Military Science Department and concurrent enrollment in MSC 301 or 302 or 303. Lab stresses practical experience and involvement in leadership, tactics, navigation, communications, and operations planning. Each student will be provided many opportunities for leadership through practical exercises. [Return to top](#)

**MSC 401 Transition to Lieutenant I (2-0-2).**
Prerequisite: Prior approval of Military Science Department. Covers United States Army staff procedures with emphasis on administration, training management, and logistical management. Leadership portion discusses various leadership theories and ethics and professionalism. [Return to top](#)

**MSC 402 Transition to Lieutenant II (2-0-2).**
Prerequisite: Prior approval of Military Science Department. Topics cover problems of concern for the junior officer, including military justice, race relations, and drug and alcohol abuse. The course also covers those areas of military life that all junior officers will face, including discussion of subjects such as superior/subordinate relationships, pay and leave policy, military benefits, education, and promotion opportunities. [Return to top](#)
MSC 499
Military Science Lab. Prerequisite: Prior approval of Military Science Department. Lab stresses practical application of leadership and management skills, while staffing the Cadet Battalion. Prepares cadets for assumption of their responsibility in the Army's Active and Reserve Components. Return to top
Professors:

Students with credit in MTH 173, 174, 176, 182, or in any mathematics course numbered above 220 may not register for a mathematics course numbered 168 or lower. A student who attempts to do so will be given a grade of W in the ineligible course. This rule takes precedence over the university regulations on repeated courses whenever both are applicable.

Placement Tests: All students must take the Mathematics Placement Examination before they will be permitted to register for mathematics courses numbered 115, 118, 119, 127, 147, 151, 167, 168, and 181, except for students who have passed the appropriate prerequisite course. Mandatory placement for these courses is in effect. Students are not permitted to register for a higher-level course than indicated by their placement exam score.

• Preparatory Courses
• Courses for Humanities, Business, Education, and Social Sciences
• Courses for Mathematics, Science, Engineering, and Computer Science Majors
  ○ Precalculus and First Year Calculus Courses
  ○ Intermediate Courses
  ○ Advanced Courses

Preparatory Courses

A student who has been unconditionally admitted to the university should have already mastered the material in these courses. Credit earned in MTH 087 or MTH 088 does not count toward graduation.

MTH 087 Basic Math and Algebra for Liberal Arts Majors (4-0-4). MTH 087 begins with a review of arithmetic topics such as fractions, decimals, percents, integers, and order of operation. It then proceeds to a review of algebra topics such as solving and graphing linear equations and inequalities, solving and graphing simultaneous equations and inequalities. MTH 087 concludes with an introduction to statistics and probability. Pass/fail system of grading, but students receive modified letter grades: S(A), S(B), S(C), U(D), U(F). The letter grades in parentheses are not computed in the students’ GPA’s. No credit toward graduation. Return to top

MTH 088 Basic Math and Algebra for Business and Science Majors (4-0-4). MTH 088 begins with a pre-algebra review. It then proceeds to basic algebra topics such as linear and quadratic equations and inequalities, rational and radical expressions, linear systems with emphasis on graphing and applications through problem-solving as well as relations and functions. Pass/fail system of grading, but students receive modified letter grades: S(A), S(B), S(C), U(D), U(F). The letter grades in parentheses are not computed in the students’ GPA’s. No credit toward graduation. Return to top

MTH 115 Intermediate Algebra (4-0-4). Prerequisite: MTH 087 or MTH 088 or suitable placement-test score. Extension of basic algebra techniques, linear equations, and linear inequalities, an introduction to functions, roots, radicals, exponents, quadratic equations, solution of second degree equations and applications, and the analysis and solution of word problems. Return to top

Courses for Humanities, Business, Education, and Social Sciences

Any course in this section, except MTH 127, is suitable for meeting the Mathematics and Logic requirement in the Approaches to the Disciplines section of the GenEd. Credit earned in these courses does not count toward the mathematics major.

MTH 118 Mathematics for Liberal Arts (4-0-4). Prerequisite: MTH 115 or suitable placement exam score. Various topics
from elementary mathematics selected to help develop an appreciation for mathematics and its role in a liberal education. Mathematics and Logic.  

**MTH 119 Statistics for Liberal Arts (4-0-4).** Prerequisite: MTH 115 or suitable placement exam score. Various topics from elementary statistics selected to enhance understanding of the uses and abuses of statistical ideas. This course includes fundamental information about statistics needed for good citizenship and contrasts with a course emphasizing statistical techniques used in social or physical science. Mathematics and Logic.  

**MTH 127 Mathematics for Elementary and Middle School Teachers I (4-0-4).** Prerequisite: MTH 087 or suitable placement-test score. Topics needed to teach elementary and middle school mathematics, including numeration systems and whole number arithmetic, integers and number theory, rational and real numbers, problem solving, and applications.  

**MTH 128 Mathematics for Elementary and Middle School Teachers II (4-0-4).** Prerequisite: MTH 127. Additional topics for the elementary curriculum, including probability, statistics, geometry, measurement, and applications. Mathematics and Logic.  

**MTH 129 Mathematics for Elementary and Middle School Teachers III (2-0-2).** Prerequisite: MTH 128. Technology in the classroom: An introduction to geometry with LOGO, other mathematical software for the classroom, computer algebra systems and mathematical activities on the Internet. Mathematics and Logic.  

**MTH 147 Statistical Concepts with Applications (4-0-4).** Prerequisite: MTH 115 or suitable placement-test score. A first course in statistics that emphasizes statistical methodology as applied in the social and behavioral sciences, education, and business; topics include descriptive statistics, elementary probability, elementary sampling theory, estimation, hypothesis testing, regression and correlation. Mathematics and Logic.  

**MTH 151 through MTH 156 Mathematical Concepts.** Each of these is a 1- or 2-credit course. Normally a student must register for MTH 151, 152, and 153, or for MTH 154, 155, and 156. One is taught at the beginning of the semester, one in the middle of the semester, and one at the end of the semester.  

A graphing calculator is required for MTH 151 to 156. Consult the Mathematics Department for recommended models.  

**MTH 151 Mathematical Concepts 1a (1-0-1).** Prerequisite: MTH 115 or suitable placement-test score. Equations of lines, word problems, linear, polynomial and rational inequalities, graphs of functions, linear and quadratic functions, and their applications. Mathematics and Logic.  

**MTH 152 Mathematical Concepts 1b (2-0-2).** Prerequisite: MTH 151. Systems of three or more linear equations, Gauss-Jordan elimination, matrix methods, linear programming. Mathematics and Logic.  

**MTH 153 Mathematical Concepts 1c (1-0-1).** Prerequisite: MTH 152. Polynomial, exponential, and logarithmic functions and graphs, math of finance. Mathematics and Logic.  

**MTH 154 Mathematical Concepts 2a (1-0-1).** Prerequisite: MTH 153. Intuitive differential calculus, derivatives, applications of derivatives. Mathematics and Logic.  

**MTH 155 Mathematical Concepts 2b (2-0-2).** Prerequisite: MTH 154. Intuitive integral calculus, antiderivatives, the definite integral, applications, partial derivatives. Mathematics and Logic.  

**MTH 156 Mathematical Concepts 2c (1-0-1).** Prerequisite: MTH 155. Probability, permutations, combinations, Bayes' Theorem. Mathematics and Logic.  

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**Courses for Mathematics, Science, Engineering, and Computer Science Majors**

**Precalculus and First Year Calculus Courses**

The precalculus courses (MTH 167 and MTH 168) are designed for students who intend eventually to take calculus (MTH 181) and are not intended as general education courses. Depending on the placement-test score, a student starts with MTH 167 or with MTH 168. Credit earned in precalculus courses does not count toward the mathematics major.  

A graphing calculator is required for MTH 167, 168, 181, and 182. Consult the Mathematics Department for recommended models.
MTH 167 Precalculus Mathematics I (4-0-4). Prerequisite: MTH 088 or suitable placement-test score. Brief review of intermediate algebra techniques, rectangular coordinates, graphs of equations; and functions, lines, circles, detailed study of functions, graphing techniques. Mathematics and Logic. Return to top

MTH 168 Precalculus Mathematics II (4-0-4). Prerequisite: MTH 167 or suitable placement-test score. Functions, polynomial and rational functions, exponential, logarithmic, trigonometric, and inverse trigonometric functions. Mathematics and Logic. Return to top

MTH 181 Calculus I (4-0-4). Prerequisite: MTH 168 or suitable placement-test score. Differential calculus including functions, limits, derivatives, continuity, applications of derivatives. Integral calculus including antiderivatives, definite integrals. Mathematics and Logic. Return to top

Intermediate Courses

MTH 220 Introduction to Discrete Mathematics (4-0-4). Prerequisites: MTH 156 or MTH 182; and CIS 260 or equivalent. Sets, relations, and functions; the concept of algorithm; mathematical induction and recursive definition. Applications of these fundamentals are chosen at the instructor's discretion from graph theory, Boolean algebra, lattice theory, finite-state automata, elementary grammars, and the theory of recurrence relations. Return to top

MTH 281 Multivariable Calculus (4-0-4). Prerequisite: MTH 182. Multivariate and vector calculus, including three-dimensional analytic geometry, partial derivatives, multiple integrals, vector calculus, line integrals, Green's Theorem. Only 2 of the 4 credits may be counted toward graduation by students who have passed MTH 283. Return to top

MTH 282 Multivariable Calculus for Engineers (2-0-2). Prerequisite: MTH 182. Multivariate calculus including three-dimensional analytic geometry, partial derivatives, multiple integrals. Students who have passed MTH 281 may not register for MTH 283. A student who attempts to do so will be given a grade of W. Return to top

MTH 284 Matrices for Engineers (2-0-2). Prerequisite: MTH 182. Matrix algebra, including matrices and systems of linear equations, determinants, inverses, eigenvalues and eigenvectors. Students who have passed MTH 288 may not register for MTH 284. A student who attempts to do so will be given a grade of W. Return to top

MTH 286 Introduction to Differential Equations (4-0-4). Prerequisite: MTH 182. First-order differential equations, linear differential equations, first order systems, Laplace transform techniques, and applications. Return to top

MTH 288 Linear Algebra (4-0-4). Prerequisite: MTH 182. Systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors. Only two of the four credits may be counted toward graduation by students who have passed MTH 284. Return to top

Advanced Courses

MTH 301 Introduction to Applied Mathematics (4-0-4). Prerequisite: At least one mathematics course numbered 280 or above. Applications of mathematics to real-world problems, including topics such as Monte-Carlo methods (pricing financial securities, light scattering, volumes of irregular shapes); population growth and other environmental issues; and encryption. Emphasis on formulating and evaluating solution strategies and carrying them out using standard software. Return to top

MTH 311 Numerical Analysis (4-0-4). Prerequisites: MTH 284 or MTH 288, MTH 286, and a computer programming language. Numerical methods for solving nonlinear equations, systems of linear equations, interpolation problems, integration problems, and differential equations. Return to top

MTH 323 Statistical Methods (4-0-4). Prerequisites: MTH 182 and a 200-level mathematics course. Issues of data collection, graphical and numerical summary techniques, basic probability, discrete random variables, continuous random variables, central limit theorem, confidence intervals, hypothesis testing of a proportion, hypothesis testing of a mean, 2 sample hypothesis testing, chi square testing, regression. Return to top

MTH 326 Numbers, Patterns and Operations for Middle School Teachers (4-0-4). Prerequisites: MTH 127 and MTH 128. An in-depth study of mathematical topics in middle school curricula in the area of numbers, patterns and operations. Topics include numeration concepts, concepts of measurement, study of rational and irrational numbers, proportionality, estimation and operations. No credit toward the mathematics major or minor. Enrollment is restricted to students seeking
MTH 327 Algebra and Functions for Middle School Teachers (4-0-4). Prerequisites: MTH 127 and MTH 128. Emphasis on algebra as a powerful symbolic language for studying patterns, relations, and variation; for solving linear and quadratic equations and inequalities; and for modeling real life situations. Emphasis is on variables and functions in symbolic and graphical forms, especially linear, quadratic, exponential, logarithmic, and inverse functions. Goals include developing deep understandings of these topics as appropriate for middle school teachers. No credit toward the mathematics major or minor. Enrollment is restricted to students seeking childhood licensure or a specialization in childhood education. Return to top

MTH 328 Geometry for Middle School Teachers (4-0-4). Prerequisites: MTH 127 and MTH 128. This course is designed to increase the conceptual understanding of geometry for middle school teachers. Topics will include dynamic geometry integrating use of computer software; basic geometry theorems and constructions; similarity, proportion, scaling, and geometric growth; tessellations; simple trigonometric relationships; van Hiele levels of geometric graphical representations; transformational geometry and analytic geometry. No credit toward the mathematics major or minor. Enrollment is restricted to students seeking childhood licensure or a specialization in childhood education. Return to top

MTH 329 Data Analysis and Probability for Middle School Teachers (4-0-4). Prerequisites: MTH 127 and MTH 128. Ratios, fractions, percentages, data collection, graphical experimentation, basic strategies of data analysis, some statistical methods to analyze data, inference based on data and simulation. No credit toward the mathematics major or minor. Enrollment is restricted to students seeking childhood licensure or a specialization in childhood education. Return to top

MTH 330 Conversational Calculus for Middle School Teachers (4-0-4). Prerequisite: MTH 327. An introduction to the concepts of calculus. Pictures and hands-on experiments are used to develop an overview of the big ideas and an appreciation of how calculus helps us understand the real world. Includes differentiation, integration and applications of calculus to the real world. No credit toward the mathematics major or minor. Enrollment is restricted to students seeking childhood licensure or a specialization in childhood education. Return to top

MTH 331 Geometry (4-0-4). Prerequisite: MTH 284 or MTH 288. The main focus is on two-dimensional Euclidean geometry. Basic topics covered include congruence, parallelism, area, and similarity. These are discussed from the axiomatic point of view. Other topics include transformation geometry, non-Euclidean geometry, vectors in geometry and some three-dimensional Euclidean geometry. Many applications are given, such as analysis of repeating patterns, computer graphics, cartography, and robot arm motion. Return to top

MTH 332 Geometry (4-0-4). Prerequisite: MTH 284 or MTH 288. This course deals with the fundamentals of geometry, including basic properties of complex numbers, analytic functions, harmonic functions, integration, Taylor and Laurent series, residue calculus and conformal mapping. A main focus of the course is the application of conformal mapping techniques (such as Mobius transformations and symmetry) to solve electrostatics, fluid flow, and heat flow problems. Return to top

MTH 333 Geometry (4-0-4). Prerequisites: MTH 127 or MTH 288. Emphasis is on the integers and number theory, rings, fields, polynomials, and applications of these concepts. Writing. Return to top

MTH 381 Analysis (4-0-4). Prerequisites: MTH 284 or MTH 288, and at least one mathematics course numbered 300 or above. Introduction to the real-number system, sequences, continuity properties in a metric space, applications to connectedness, sequences and series of functions, basics of differentiation, and Riemann integration. Writing. Return to top

MTH 386 Differential Equations (4-0-4). Prerequisites: MTH 281 and MTH 288 or MTH 283 and MTH 284, and MTH 286. Series solutions of second-order linear equations, qualitative behavior of linear and almost linear systems of first-order differential equations, boundary value problems, introduction to partial differential equations. Return to top

MTH 389 Functions of a Complex Variable (4-0-4). Prerequisite: MTH 281 or MTH 283. This course deals with the fundamentals of complex analysis, including basic properties of complex numbers, analytic functions, harmonic functions, integration, Taylor and Laurent series, residue calculus and conformal mapping. A main focus of the course is the application of conformal mapping techniques (such as Mobius transformations and symmetry) to solve electrostatics, fluid flow, and heat flow problems. Return to top

MTH 390 Foundations of Computing (3-0-3). Prerequisites: MTH 181, 182, MTH 220, and CIS 335; Mathematics majors may substitute one mathematics course numbered 280 or above for CIS 335. Sets, relations, regular languages, finite automata, context-free languages, pushdown automata, phrase-structure languages, Turing machines, Church's theory, recursion, computability, decidability, computational complexity. Cross listed with CIS 490. Return to top

MTH 401 Mathematical Modeling (4-0-4). Prerequisites: MTH 284 or MTH 288, MTH 286, and at least one mathematics course numbered 300 or above (MTH 301 recommended). Deterministic and probabilistic models chosen from the areas of linear optimization, Markov chains, game theory, graphs and networks, axiom systems, growth processes, and queueing systems. Return to top

MTH 420 Combinatorial Mathematics (4-0-4).
Prerequisite: At least one mathematics course numbered 300 or above. A survey of combinatorial methods, including binomial coefficients and other special numbers, recurrence relations, calculus of finite differences, and generating functions, emphasizing exact evaluation of combinatorial sums in closed form.  

**MTH 424 Probability Theory and Applications (4-0-4).** Prerequisites: MTH 281 or MTH 283, MTH 284 or MTH 288, and a 300-level mathematics course. General probability (set functions, basic axioms, independence); Bayes theorem; univariate probability distributions (probabilities, moments, variance, mode, percentiles, transformations); multivariate probability distributions (central limit theorem, joint conditional and marginal distributions - probabilities, moments, variance, covariance); discrete and continuous time Markov chains; selected applications.  

**MTH 434 Differential Geometry (4-0-4).** Prerequisites: MTH 281 or MTH 283, MTH 284, and at least one mathematics course numbered 300 or above. This course focuses on the calculus, linear algebra, and geometry of curves and surfaces, as well as applications to engineering and science. Material covered will include the curvature and torsion of curves, Gaussian and mean curvatures of surfaces, minimal surfaces, geodesics, holonomy, and the Gauss-Bonnet theorem. Optional material includes applications of the calculus of variations to geometry and of minimal surface theory to soap film formation.  

**MTH 487 Dynamical Systems (4-0-4).** Prerequisites: MTH 284 or MTH 288, MTH 286, and at least one mathematics course numbered 300 or above (MTH 386 recommended). Systems of differential equations, local and global behavior of a vector field in the plane, discrete dynamical systems, structural stability, the Poincare-Bendixon theorem, bifurcations, chaos, and strange attractors.  

**MTH 493 Special Topics in Mathematics (4-0-4).** Prerequisite: At least one mathematics course numbered 300 or above, or permission of instructor. Detailed study of a selected topic in advanced mathematics. Topic will vary, depending on instructor. May be taken for credit more than once, but no single topic may be repeated. Consult Mathematics Department for current information.  

**MTH 495 Senior Seminar (2-0-2).** Prerequisites: At least two mathematics courses numbered 300 or above, or departmental approval. This is the department's main assessment tool. Students will read papers in technical journals, choose a research topic, and write a technical report. Three key assessment areas are mathematical modeling (translating real-world situations into mathematics), mathematical reasoning (manipulation, by hand or by computer, of data and expressions using valid mathematical techniques) and communication (ability to write cogent and well-formulated reports).  

**MTH 497 Readings in Mathematics (1 to 4 credits).** Prerequisite: Departmental approval. Topics studied under supervision of an advisor.
MTT 300 Applied Mathematics (4-0-4).
Prerequisites: associate-degree-level of algebra, trigonometry, geometry, and introductory calculus. Applications of differential and integral calculus including advanced differentiation and integrations techniques as applied to engineering problems.
Return to top

MTT 301 Advanced Applied Math (4-0-4). Prerequisite: MTT 300 or equivalent. Differential equations, transient analysis, Laplace transform methods. S-plane poles and zeros are applied specifically toward program applications. Return to top
MUA 101 Class Piano (0-2-1).
Beginning piano skills and keyboard orientation for the nonmusic major. Designed for students with no previous piano experience. Return to top

MUA 102 Keyboard Skills I (0-4-2).
Prerequisite: Open to music majors only. Intensive training in the application of manual keyboard skills toward the production of simple accompaniments. Drills consist of primary triads in major and minor keys, use of chord inversions, and common finger pattern technique. Return to top

MUA 103 Keyboard Skills II (0-4-2). Prerequisite: Grade of C or better in MUA 102. Intensive training in the application of manual keyboard skills toward the production of accompaniments in common figurations. Includes transposition, improvisation, and harmonizing melodies. Drills consist of primary triads in major and minor keys, secondary dominants, triads of the 2nd, 3rd and 6th degrees in major mode, common harmonic formulas, and interpretation of chord symbols. Return to top

Private lessons

MUA 111 Section 1: Piano (1 credit) Return to top
Section 2: Harpsichord (1 credit)

MUA 112 Section I: Piano (2 credits) Return to top
Section 2: Harpsichord (2 credits)

MUA 121 Voice (1 credit) Return to top
MUA 122 Voice (2 credits) Return to top

MUA 131 Organ (1 credit) Return to top
MUA 132 Organ (2 credits) Return to top

MUA 141 Strings (1 credit) Return to top
Classical Guitar (1 credit)
Electric Guitar (1 credit)

MUA 142 Strings (2 credits) Return to top
Classical Guitar (2 credits)
Electric Guitar (2 credits)

MUA 151 Woodwinds (1 credit) Return to top
MUA 152 Woodwinds (2 credits) Return to top

MUA 161 Brass (1 credit) Return to top
MUA 162 Brass (2 credits) Return to top

MUA 171 Percussion (1 credit) Return to top
MUA 172 Percussion (2 credits) Return to top

MUA 181 Harp (1 credit) Return to top
MUA 182 Harp (2 credits) Return to top

MUA 311 Section 1: Piano (1 credit) Return to top
Section 2: Harpsichord (1 credit)

MUA 312 Section I: Piano (2 credits)

Section 2: Harpsichord (2 credits)

MUA 321 Voice (1 credit)

MUA 322 Voice (2 credits)

MUA 331 Organ (1 credit)

MUA 332 Organ (2 credits)

MUA 341 Strings (1 credit)

Classical Guitar (1 credit)

Electric Guitar (1 credit)

MUA 342 Strings (2 credits)

Classical Guitar (2 credits)

Electric Guitar (2 credits)

MUA 351 Woodwinds (1 credit)

MUA 352 Woodwinds (2 credits)

MUA 361 Brass (1 credit)

MUA 362 Brass (2 credits)

MUA 371 Percussion (1 credit)

MUA 372 Percussion (2 credits)

MUA 381 Harp (1 credit)

MUA 382 Harp (2 credits)
Associate Professor: Eric Ziolek (Chairperson); Professors: Albert Blaser, Howie Smith, Judith Eckelmeyer; Professors Emeriti: J. Heywood Alexander, Rudolph Bubalo, Julius Drossin, John A. Flower, Edwin London, William R. Martin; Associate Professors: Betsy Burleigh, Rita Klinger, Howard Meeker, Daniel Rains; Associate Professors Emeriti: Mary Friedmann, Ernest Hisey; Assistant Professors: Angelin Chang, Elizabeth Unis Chesko, Greg D’Alessio, Andrew Rindfleisch; Applied Music Staff: Gary Adams (tuba), George Bachmann (guitar), Daniel Barber (piano), Harry Barnoff (bass), Jocelyn Chang (harp), Charles Couch (trumpet), Rock Wehrmann (jazz piano), B. Neil Davis (voice), Alan DeMattia (horn), William Dempsey (voice), Bryan Dumm (cello), Molly Fung Dunn (violin), Erich Eichorn (violin), Robert Fraser (guitar), Tom Freer (percussion), Louis Gangale (clarinet), Matthew Bassett (percussion), Geoffrey Hardcaste (trumpet), David Alan Harrell (cello), Daniel Hathaway (organ), Christine Hill (piano), Theodore Johnson (clarinet), David McGuire (oboe), Robert McKee (jazz drums), Jeanne Meszoros (piano), Eileen Moore (voice), Noriko Paukert (voice), Maria Pla (piano), George Shernit (saxophone), Margaret Scharf (organ), Margarith Shevchenko (piano), Jonathan Sherwin (bassoon), James Taylor (trombone), Michelle George-Smith (viola), Lecturers: Christopher Anderson, Melanie Blaser, Christine Smith Dorey, Paul Ferguson, Alvin Fulton, Charles Smith.

See also Applied Music

MUS 101 University Chorus (0-4-1). Prerequisite: Open to any university student with permission of instructor at first rehearsal. Open to university community at large, the University Chorus sings a wide variety of repertoire, including multicultural works as well as those from the European tradition. Basic music reading skills pertaining to choral singing will be developed. May be repeated for credit. Return to top

MUS 102 Band/ Wind Ensemble (0-4-1). Prerequisite: Open to any university student with permission of instructor at first rehearsal. Repertoire selected according to nature of each performance, with emphasis on music written specifically for wind band. Chamber Winds (one player per part) is listed as a different section number under this course when offered. May be repeated for credit. Return to top

MUS 103 Collegium Musicum (0-4-1). Prerequisite: Membership by audition. Small ensemble of singers and instrumentalists for the study and performance of music of all eras, with emphasis on works written prior to 1750. May be repeated and may be taken with or without credit. Return to top

MUS 104 University Orchestra (0-4-1). Prerequisite: Open to any university student with permission of instructor at first rehearsal. Orchestral repertoire from the various stylistic periods prepared and performed in three concerts per semester. May be repeated for credit. Return to top

MUS 105 CSU Chorale (0-4-1). Prerequisite: Open to any university student with permission of instructor at first rehearsal. Select ensemble of approximately 30 voices chosen by audition from the student body; provides advanced challenge and opportunity to those with singing experience; music of various genres and stylistic eras. May be repeated for credit. Return to top

MUS 106 Chamber Ensembles (0-2-1). For those participating in student recitals. Ensembles of one person per part, working under faculty supervision. Chamber Ensemble credit cannot be earned by student receiving recital credit for the same project. May be repeated for credit, but credit awarded only once for any particular project. Return to top

MUS 107 Jazz Ensemble (0-4-1). Prerequisite: Open to any university student with permission of instructor at first rehearsal. Provides experience in reading and performing jazz band arrangements and compositions. May be repeated for credit. Return to top

MUS 108 Opera Theater Workshop (0-4-1). Prerequisite: Open to any university student with permission of instructor at first rehearsal. Practical experience in performance and production of opera scenes includes theatrical improvisation and stage movement. May be repeated for credit. Return to top

MUS 109 New Music Ensemble (0-4-1). Prerequisite: Permission of instructor. A performing chamber ensemble dedicated to music literature composed since 1950 with emphasis on more recent literature. May be repeated for credit. Return to top
MUS 111 The Enjoyment of Music (3-0-3).
An introductory course in classical music, principally through aural understanding. Live and recorded listening experiences. Arts and Humanities, Western Culture and Civilization. Return to top

MUS 112 Macromusic (2-0-2).
Prerequisite: Open only to music majors or by permission of instructor. Introduction to music technology; basic applications of computing, MIDI (Musical Instrument Digital Interface), synthesizers, sequencing, music notation, digital audio, and the Internet to the study of music. Assigned studio time. Return to top

MUS 113 Writing about Music (2-0-2). Prerequisites: ENG 101 and music major/ minor status only. Builds on skills of English 101 while developing basic research skills, information literacy, and preparation of writing assignments, specifically short essays such as a set of recital program notes, a historical or analytical essay, and an extended research paper on a musical subject. Equivalent to ENG 102. Return to top

MUS 122 Materials of Music (3-0-3).
Open to any university student. Survey course with drills and creative exercises in reading and writing basic pitch and rhythmic materials of music. Return to top

MUS 151 Jazz Survey (3-0-3).
An introductory course in jazz with a broad overview of its performers, composers, and styles. Live and recorded listening experiences. Arts and Humanities. Return to top

MUS 161 Roots of Rock and Soul (3-0-3).
Survey of the roots and development of rhythm and blues, rock and roll, and soul music with an examination of social causes and effects, commonalities to art music and role in culture in the United States. Arts and Humanities. Return to top

MUS 205 Orientation to Music Education (1-1-1).
Survey of general, choral, and instrumental music at elementary and secondary levels in selected urban and suburban schools. Includes lecture and discussions on campus and observations in schools. Return to top

MUS 231 Harmony and Form I (3-0-3). For music majors, MUS 112 is a corequisite. Harmonic, rhythmic and formal practices in tonal music of the common practice period. Correlated creative work and analysis. Return to top

MUS 232 Harmony and Form II (3-0-3). Prerequisite: MUS 231 or equivalent. Harmonic, rhythmic, and formal procedures in music from J.S. Bach through the Classic Era. Correlated creative work and analysis. Return to top

MUS 233 Harmony and Form III (3-0-3). Prerequisite: MUS 232 or equivalent. Harmonic, rhythmic, and formal procedures in music from Beethoven through the chromatic music of the late 19th century. Correlated creative work and analysis. Return to top

MUS 234 Harmony and Form IV (3-0-3). Prerequisite: MUS 233 or equivalent. Harmonic, rhythmic, and formal procedures in music from Impressionism through the 20th century. Correlated creative work and analysis. Return to top

MUS 241 Musicianship I (0-3-1). Corequisite: MUS 231. Course is designed to develop basic skills in sightreading, sightsinging, keyboard, improvisation, basic conducting, and musical perception. Return to top

MUS 242 Musicianship II (0-3-1). Prerequisite: MUS 241 or equivalent. Continuation of MUS 241 with more advanced materials for sightsinging, improvisation, keyboard, score reading and musical perception. Return to top

MUS 243 Musicianship III (0-3-1). Prerequisite: MUS 242 or equivalent. Advanced skills course including sightsinging, improvisation, keyboard, wholistic listening, and musical perception. Return to top

MUS 244 Musicianship IV (0-3-1). Prerequisite: MUS 243 or equivalent. Advanced materials for sightsinging, rhythmic performance, improvisation, holistic listening, and musical perception dealing mainly with features of 20th-century concert music and jazz. Return to top

MUS 290 Elementary Music Field Experience (1-2-2). Prerequisites: MUS 205, completion of Music Education Gateway Exam, and permission of instructor. Guided field experience under the supervision of a music specialist in the elementary school. Includes a training session and final session on campus. Offered during Intersession only. Return to top

MUS 300 Secondary Music Field Experience (1-4-3). Prerequisites: MUS 205, and permission of instructor, completion of Music Education Gateway. Guided field experience under the supervision of a music specialist in the secondary school. Includes a training session and final session on campus. Offered during Intersession only. Return to top

MUS 301 Music Fundamentals and Methods for the Classroom Teacher (4-0-4). Prerequisite: For College of Education
majors only. Aural, written, and performance competency in musical notation, scales, intervals, key and meter signatures, and primary triads in major and minor modes. Development of skills in singing, conducting, and performance on keyboard, recorder, and classroom music instruments. Applications to elementary classroom activities covered in methods component. Return to top

MUS 310 The Business of Music (3-0-3).
Prerequisite: Open to any university student with permission of instructor. A team-taught overview of business practices and how they affect musicians. Topics include auditions, promotional materials, recording, concert production, contracts, copyrights, management, unions, taxes, and grant writing. Return to top

MUS 320 Composition (3 credits). Prerequisite: Permission of Instructor. Corequisite: MUS 321 (students enrolled in MUS 320 must also enroll in MUS 321: Composition Forum). Tutorial sessions with composition faculty. Independent projects explore large and small forms, compositional techniques and modes of expression for various media. May be repeated for credit. Return to top

MUS 321 Composition Forum (1-0-1). Prerequisite: Permission of Instructor. Weekly meeting of students registered for MUS 320. May be taken independently of MUS 320: Composition. Composition, and all other interested students. Study and analysis of student's own creative work and the works of other composers. May be repeated for credit. Return to top

MUS 341 Counterpoint (3-0-3). Prerequisites: MUS 234 and 244 or equivalents. Modal and tonal counterpoint in two and three voices; composition of melodies, subjects, and examination of contrapuntal devices; invertible counterpoint; binary forms, inventions and fugue. Return to top

MUS 351 Teaching String Instruments (1-2-2). Prerequisites: MUS 205, MUS 233, MUS 243. Techniques of playing and teaching violin, viola, cello, and contrabass with an emphasis upon beginning instruction and methods and materials for group lessons. Laboratory class for music-education majors as preparation for teaching school instrumental music. Return to top

MUS 352 Teaching Woodwind Instruments (1-2-2). Prerequisites: MUS 205, MUS 234, MUS 244. Techniques of playing and teaching flute, oboe, clarinet, saxophone, and bassoon, with an emphasis upon beginning instruction and methods and materials for group lessons. Laboratory class for music education majors as preparation for teaching school instrumental music. Return to top

MUS 353 Teaching Brass Instruments (1-2-2). Prerequisites: MUS 205, MUS 233, MUS 243. Techniques of playing and teaching trumpet, trombone, horn, euphonium, and tuba with an emphasis upon beginning instruction and methods and materials for group lessons. Laboratory class for music education majors as preparation for teaching school instrumental music. Return to top

MUS 354 Teaching Percussion Instruments (1-2-2). Prerequisites: MUS 205, MUS 234, MUS 244. Techniques of playing and teaching timpani, snare drum, bass drum, xylophone, cymbals, Afro-Indio-Latin drums, and jazz drumset with an emphasis upon beginning instruction and methods and materials for group lessons. Laboratory class for music education majors as preparation for teaching school instrumental music. Return to top

MUS 355 Teaching Vocal/ Choral Music (1-2-2). Prerequisites: MUS 234, MUS 244, MUS 461. Techniques for learning and teaching proper use of the singing voice in elementary- and secondary-school music. Emphasis upon methods and materials for K-12 singers in general music classes and choral ensembles. Laboratory class for music education majors as preparation for teaching school vocal/choral music. Return to top

MUS 356 Diction (3-0-3).
Prerequisite: For performance majors in voice and others with permission of instructor. Use of the International Phonetic Alphabet as a means to teach proper pronunciation for singers; basic concepts for the formation and use of vowels and consonants within a vocal line; application of IPA symbols to sounds in French, German and Italian; basic rules for singing in English. Return to top

MUS 361 Voice Class (2-0-2).
Prerequisite: Not for voice majors. Assists students in the basic elements and techniques of vocal production for singing. Return to top

MUS 381 Jazz Theory and Improvisation I (2-0-2). Prerequisite: MUS 122 or permission of instructor. Theory and practice of spontaneous composition/performance in a jazz style, with emphasis on the 12-bar blues form, modal materials, and melodic derivatives of harmonic progressions. Return to top

MUS 382 Jazz Theory and Improvisation II (2-0-2). Prerequisite: MUS 381 or permission of instructor. Further exploration of melodic-harmonic inter-relation, harmonic substitution, modal materials, and rhythmic styles. Advanced harmonic and rhythmic concepts. Return to top

MUS 411 Music History I (3-0-3). Prerequisites: MUS 112, MUS 113, MUS 234 and MUS 244 or permission of instructor.
Survey of the history of Western music from Antiquity to 1750 through examination of stylistic characteristics and literature from chronological eras, as well as individual composers' lives and the culture of their times. Western Culture and Civilization. Return to top

**MUS 412 Music History II (3-0-3).** Prerequisites: MUS 112, MUS 113, MUS 234 and MUS 244 or permission of instructor. Survey of the history of Western music from 1750 to the present through examination of stylistic characteristics and literature from chronological eras, as well as individual composers' lives and the culture of their times. Western Culture and Civilization. Return to top

**MUS 414 Ethnomusicology (3-0-3).** Prerequisite: Music major status or permission of instructor. The study of music outside the European art tradition. Non-Western Culture and Civilization. Return to top

**MUS 415 World Music Studies (3-0-3).** Variable topics include music from specifically selected non-Western world cultures. Non-Western Culture and Civilization. Return to top

**MUS 427 Computer Music I (3-0-3).** Prerequisite: MUS 112 or permission of instructor. Introduction to creating music with the use of computers. Topics include synthesis, midi sequencing, sampling, notation, and aesthetics. Also includes an overview of the repertoire of electronic and electro-acoustic music. Assigned studio time for individual composition projects. Return to top

**MUS 428 Computer Music II (3-0-3).** Prerequisite: MUS 427 or permission of instructor. Advanced applications in computer music. Topics include digital audio, digital signal processing, computer synthesis, and recording techniques. Assigned studio time for individual composition projects. Return to top

**MUS 441 History of Jazz (3-0-3).** Prerequisite: MUS 151 or permission of instructor. Development of jazz, the various influences that shaped its direction, and its influence on other styles of music. Western Culture and Civilization. Return to top

**MUS 443 Music Literacy and Learning (1-2-2).** Prerequisites: MUS 444, EDB 305. Understanding the music-reading process through the association of verbal sounds/ syllables and symbols of notation. Includes experiences in informal assessment of reading proficiency and in the teaching of pattern recognition. A field component is required. Return to top

**MUS 444 Elementary Music Curriculum and Methods (2-2-3).** Prerequisites: MUS 205, MUS 234, MUS 244. Lesson planning, curricular materials, and instructional strategies for preschool and elementary-school classroom music. Includes curriculum design, principles of assessment, and issues of classroom management. A field component is required. Return to top

**MUS 445 Secondary Music Curriculum and Methods (2-2-3).** Prerequisite: MUS 444. Lesson planning, curricular materials, instructional and rehearsal strategies for middle-school and high-school music. Includes curriculum design, principles of assessment, and issues of classroom management for both general music and school ensembles. A field component is required. Return to top

**MUS 451 Orchestration (3-0-3).** Prerequisite: MUS 234 or permission of instructor. Study of characteristics and capabilities of orchestral instruments; writing for various instrumental combinations; correlated analysis of symphonic forms and orchestral techniques. Return to top

**MUS 461 Conducting School Ensembles (3-0-3).** Prerequisites: MUS 234 and 244. Development of effective conducting and rehearsal techniques common to instrumental and vocal ensembles. May culminate in a rehearsal reading with the University Band or Chorus depending on the student's focus. Team taught. Return to top

**MUS 475 Workshop (variable credit).** Special presentations offered by faculty or visiting specialists for professional development. Carries undergraduate or graduate credit. May be repeated with change of topic. Return to top

**MUS 476 Extended Workshop (variable credit).** Special presentations offered by faculty or visiting specialists for professional development. Carries undergraduate or graduate credit. May be repeated with change of topic. These workshops extend beyond the normal semester. Students will receive a "T" grade at the end of the semester and a grade for credit upon completion of the workshop. Return to top

**MUS 481 Half Recital (0-0-1).** Prerequisite: Permission of instructor. Thirty-minute recital demonstrating appropriate level of competency. Required of all music majors. Return to top

**MUS 482 Full Recital (0-0-2).** Prerequisite: Permission of instructor. Sixty-minute recital demonstrating appropriate level of competency. Required of all applied music majors. Return to top
MUS 485 Composition Recital (0-0-2).
Prerequisite: Permission of instructor. A recital of works for various media representing the creative accomplishments of composition study. Return to top

MUS 493 Special Topics (variable credit).
Prerequisite: Permission of instructor. Topics designed by faculty to be announced in semester schedule. May be repeated for credit with change of topic. Return to top

MUS 496 Independent Study (credit as arranged).
Prerequisite: Permission of instructor. Faculty-supervised independent study in areas of individual interest. Return to top

MUS 498 Senior Project (0-0-3).
Prerequisite: To be elected by candidates pursuing the B.A. degree with a major in music at least one semester prior to graduation. The project is a focal point bringing together the various strands of the undergraduate's career in a meaningful way. It represents individual work done under committee guidance, resulting in either a formal research paper, public presentation, or both. Return to top
Baccalaureate Nursing Program

Professor: Noreen Frisch (chairperson); Associate Professors: Valerie George, Amy Govoni, Cheryl McCahon, June Romeo; Assistant Professors: Laura DeHelian, George Kirkwood, Sharon Radzyminski, Andrea Jennings-Sanders, Sharon Wing; Term Appointments: Cheryl Delgado and Michelle Kwiatkowski.

NUR 110 Introduction to University Life (1-0-1). Presents students with topics designed to familiarize them with the CSU campus and facilities. The Department of Nursing expectations for successful student outcomes are explored. Required of all new students. Open to transfer and R.N. students. Return to top

NUR 125 Health and Wellness (2-0-2). Using a holistic approach, selected health behaviors which promote high-level wellness will be explored. Students will have an opportunity to clarify their own health values and assess their present health behaviors and life styles in order to make decisions relative to future health behaviors and lifestyles. Elective. Return to top

NUR 200 Stress: A Framework for Professional Nursing (4-0-4). Prerequisites: NUR 110, admission to the Nursing major. Introduces the student to the need for theory development in nursing, selected nursing models, and the philosophy and conceptual framework of the Department of Nursing. Attributes and values that support the professional nurse are explored. Concepts related to community-based practice are introduced. Emphasis is placed on the acquisition of knowledge and skills for facilitative communication and the appreciation of cultural diversity. Writing. Return to top

NUR 215 Strategies for Nursing Practice (4-0-2) 2 semester course. Prerequisites: NUR 220, NUR 221. Introduces concepts, principles, and theories of nursing practice in relation to levels of preventive care. Includes interpersonal and psychomotor skills as well as the use of the nursing process. (NUR 216 must be taken concurrently; NUR 200 and NUR 218 must be taken concurrently unless previously completed.) Return to top

NUR 216 Strategies for Nursing Practice - Clinical (0-12-3). 2 semester course. Prerequisites; NUR 220, NUR 221. Applies the nursing process and principles from the natural, behavioral, and nursing sciences to provide direct care to adult clients within structured settings who are experiencing health problems as a result of stressors. Psychomotor skills are learned and practiced in a skills laboratory prior to performance in a community-based setting. (NUR 215 must be taken concurrently.) Return to top

NUR 218 Nursing Pharmacology (2-0-2). Introduces the student to various classifications of drugs used in the care of clients experiencing stressors and to the calculations needed to give accurate dosages. Emphasis on nursing implications. Return to top

NUR 219 Pathophysiology for Nurses. (2-0-2). Prerequisite: sophomore standing in the nursing major or permission of the instructor. This course focuses on the exploration of various physiologic stressors by which disease occurs, the impact of the individual's GRR on the response of the body and the effects of the disease on normal physiology. Each disease entity will be examined by definition, epidemiology, etiology, diagnostic data and clinical manifestation. The clinical concepts of disease can be utilized by the professional nurse in the application of the nursing process in all settings. Return to top

NUR 220 Health Assessment (4-0-2). 2 semester course. Prerequisite: Admission to the Nursing major. Designed to teach the student knowledge and skills to assess the health status of an individual. Content related to the use of techniques of inspection, palpation, percussion, and auscultation. (NUR 221 must be taken concurrently.) Return to top

NUR 221 Health Assessment - Lab (0-4-1). 2 semester course. Prerequisite: Admission to the Nursing major. Provides supervised laboratory practice to develop health-appraisal skills. A comprehensive assessment tool based on the stress framework is used. (NUR 220 must be taken concurrently.) Return to top

NUR 222 Tertiary Preventive Strategies for the Elderly Experiencing Stress (2-0-2). Focuses on tertiary preventive care of the elderly who have diseases of adaptation. Theories/concepts of aging, long-term care and rehabilitation are presented. Selected chronic health problems are discussed. (NUR 226 must be taken concurrently.) Return to top
NUR 225 Tertiary Preventive Strategies for Adults Experiencing Stress (2-0-2). Prerequisites: NUR 215, NUR 216, NUR 200, NUR 220, NUR 221, NUR 218. Focuses on care of adults who have diseases of adaptation. Theories/concepts of chronic disease and rehabilitation are presented. Emphasis is on health problems related to immobility. (NUR 226 must be taken concurrently.) Return to top

NUR 226 Tertiary Preventive Strategies - Clinical (0-12-6). Prerequisites: NUR 215, NUR 216, NUR 200, NUR 220, NUR 221, NUR 218. Focuses on the use of the nursing process in structured settings to plan care for patients from young adulthood through old age who have diseases of adaptation. Emphasis is on developing the student's ability to provide tertiary preventive care. Psychomotor skills are learned and practiced in a skills laboratory prior to performance in a community-based setting. (NUR 225 must be taken concurrently.) Return to top

NUR 250 Health Problems of African Americans and Other Minorities (4-0-4). Explores health problems that are prevalent among African-Americans and other minorities. It is assumed that being African-American predisposes persons to health problems that increase the risk of disease or disability. Specific lifestyle and socio-cultural issues that influence health, access to health care and use of health services will be addressed. Students will be introduced to specific strategies for assessing the health care needs of minority individuals, families and communities. Elective. Human Diversity. Return to top

NUR 300 Nursing Leadership and Management (2-0-2). Prerequisites: Junior standing in Nursing. Focuses on leadership and management theories and concepts as they relate to the practice of nursing and the delivery of care in a variety of community-based settings. Emphasizes the use of change theory and quality assurance concepts. Approaches to developing leader/change agent and consultant/collaborator roles are explored. (NUR 310 must be taken concurrently unless previously completed.) Writing. Return to top

NUR 305 Secondary Preventive Strategies for Adults Experiencing Stress (4-0-2). 2 semester course. Prerequisite: Junior standing in the Nursing major. Focuses on care of patients from young adulthood through old age who are experiencing health problems as a result of stressors. Theories and concepts related to care of adults in acute-care settings are presented. (NUR 306 must be taken concurrently.) Return to top

NUR 306 Secondary Preventive Strategies for Adults Experiencing Stress - Clinical (0-12-3). 2 semester course. Prerequisite: Junior standing in the Nursing major. Focuses on the use of the nursing process in acute care settings to plan care for patients from young adulthood who have acute health problems as a result of stressors. Emphasis is on developing the student's ability to provide secondary preventive care. Psychomotor skills are learned in a skills laboratory prior to performance in a community-based setting. (NUR 305 must be taken concurrently.) Return to top

NUR 310 Nursing Research (2-0-2). Prerequisite: one of the following statistics courses: ANT 303, COM 303, PSY 311 or SOC 354, NUR 200, NUR 340 or permission of chairperson. Introduces the research process and the contributions of research to the improvement of nursing practice. Focuses on the critical analysis and interpretation of research reports and the development of strategies for implementation of research findings. (Must be completed for senior standing in the major.) Writing. Return to top

NUR 312 Secondary Preventive Strategies for Adults Experiencing Psychosocial Stress (4-0-2). 2 semester course. Prerequisite: Junior standing in the Nursing major or permission of the chairperson. Focuses on the care of adults who have health problems related to psychosocial stressors. Theories and concepts related to therapeutic nursing-intervention strategies with individuals and groups are presented. (NUR 313 must be taken concurrently.) Return to top

NUR 313 Secondary Preventive Strategies for Adults Experiencing Psychosocial Stress - Clinical (0-12-3). 2 semester course. Prerequisite: Junior standing in the Nursing major or permission of chairperson. Focuses on the use of the nursing process to design therapeutic nursing interventions for clients experiencing psychosocial stressors. Emphasis is on the development of the therapeutic self which is used with individuals and groups in a variety of community-based settings to enhance the communication process and facilitate intervention strategies of a psychosocial nature. (NUR 312 must be taken concurrently.) Return to top

NUR 325 Secondary Preventive Strategies for Children Experiencing Stress (4-0-2). 2 semester course. Prerequisites: NUR 305, NUR 306, NUR 312, NUR 313. Focuses on the care of children who are experiencing a variety of stressors, stress, and diseases of adaptation. Theories, concepts, and principles related to the care of children and their families are presented. (NUR 326 must be taken concurrently.) Return to top

NUR 326 Secondary Preventive Strategies for Children Experiencing Stress - Clinical (0-12-3). 2 semester course. Prerequisites: NUR 305, NUR 306, NUR 312, NUR 313, or permission of the chairperson. Focuses on the use of the nursing process to provide secondary preventive care in a variety of community-based settings to children experiencing health problems as a result of stressors. The impact of illness/disease on the development of children from infancy through adolescence will be evaluated. Psychomotor skills are learned and practiced in a skills laboratory prior to
NUR 340 Stress: A Framework for Professional Nursing (4-0-4). Prerequisite: Admission to the Nursing major. (Open to R.N. students only.) Introduces the student to the need for theory development in nursing, selected nursing models, and the philosophy and conceptual framework of the Department of Nursing. Attitudes and values that support the professional nurse are explored. Emphasis is placed on the acquisition of knowledge and skills for facilitative communication and the appreciation of cultural diversity. Concepts related to community-based practice and the nursing process are introduced. (NUR 345 must be taken concurrently, unless previously taken.) Writing. Return to top

NUR 343 Health Assessment (2-0-2). Prerequisites: Admission to Nursing major or permission of chairperson; NUR 345. (Open to R.N. students only.) Designed to teach the student knowledge and skills to assess the health status of an individual. Content related to the use of the techniques of inspection, palpation, percussion, and auscultation. (NUR 340 and NUR 344 must be taken concurrently.) Return to top

NUR 344 Health Assessment - Lab (0-3-1). Prerequisites: Admission to Nursing major or permission of chairperson; NUR 345. (Open to R.N. students only.) Provides supervised laboratory practice to develop health-appraisal skills. A comprehensive assessment tool based on the stress framework is used. (NUR 343 must be taken concurrently.) Return to top

NUR 345 Computers and Health Care (1-1-2). Prerequisite: Admission to the Nursing major. Introduces student to use of personal computer, computer concepts, and information systems. Students will explore ways in which computers have impacted the delivery of health care. Students will learn to use computers for word processing, conducting library searches, and use the World Wide Web to locate health-care information to improve nursing practice. (NUR 340 must be taken concurrently.) Return to top

NUR 350 Leadership and Management (4-0-4). Prerequisites: NUR 340, NUR 343, NUR 344, NUR 345. (Open to R.N. students only.) Focuses on leadership and management theories and concepts as they relate to the practice of nursing and the delivery of care in a variety of community-based settings. Emphasizes the use of change theory and quality assurance concepts. Approaches to developing leader/change agent and consultant/collaborator roles are explored. Writing. Return to top

NUR 360 Nursing Research (2-0-2). Prerequisite: One of the following statistics courses: ANT 303, COM 303, PSY 311 or SOC 354, NUR 340, NUR 345. (Open to RN students only.) Introduces the research process and the contributions of research to the improvement of nursing practice. Focuses on the critical analysis and interpretation of research reports and the development of strategies for implementation of research findings. Must be completed for senior standing in the major. Writing. Return to top

NUR 370 Parish Nursing 1 (3-0-3). Open to RNs only. This is the first course in preparation of the specialized practice of Parish Nursing. Course content includes the role of the faith community in health and wholeness; study of the theology, history, philosophy and ethics of parish nursing; and legal boundaries and scope of practice of nursing in this specialty. Roles of the parish nurse include health educator, coordinator of volunteers, health advocates, collaborator, and integrator of spiritual health care. This course is based on the core curriculum of the International Parish Nurse Resource Center. Return to top

NUR 371 Parish Nursing 2 (0-6-3). Open to RNs only. This clinical course provides the nurse with supervised clinical experiences in the practice of Parish Nursing. Students have opportunity to observe the role of nursing in a faith community, perform nursing assessments and apply principles of Parish Nursing in planning and implementing nursing interventions. Return to top

NUR 380 Primary Preventive Strategies for Childbearing Families Experiencing Stress (4-0-2). 2 semester course. Prerequisites: NUR 305, NUR 306, NUR 312, NUR 313. Explores primary preventive strategies that can be used to ameliorate stressors that affect the health of childbearing families. Theoretical issues related to developmental and situational stressors are presented. (NUR 382 must be taken concurrently.) Return to top

NUR 382 Primary Preventive Strategies for Childbearing Families Experiencing Stress - Clinical (0-12-3). 2 semester course. Prerequisites: NUR 305, NUR 306, NUR 312, NUR 313, ANT 202. Focuses on the use of the nursing process to provide primary preventive care to childbearing families experiencing stressors. Psychomotor skills will be learned and practiced in a skills laboratory prior to performance in a community-based setting. (NUR 380 must be taken concurrently; NUR 300 must be taken concurrently unless previously completed.) Return to top

NUR 407 Preventive Strategies for Gerontologic Nursing (4-0-2). 2 semester course. Prerequisite: Senior standing in the Nursing major. (Open to RN students only.) Focuses on using the conceptual framework in planning and evaluating
preventive strategies in the provision of health care for the older adult. Theories, concepts, and principles related to adaptation of stressors are presented. (NUR 409 must be taken concurrently). Return to top

NUR 408 Preventive Strategies for Nursing in the Community: Home Care (4-0-2). 2 semester course. Prerequisites: Senior standing in the Nursing major. (Open to RN students only.) Focuses on using the conceptual framework in planning and evaluating preventive strategies for the provision of nursing care to adults and families in the community. Theories, concepts, and principles related to adaptation of stressors are presented. (NUR 409 must be taken concurrently). Writing. Return to top

NUR 409 Preventive Strategies for Nursing - Clinical (0-4-2). Prerequisite: Senior standing in the Nursing major. (Open to R.N. students only.) Focuses on the use of the nursing process to provide preventive care to adults in community-based settings who are experiencing health problems as a result of stressors. Emphasis is on implementing strategies to facilitate the client's ability to adapt to stress. (NUR 408 must be taken concurrently.) Return to top

NUR 410 Primary Preventive Strategies for Communities I (4-0-2). 2 semester course. Prerequisite: Senior standing in Nursing major. Focuses on the care of clients in their homes. Historical perspectives of home health care and the legal and ethical issues involved will be explored. Types of case management, financing, and provider roles will be discussed. (NUR 411 must be taken concurrently; PHL 211 must be taken concurrently unless previously completed.) Return to top

NUR 411 Primary Preventive Strategies for Communities I - Clinical (0-12-3). 2 semester course. Prerequisite: Senior standing in Nursing major. Focuses on application of case management in home-health nursing. Emphasis is on primary preventive aspects of planning and providing care to individuals and families in their homes. Roles of the nurse in home-health nursing will be explored. (NUR 410 must be taken concurrently; PHL 211 must be taken concurrently unless previously completed.) Return to top

NUR 412 Primary Preventive Strategies for Communities II (4-0-2). 2 semester course. Prerequisite: Senior standing in Nursing major. Focuses on community as client and the factors necessary to define and describe the client and assess community. Basic principles of the study, prevention, and control of diseases that impact a community will be discussed. Use of the nursing process to plan care for the community will be explored. (NUR 414 must be taken concurrently; PHL 211 must be taken concurrently unless previously completed.) Return to top

NUR 413 Primary Preventive Strategies for Communities II - Clinical (0-12-3). 2 semester course. Prerequisite: Senior standing in Nursing major. Focuses on community assessment. Students will use the nursing process to develop therapeutic nursing interventions for communities with increased risk of illness, disability, or premature death. Emphasis is on health promotion, health maintenance, health education, and case management for the community. (NUR 412 must be taken concurrently; PHL 211 must be taken concurrently unless previously completed.). Writing. Return to top

NUR 415 Preventive Strategies in Complex and Critical Situations (4-0-2). 2 semester course. Prerequisite: PHL 211. Focuses on care of adults with life-threatening health problems in a variety of settings. (NUR 416 must be taken concurrently.) Return to top

NUR 416 Preventive Strategies in Complex and Critical Situations - Clinical (0-8-2). 2 semester course. Prerequisite: PHL 211. Focuses on care of clients with life-threatening health problems with emphasis on assessment, integration of laboratory results, use of biomedical technology, and planning and implementing appropriate nursing care. (NUR 415 must be taken concurrently.) Return to top

NUR 420 Role Practicum (0-12-3). 2 semester course. Prerequisites: NUR 410, NUR 411, NUR 415, and NUR 416. Designed to provide the student with in-depth experience within a chosen field of practice. Emphasis is directed toward use of the nursing process within the parameters of the stress framework for the refinement of clinical skills in the delivery of quality nursing care for individuals, groups, families, or communities. Includes experience in operationalizing the entire role spectrum of the professional nurse. Return to top

NUR 430 Professional Seminar Issues in Nursing (2-0-1). 2 semester course. Prerequisites: NUR 410, NUR 411, NUR 415, and NUR 416. Identifies and explores contemporary issues and future trends that have impact on the profession. Students will examine selected legal, economic, political, cultural, and ethical issues that act as stressors on the professional nurse, the practice of nursing, and the delivery of nursing care within the health-care delivery system. (Either NUR 412, NUR 414 or NUR 420 must be taken concurrently.) Return to top

NUR 440 Primary Preventive Strategies for Communities (4-0-2). 2 semester course. Prerequisites: Senior standing in Nursing major, NUR 407, NUR 408, NUR 409. (Open to R.N.s only.) Focuses on community as client and the factors necessary to define, describe the client, and assess needs. Basic principles of the study, prevention, and control of diseases that impact a client will be discussed. Use of the nursing process to plan care for the community will be explored. (NUR 441 must be taken concurrently.) Return to top
NUR 441 Primary Preventive Strategies for Communities - Clinical (0-4-1). 2 semester course. Prerequisites: Senior standing in Nursing major, NUR 407, NUR 408, NUR 409. (Open to R.N.s only.) Focuses on community assessment. Students will use the nursing process to develop nursing interventions for communities with increased risk of illness, disability, or premature death. Emphasis is on health promotion, health maintenance, health education, and case management for the community. (NUR 440 must be taken concurrently.) Return to top

NUR 460 Role Practicum (0-12-3). 2 semester course. Prerequisites: NUR 408, NUR 409, NUR 440, NUR 441. (Open to R.N.s only.) Designed to provide the student with in-depth experience within a chosen field of practice. Emphasis is directed toward use of the nursing process within the parameters of the stress framework in the refinement of clinical skills and in the delivery of quality nursing care for individuals, groups, families, or communities. Includes experience in operationalizing the entire role spectrum of the professional nurse. Return to top

NUR 493 Special Topics in Nursing (1 to 4 credits). Prerequisite: Admission to the Nursing program or permission of instructor. Study of health problems of particular groups. Topics arranged by mutual agreement of the students and the department. May be repeated. Return to top

NUR 496 Independent Study (1 to 4 credits). Prerequisite: Admission to the Nursing program or permission of instructor. Faculty-supervised independent study in one area of student's interest. May be repeated. Return to top

NUR 498 Health of Older Persons (4-0-4). A comprehensive course emphasizing health-related factors which affect the aged population in the United States; aging as a normal but irreversible process; factors contributing to health promotion or maintenance, such as nutrition and access to health-care delivery systems; patterns of illness and viable alternatives to institutionalization of the aged. (Core course for Gerontology Certificate Program). Writing. Return to top
Operations Management and Business Statistics

Professors: Injazz Chen, Chia-Shin Chung, James O. Flynn, Walter O. Rom; Associate Professors: Ronald L. Coccari (Chair), Oya Icmeli Tukel; Term Assistant Professor: Kenneth A. Paetsch.

OMS 201 Business Statistics I (3-0-3). Prerequisite: MTH 156. Application of statistical methods to business problems; topics include descriptive statistics, elementary probability, random variables and probability distributions, the binomial, Poisson, and normal and "t" distributions; estimation and hypothesis testing; type I and II errors and their control. Mathematics and Logic: Return to top

OMS 202 Business Statistics II (3-0-3). Prerequisite: OMS 201. Application of statistical methods to business problems; topics include chi-square analysis, the F distribution, one-way and two-way analysis of variance, correlation analysis, simple and multiple regression analysis, and introduction to forecasting with regression models; use of computer programs in solving statistical problems. Mathematics and Logic: Return to top

OMS 311 Introduction to Production Management (3-0-3). Prerequisite: OMS 201. Introduction to production management, competitive strategy, decision-making, linear programming, quality management and tools, supply-chain management, inventory management, master production scheduling, resource planning (MRP/ERP), lean production systems, and project management. Return to top

OMS 312 Operations Research (4-0-4). Prerequisite: OMS 202. This course covers quantitative models commonly used in business and industries. Topics include linear programming, transportation, assignment, and transshipment problems; integer linear programming; network models; conditional probability; markov chain; waiting line models; decision analysis; multicriteria decision problem; and dynamic programming. Examples of business application will be used to establish the relevancy of the models. Cross-listed with CIS 312. Return to top

OMS 313 Material and Inventory Management (3-0-3). Prerequisite: OMS 311. Various problems related to the procurement, handling and storing of materials in different stages of production will be discussed. Topics include purchasing, inventory models in deterministic and probabilistic situations, material requirements planning, material handling and transportation, and distribution inventory management. Both qualitative and quantitative techniques will be discussed. Examples will be drawn from business situations. Special focus will be on materials related to APICS certification exam. Return to top

OMS 335 Forecasting (3-0-3). Prerequisite: OMS 202 or equivalent. A critical study of the forecasting methods available for use in business and nonbusiness organizations. The emphasis is on developing the ability to use regression and time series methods. Topics will include simple and multiple regression models, leading indicators, smoothing models, classical decomposition, time-series regression models, seasonal-cyclical models, and BOX-Jenkins analysis. An evaluation of these techniques is also presented, including evaluation of accuracy, techniques for improving accuracy, and analysis of the appropriateness of each model. In addition, a number of statistical and forecasting software packages are demonstrated. This will enable the student to complete a series of forecasting projects that are required as part of the course. Return to top

OMS 412 Supply Chain Management (4-0-4). Prerequisite: OMS 311. This course deals with the movement of goods and services through a distribution channel from supplier to the ultimate customer. Topics covered include development of supply chain management; logistics environment, including political and legal environment; global logistics; transportation systems, including intermodal systems; warehousing and packing; logistic quality; and strategic decisions in logistics. Return to top

OMS 413 Production Planning and Control (3-0-3). Prerequisite: OMS 311. Problems of planning, scheduling, and controlling of activities related to the production of goods and/or services are examined. Topics include manufacturing planning and control, short-term forecasting systems, demand management and order servicing, master production scheduling (MPS), production planning, capacity planning, integrated MPC systems, implementation of MPC systems, and integrated supply chain management. Return to top

OMS 414 Material and Capacity Requirements Planning (3-0-3). Prerequisite: OMS 311 or permission of the instructor. This course studies material requirements planning (MRP) and capacity requirements planning (CRP) in the manufacturing environment. MRP uses master production schedule (MPS), bills of material (BOM), inventory data, and other planning factors to derive a schedule of planned purchase and factory orders to fulfill the MPS requirements. CRP considers the output of MRP and existing orders already in process to identify and help correct capacity shortfalls or imbalances. Return
OMS 417 Just-In-Time Manufacturing (3-0-3). Prerequisite: OMS 311 or permission of the instructor. This course presents the Just-In-Time philosophy in manufacturing. The central theme is an in-depth understanding of how to synchronize the production process and to eliminate unnecessary inventory and non-value-added activities by controlling the process through the use of modern quality methods, such as supplier relationships and preventative maintenance. Students develop a strong understanding of the financial and nonfinancial incentives used to justify JIT activities. A solid implementation program is also examined. Return to top

OMS 418 Production Activity Scheduling and Control (3-0-3). Prerequisite: OMS 311 or permission of the instructor. This course teaches daily production activity and control on the shop floor. Topics include interface with various levels of manufacturing planning such as master planning and material requirements planning, capacity control, level load and material, operation and project scheduling, lead-time management and outside supplier interfaces, data collection and shop performance measurements. Return to top

OMS 419 Manufacturing Systems and Technologies (3-0-3). Prerequisite: OMS 311 or permission of instructor. Development and implementation of manufacturing strategy and the interface/integration of this strategy with other functional areas of the organization. Topics include international comparisons, productivity, strategy formulation and development, order-winners and qualifiers, competitive priorities, process choices, capacity planning, vertical vs. virtual integration, sourcing and supply chain strategy, product profiling, manufacturing infrastructure development, and focused manufacturing. Return to top

OMS 422 Project Management for Business and Technology (3-2-4). Prerequisite: OMS 311. Designed to teach students how to design, implement and control "business" and "technical" projects. Students will be exposed to projects in product development, marketing, process improvement, and engineering projects to learn the differences and similarities in managing them as well as the human side of project management. The course coverage is intended for advanced undergraduate students and it is designed to help them get started as project managers. The course coverage also prepares students for the Project Management Professional (PMP) Certification exam. Microsoft Project package will be used during lab hours. Return to top

OMS 431 Sampling and Experimental Design (4-0-4). Prerequisite: OMS 202. This course presents the principal applications of sample surveys, survey design, criteria of a good sample design, and characteristics of simple random sampling, stratified random sampling, and cluster sampling. Case studies are used where appropriate to illustrate applications of survey sampling. This course also explains how to plan an experiment so that appropriate data can be collected and analyzed and a reliable conclusion can be drawn. Topics covered in the design of experiments include fundamentals, completely randomized design, randomized complete blocks, Latin square, factorial, nested factorial, and analysis of variance in regression models. Strong emphasis will be placed on the application of SAS software to actual data. Return to top

OMS 433 Data Analysis (4-0-4). Prerequisite: OMS 202. This course presents practical applications of statistical methods by using SAS software. The emphasis is on giving students experience in solving business problems using appropriate statistical methods. The SAS topics to be covered include creating SAS data set, using SAS procedure, summarizing data, and interpreting outputs. Statistical techniques studied and applied include organization and presentation of data, statistical testing, multiple regression, analysis of variance, and experimental design. Case studies and projects, with SAS applications, are used to show the application of statistical methods to business problems. Return to top

OMS 445 Quality Control and Management (4-0-4). Prerequisite: OMS 311. This course covers the core principles of the management of quality in the production of goods and services. Statistical quality control techniques are used in the implementation of these principles. Topics include TQM, continuous improvement, control charts, sampling plans, process capability, and ISO 9000. Applicable computer software is used to implement the techniques. Return to top

OMS 448 Queuing and Simulation (4-0-4). Prerequisite: OMS 311. This course covers the application of simulation and animation techniques to queueing systems using personal computers. Included are more complex systems such as those encountered in production, inventory, and service systems. Statistical tools are used to analyze the simulated systems. In addition, the use of simulation software will be an integral part of the course. Return to top

OMS 490 Internship in Operations Management and Business Statistics (4-0-4). Prerequisite: Permission of the instructor. This course is a study of recent topics in operations management and business statistics. One topic may constitute the course, or two or more subjects may be studied. Topics may come from either or both of the areas of production and statistics. Examples include production planning, logistics, quality control, and forecasting. A textbook and/or journal articles will be studied. Topics chosen will be announced in advance. This course can be repeated if the content is changed. Return to top

OMS 491 Special Problems (1 to 4 credits).
Prerequisites: Senior standing, approval of sponsoring professor and department chairperson, written proposal approval before registration. Flexible content/structure course to enable qualified students to pursue special areas of interest and competency; opportunity for independent study, field research, or other special assignments.
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PED 200 Foundations of Sport, Exercise, and Movement (2 hours). Examination of the disciplines, professions, and careers relating to physical education and sport, including the historical perspective, as well as current issues and problems that influence philosophical, psychological, and physiological aspects of sport and activity participation. Return to top

PED 205 Introduction to Sports Management (3 hours). Examines sport and sport-related organizations and acquaints students with job opportunities in the profession. A brief overview of the body of knowledge concerning sport management is included. Future trends in sports management will be highlighted. Includes field experience. Return to top

PED 210-213 Group I Forms of Movement (1 hour). Prerequisite: Fundamental skill in each sport covered is required. Persons lacking such skills may attain this skill level by taking the PES equivalent, if available, to develop basic skill proficiency. Development of intermediate skills and knowledge of rules, skill techniques, and strategies of the game. The student will be exposed to a variety of teaching strategies, styles, and learning environments. The course includes a lab teaching opportunity. The following Group I courses will be offered: Return to top

PED 210 Archery and Golf Return to top
PED 211 Badminton and Tennis Return to top
PED 212 Bowling, Table Tennis, Orienteering, Boccie Ball, and Croquet Return to top
PED 213 Track & Field and Self Defense Return to top

PED 215-218 Group II Forms of Movement (1 hour). Prerequisite: Fundamental skill in each sport covered is required. Persons lacking such skills may attain this skill level by taking the PES equivalent, if available, to develop basic skill proficiency. Development of intermediate skills and knowledge or rules, skill techniques, and strategies of each game or sport. The student will be exposed to a variety of teaching strategies, styles, and learning environments. The course includes a lab teaching opportunity. The following Group II courses will be offered: Return to top

PED 215 Lacrosse, Field Hockey, and Touch Football Return to top
PED 216 Pickleball, Racquetball, Team Handball, Broomball, and Floor Hockey Return to top
PED 217 Softball and Basketball Return to top
PED 218 Volleyball and Soccer Return to top

PED 220 222, 227, and REC 460 Alternative/Lifetime Sports (1 hour). Courses in this block of study are designed to expose the student to the various adventure education-type sport activities. Emphasis will be on the development of sport-specific basic skills and knowledge related to each of the sport activities. The following Alternative/Lifetime Sports courses will be offered (typically in a weekend or other intensive period schedule format): Return to top

PED 220 Cross-Country Skiing and Snowshoeing Return to top
PED 221 In-Line Skating and Cycling Return to top
PED 222 Rock Climbing and Backpacking Return to top
PED 227 Aerobic Instructor Training Return to top

REC Outdoor Recreation (2 hours)

PED 225 Gymnastics (2 hours).
The student will have the opportunity to develop the fundamental skills necessary for tumbling activities, pyramid building, couple stunts, and select pieces of apparatus work. The student will be exposed to a variety of teaching strategies, styles, and learning environments. The course includes a lab teaching opportunity. Attention will be
paid to safety, skill analysis, class management, and assessment.  

**PED 226 Swimming (1 hour).**  
Prerequisite: Red Cross Level 4, Learn to Swim Proficiency. Analysis of aquatic skills, methods and strategies of instruction, progressions, classroom management in aquatic settings, and evaluation.  

**PED 227 Aerobic Instructor Training (1 hour).** Development of skills and knowledge necessary to create and instruct safe and effective aerobic dance classes.  

**PED 250 Mental Skills Training (2 hours).**  
This course is designed for student athletes and performers (including musicians) who are interested in improving their practice and competitive behaviors. Focuses on identifying and improving performance enhancement strategies that can be incorporated into an overall mental performance plan.  

**PED 270 Aquatic Programs (3 hours).** Prerequisite: PED 226. The study of the broad field of aquatics, including self-propelled and equipment-propelled activities. An understanding of certification programs, including swimming, boating, and sailing, and the ability to effectively contrast programs when more than one exists. An understanding of swimming pool chemistry to pass National Pool and Spa Foundation Pool Operators Course.  

**PED 285 Adapted Aquatics (2 hours).**  
Instruction leading to Red Cross adapted aquatics certification. Emphasis on instructing adapted physical education through the medium of water; methods of organizing, administering, and implementing a program for the handicapped.  

**PED 301 Early Childhood/Middle Childhood Physical Education (3 hours).** The course will include movement and skill concepts necessary to successfully implement and teach in the preK-6 setting. Major emphasis will be given to developmentally appropriate games, sports, and activities for each grade. Additionally, students will have the opportunity to practice skills and activities learned both in lab and field settings. Attention will be given to the organization, management, and assessment of students in this age group. A wide variety of teaching strategies, styles, and learning environments will be explored and practiced.  

**PED 302 Middle Childhood/Adolescent-Young Adult Physical Education (3 hours).** Development of teaching strategies and styles necessary for the implementation of team, individual, and contemporary (requiring minimum skill acquisition for success) activities from 6th grade through adulthood. Emphasis will be placed on practical teaching concerns, such as skills needed for class control and activity adaptation for special populations as well as sensitivity to the diversity in our classrooms. Special attention will be given to the full inclusion of all children regardless of physical skill, physical or mental disabilities, or environmental limitations of facilities. Course includes a lab assignment which will provide the student with an opportunity to practice teaching in a PES activity course.  

**PED 316 Health and Physical Education for Classroom Teachers (3 hours).** Prerequisite: HED 210 or equivalent. Introduction to creative and innovative methods needed to implement and integrate school health and physical education by classroom teachers. Topics are community resources, content, curricula, technology, and teaching strategies. Includes an outside service learning experience.  

**PED 322 Kinesiology (3 hours).** Prerequisite: BIO 266. Study of the scientific basis of human movement and the implements used in activity. The biomechanics of physical activity is reviewed and movement is analyzed. The musculoskeletal system is studied and application is made to posture, locomotion, and selected physical-activity skills. The application of biomechanics and anatomy is emphasized during instructional activities and laboratories.  

**PED 324 Physical Fitness (2 hours).**  
Designed for the evaluation and development of personal physical fitness. Hands-on fitness evaluation and exercise prescription for the healthy and cardiac patient are discussed with emphasis on risk factor reduction. This course must be taken with PED 325 and is designed for physical-education majors only.  

**PED 325 Physiology Of Exercise (2 hours).** Prerequisite: BIO 267. Study of the physiological function during physical activity and the effects of exercise-training programs. The functional basis for physical activity and fitness, including metabolic energy sources, cardiorespiratory function, muscle contraction, temperature regulation, and gender comparisons are studied. Laboratory activities focus on the application and measurement of physiological function during exercise. This course must be taken with PED 324 and is designed for physical-education majors only.
PED 328 Legal and Administrative Aspects of Physical Education (4 hours). Prerequisite: HED 200. Legal aspects of physical education will include negligence, intentional torts, contracts, Americans With Disabilities Act (IDEA), and appropriate components of the Occupational Health and Safety Act. Administration will include not-for-profit business organizations and the role of the school, finance, and planning. Return to top

PED 330 Motor Learning and Development (4 hours). Introductory course in motor learning and motor development; emphasis on utilizing basic knowledge of the developmental and learning processes for more effective understanding as to why and how children and adults learn and perform motor skills. Writing Course. Return to top

PED 415 Evaluation in Physical Education (3 hours). Study of the purpose, selection, construction, administration, and evaluation of tests for assessing physical fitness, motor ability, and sport skills. Basic descriptive statistics are used to organize and interpret test scores. Laboratory sessions focus on test administration and statistical analyses. Return to top

PED 430 Psychosocial Aspects of Physical Activity (4 hours). This course provides an overview to the field of sport and exercise psychology. The content focuses on the psychological variables (personalities, motivational orientations, achievement, competitiveness and anxiety levels), sociological variables (the environmental influences affecting sport and exercise participants), group processes, performance enhancement strategies, and motivational strategies for enhancing health and well-being through sport and exercise. Teaching strategies involving the application of psychological skills training to physical-skill acquisition will also be covered. In addition, psychosocial considerations of sport across age groups, race, and gender will be explored. Writing. Return to top

PED 435 Physical Education for Students With Disabilities (4 hours). Study of rationale underlying the provision for physical-education programs for students with disabilities; organization, administration, and conduct of physical education programs for the most prevalent types of educational and medical conditions found in schools and agencies; assists the student to develop placements that adhere to the doctrine of the least-restrictive environment. Includes clinical experiences. Return to top

PED 440 Modes and Models in Physical Education (4 hours). Prerequisite: Professional education core. Strategies for instructional planning, implementation, and assessment of physical education programs are presented and analyzed within the context of the multiage learning setting; development of the organizing centers, content goals, objectives, evaluation procedures (including alternative assessment), and learning experiences; emphasis on development of a variety of teaching strategies and classroom management skills. Course includes clinical and field teaching experiences. Writing. Return to top

PED 445 Gateway to the Profession: Communication and Collaboration (3 hours). A course that brings closure to the accrued knowledge and skills relating to all aspects of teaching. The emphasis in course work will focus on the practical application of the information in public or private educational settings. Taken during the student-teaching semester. Return to top

PED 450 Psychology of Sport and Exercise (4 hours). Reviews the major theories of sport psychology and identifies the strategies involved in the development, maintenance, and change of sport and exercise behavior. The course will focus on both theoretical and applied research in the field of sport and exercise psychology. Return to top

PED 454 Sport Sociology (3 hours). Examines the effects of social change on the structure and function of sport. The class traces the history of sociological theory and research as it has been applied to play and sport. The course explores the popular concept that sport mirrors society through topics such as sport and politics, economics, racism, sexism, violence, and the impact of media on sport. In addition, the changes in the role and functions of youth sport, high school, college, professional sports and the Olympics are explored. Return to top

PED 456 Individualized Physical Education for Children with Special Needs (3 hours). Study of evaluative procedures used to identify the unique needs of students with disabilities in physical education; development of annual goals and benchmarks for helping students acquire motor skills; enables special educators to establish themselves as resource persons. Includes a clinical experience. Return to top

PED 461 Sport Governance (3 hours). Governance structures used in amateur and professional sports will be explored. Emphasis will be placed on the International Olympic Committee, the United States Olympic Committee, and the National Governing Bodies; the National Collegiate Athletic Association; high school leagues; professional team sports leagues; and individual
PED 465 Law and Policy Studies in Sport and Physical Education (4 hours). An overview of the legal and social policy issues most often encountered in sport and physical activity; with emphasis on tort and selected areas of constitutional, commercial, contract, labor, and intellectual property law. The law will be applied to the amateur and professional sport environments, recreation and leisure activities, and to instruction and rehabilitation. Leading court decisions will be explained and will guide students in an in-depth study of their choice and a comprehensive risk management presentation. Return to top

PED 466 Sport Facility Management (3 hours). Provides an overview of sports-facility planning and management, and the relationship between sport stadiums and professional sports. Planning, design, construction, operation, maintenance, security, scheduling, evaluation, and risk management of facilities are presented in detail. Return to top

PED 467 Sports Marketing (3 hours). Identification of the sport product and an overview of marketing applied to the sport industry, including consumer behavior, role of research in marketing, and marketing management, segmentation, pricing, promotion, place, and public relations. Return to top

PED 470 Seminar in Training and Conditioning (3 hours). Study of the principles of physical fitness and conditioning programs. Focuses on methods to enhance physical fitness and/or sport performance for a variety of individuals including athletes and clinical populations. Practical experience in assessing physical fitness is obtained. Return to top

PED 471 Biomechanics of Sport and Fundamental Skills (3 hours). Biomechanics, the study of human movement, will focus on balance, buoyancy, leverage, force, angles of rebound, projectiles, motion, and kinesthesis. They will be used to analyze fundamental movement and create specialized sports skills. These factors will be related to learning theory, coaching techniques, and individualization of instruction. The course, designed to accommodate persons new to biomechanics, will enable sport management personnel to recognize efficient movement in visual media and to describe sport skills accurately. Coaches and teachers will learn to identify error in sport skills. Return to top

PED 472 Physiology of Aging (3 hours). Course is designed to develop an understanding of the physiological, social, and emotional changes which accompany the aging process. Emphasis will be placed on evaluation of physical, sensory, motor, and cognitive changes which accompany aging. Special attention will be paid to developing programs for the elderly in exercise, prevention of falling, improvements in strength, and sense of well-being. Return to top

PED 480 Internship and Senior Seminar (8 hours). Prerequisites: Senior status and permission of department chair. Specialized field experience in an appropriate setting that provides extensive exposure for the sports manager or exercise/fitness specialist. Includes the development of a professional portfolio and required seminars. Return to top

PED 481 Internship and Senior Seminar (12 hours). Prerequisites: Senior status and permission of department chair. Specialized field experience in an appropriate setting that provides extensive exposure for the sports manager or exercise/fitness specialist. Includes the development of a professional portfolio and required seminars. Return to top

PED 493 Special Topics in Sport Education (2 to 4 hours). Study of current topics of interest in the discipline of sport and sport education. Specific topics and hours will be based on analysis of need at the time each course is scheduled and may include such topics as motivating students in physical education, applying sport psychology strategies to enhance performance, the emerging role of women in sport, and improving exercise adherence. Return to top

PED 496 Individual Projects in Physical Education (1 hour). Prerequisite: Permission of department chair. Independent project in a selected area of physical education. Project must be approved by and arrangements made with permission of project supervisor and department chair. May be repeated for a maximum of four hours. Return to top

PED 497 Individual Projects in Physical Education (2 hours). Prerequisite: Permission of department chair. Independent project in a selected area of physical education. Project must be approved by and arrangements made with permission or project supervisor and department chair. May be repeated for a maximum of four hours. Return to top
Physical Activity Courses

PES 101 Physical Fitness (1 hour).
Focuses on principles of physical fitness, risk factors for cardiovascular disease and how to avoid/overcome them through weight control, exercise, and nutrition. Students work to improve personal fitness levels and develop individualized fitness programs for future participation. Return to top

PES 102 Physical Fitness Orientation (2 hours).
Introduction to personal fitness programs with emphasis on measurement, evaluation, and the development of physical fitness and positive long-term fitness attitudes. Return to top

PES 104 Jogging (1 hour). Introduction to techniques, principles, and benefits of jogging. Return to top

PES 105 Weight Training (1 hour).
Introduction to techniques, principles, and benefits of weight training. Return to top

PES 106 Walking for Aerobic Fitness (1 hour).
Designed to progressively develop cardiorespiratory endurance by walking. Individuals who are at below-normal physical fitness levels will benefit most. Regular walking outside of class will be required. Return to top

PES 107 Cross-Training (1 hour).
A program of fitness activities that stresses cardiovascular aspects of training. Emphasis on the use of several sports for the purpose of training for one specific sport. Whole-body fitness will include strength, flexibility, and anaerobic power. Return to top

PES 108 BodyPUMP (1 hour).
Resistance training class to music; athletic movements work all major muscle groups; pre-choreographed routines use high repetitions and low weights to increase muscle endurance and strength; conducted off-campus at the Downtown YMCA. Return to top

PES 109 Distance Running (1 hour).
Prerequisite: Ability to run continuously for 30 minutes. Intended for person who has progressed through the beginning stages of jogging and running. Knowledge and abilities are expanded with respect to the physiological and psychological changes that occur for the distance runner. Return to top

PES 110 Basketball (1 hour).
Introduction to basic rules of basketball and fundamentals of team play; emphasis is placed on individual skill development. Return to top

PES 111 Volleyball (1 hour).
Introduction to basic rules and concepts of coed volleyball; emphasis on individual skill development. Return to top

PES 112 Intermediate Volleyball (1 hour).
Designed to give the volleyball enthusiast an opportunity to explore advanced skill techniques of the game. Focus is on the development of strategies that apply to the game of "Power Volleyball." Return to top

PES 113 YMCA Personal Training Instructor (1 hour).
Three certifications are earned in this intensive fitness class: CPR, principles of YMCA health and fitness, and YMCA personal training instructor. Learn how to properly use cardiovascular and strength (free weights and selectorized) equipment, set up workouts for others, effective goal setting, and communication strategies. Includes muscle anatomy and physiology, practical sessions with various equipment, and case studies. Textbooks and manual are required at additional cost. Return to top

PES 114 Relaxation Training (1 hour).
Designed to assist students in understanding the impact of stress on their lives, recognizing early warning signs of stress, and developing strategies to reduce levels of stress and tension. Course focuses on the variety of techniques used to achieve a state of attentive relaxation. Return to top

PES 115 Spinning I (1 hour).
Beginning stationary cycling program. Learn how to properly use the bike and manipulate it to create a challenging workout. Experience a journey of flat roads, sprints, jumps, uphill climbs, and downhill runs. Motivational music is used to get into the rhythm of the ride. Return to top
PES 116 Spinning II (1 hour).
Intermediate stationary cycling program. Learn how to properly use the bike and manipulate it to create a challenging workout. Experience a journey of flat roads, sprints, jumps, uphill climbs, and downhill runs. Motivational music is used to get into the rhythm of the ride. Return to top

PES 117 Rock Climbing (1 hour).
Experience "free climbing" and "bouldering" in an indoor rock environment; basic climbing and movement techniques; belay techniques and basic climbing-specific knot tying; become belay certified; additional fee required; conducted at CSU rock wall facility and off-campus at Cleveland Rock Gym. Return to top

PES 118 Intermediate Wallyball (1 hour).
An introduction to the basic rules and concepts of coed wallyball (similar to volleyball except played in a racquetball court); emphasis is on refinement of skills of the game of volleyball. Return to top

PES 119 Field Hockey (1 hour).
Designed to develop fundamental skills and knowledge of rules, game-play strategies, and skill techniques in the game of field hockey; game-specific physical conditioning also emphasized. Return to top

PES 120 Beginners Swimming - Level 1-4 (1 hour). For both the nonswimmer and low-skilled swimmer; includes Red Cross beginner and advanced beginner training. Return to top

PES 121 Intermediate Swimming - Level 5-6 (1 hour). For the individual with middle-range swimming skills; based on the Red Cross learn-to-swim format. Return to top

PES 122 Swimmers - Level 7-8 (1 hour).
For the individual who has mastered the middle-range swimming skills and who wishes to develop greater swimming competency; based on the Red Cross learn-to-swim format. Return to top

PES 123 Synchronized Swimming (1 hour).
Introduction to basic stunts of synchronized swimming; emphasis on individual skill development. Return to top

PES 125 Water Exercise Certification (2 hours). Prerequisite: Certification as aerobics instructor, life guard, or Water Safety Instructor (WSI). Development of skills and knowledge to create and instruct safe and effective water aerobic/exercise classes; preparation for becoming certified by the Aquatic Exercise Association. Return to top

PES 126 Lifeguard Training (2 hours).
Prerequisites: Swim 500 yards continuously performing at least 50 yards each of the front crawl, breast stroke, side stroke, lifesaving stroke, elementary backstroke; surface dive to 9 feet and retrieve 10-pound brick; surface dive to 5 feet and swim 15 feet underwater; and tread water for 1 minute. Regular Red Cross course leading to certification in lifeguard training. Standard First Aid and CPR must be current by conclusion of course. Return to top

PES 127 Water Safety Instructor (3 hours).
Instruction leading to Red Cross Water Safety Instructor certification; emphasis on development of swimming skills and methods of organization, teaching, and skill analysis of swimming programs. Return to top

PES 128 Aquatic Fitness (1 hour).
Prerequisite: Intermediate swimming skills. Focuses on principles of physical fitness applied to aquatic activities. Students work to improve personal fitness levels through swimming and other activities in the pool. Return to top

PES 130 Beginning Springboard Diving (1 hour). Basic diving instruction from both the one- and three-meter boards. Return to top

PES 132 Skin Diving (1 hour).
Prerequisites: Swim 50 feet underwater, perform survival float 20 minutes, tow an inert swimmer 40 yards, swim 300 yards in a maximum of 10 minutes. Introduction to the safe handling of mask, fins, and snorkel, and the related underwater environment. Return to top

PES 134 Scuba Diving (2 hour).
Prerequisites: Swim 75 feet underwater, perform survival float 20 minutes, tow an inert swimmer 50 yards, swim 400 yards in less than 10 minutes, permission of instructor only. Opportunity to learn safe skin- and scuba-diving skills; N.A.U.I. and Y.M.C.A. certification available upon successful completion of course work plus additional open water tests. Additional fee charged. Return to top

PES 136 Canoeing and Small Crafts (1 hour).
Designed for gaining knowledge of small craft safety and acquiring practical experience in the proper handling of small crafts; emphasis placed on canoeing. Previous minimum background through Red Cross Intermediate Swimming recommended.
PES 138 Basic Sailing (1 hour).
Course offered in conjunction with American Red Cross. Provides hands-on experience in boat handling, points of sail, types and classes of boats, sails and rigging, required and recommended equipment, safety and rescue techniques, artificial respiration. Return to top

PES 140 Modern Dance I (1 hour).
Introduction to the fundamental theories and skills of modern dance. May be repeated for up to 4 hours. Return to top

PES 141 Modern Dance II (2 hours).
Continued study of the fundamental theories and skills of modern dance. May be repeated for up to 8 hours. Return to top

PES 146 Jazz Dance I (1 hour).
Introduction to the fundamental theories and skills of jazz dance. May be repeated for up to 4 hours. Return to top

PES 147 Tap Dance I (1 hour).
Introduction to the skills, rhythms, and stylization of tap dance. Return to top

PES 148 Tap Dance II (1 hour).
Expanding on previous techniques of Tap Dance I with emphasis on complex phasing. Return to top

PES 150 Ballet I (1 hour).
Introduction to the fundamental theories and skills of classical ballet. May be repeated for up to 4 hours. Return to top

PES 151 Ballet II (2 hours).
Continued study of the fundamental theories and skills of classical ballet. May be repeated for up to 8 hours. Return to top

PES 154 African Dance (1 hour).
Focuses on performance, understanding, and enjoyment of West African traditional dance in order to develop a fundamental awareness and appreciation of it as an art form and its social and cultural contributions to society. Return to top

PES 156 Traditional Social Dance I (1 hour).
Introduction to the basic steps of various social dances, including the fox trot, waltz, jitterbug, polka, and cha-cha. Return to top

PES 157 Traditional Social Dance II (1 hour). Continued study of various social dances, including the fox trot, waltz, jitterbug, polka, cha-cha, and tango. Return to top

PES 158 Aerobic Jazz (1 hour).
Includes basic jazz exercises and a variety of easy and fun-filled dance routines. Dances are combined into an aerobic framework (continuous rhythmic movement), warm-ups, high-level activity, and cool-down periods. Return to top

PES 160 Water Aerobics (1 hour).
A non-swimming aerobic and dance exercise class for adults of all age group and activity levels. Taught in the shallow water, this course uses choreographed movements to provide toning, conditioning, and aerobic benefits along with aesthetic experiences and body awareness. The activity uses the water to cushion joints, neutralize gravity, and add buoyancy. Return to top

PES 162 Yoga I (1 hour).
Comprehensive instruction in the three basic aspects of classical Yoga: exercise, correct breathing, and relaxation/meditation. Yoga theory, scheduling, stress management, and nutrition discussed in relation to individual goals. American Yoga Association instructors. Return to top

PES 163 Yoga II (1 hour). Prerequisite: PES 162. Emphasizes the exercise portion of the curriculum and increasing the number and the difficulty of exercises while working within individual limitations; several new breathing techniques also taught. American Yoga Association instructors. Return to top

PES 165 Self-Defense (1 hour). Study of preventive measures and self-protection techniques. Return to top

PES 166 Beginning Fencing (1 hour). For the beginner, course focuses on the attack and defense techniques using the foil. Return to top

PES 167 Intermediate Fencing (1 hour). Prerequisite: PES 166 or equivalent. Further development of attack and defense techniques using the foil. Return to top

PES 168 Beginning Tae Kwon Do (1 hour).
Introduction to the traditional Korean martial art of self-defense, including basic principles of punching, kicking, striking, blocking, and practical self-defense skills. Rank/belt promotional test is available at the end of the course. Return to top
PES 169 Intermediate Tae Kwon Do (1 hour). Prerequisite: PES 168 or permission of instructor. The skills of the novice are developed through reinforcement of basic techniques. Advancement of rank/belt is possible at the end of the course. Return to top

PES 170 Aikido I (1 hour).
Introduction to this graceful, dancelike, and nonviolent Japanese art of self-defense, includes study of the basic movement and tumbling skills, principles of centering, energy flow and focus, and blending of energies. Return to top

PES 171 Aikido II (1 hour). Prerequisite: PES 170 or permission of instructor. Continued practice of the basic techniques and principles learned in beginning Aikido as well as the introduction of skills and techniques. Testing for rank is possible at the end of the course. Return to top

PES 174 T'ai Chi Ch'uan I (1 hour).
Ancient nonaggressive Chinese martial art which also serves as a form of moving meditation and exercise. There is a short-form course consisting of 33 movements which can be learned and understood in a semester session. Return to top

PES 176 Golf (1 hour).
Introduction to fundamental golf skills, rules, etiquette, equipment, and playing opportunities. Analysis of swing by instant video replay is used. Return to top

PES 178 In-Line Skating (1 hour).
Covers basics to more advanced moves for both novice and experienced in-line skaters; street smarts, safety techniques, and how to care for equipment; training steps for in-line racing; students must supply own equipment. Return to top

PES 179 Cycling (1 hour).
Basic riding techniques and essentials of training for mountain biking, touring, commuting, racing, or pleasure-riding; how to ride safely and confidently in traffic; meets needs of the serious cyclist and those riding for fun and fitness. Students must supply own equipment. Return to top

PES 180 Badminton (1 hour).
Course designed for various levels of badminton skill with individual and group instruction in basic skills and strategies for singles and doubles play. Return to top

PES 182 Beginning Tennis (1 hour).
Introduction to the basic rules of tennis and fundamentals of singles and doubles play; emphasis on individual skill development. Return to top

PES 183 Intermediate Tennis (1 hour).
Continuation of individual skill development with emphasis on technique and game strategy. Return to top

PES 185 Bowling (1 hour).
For all levels of bowling skill from beginner on up; a programmed recreational activity conducted off campus. Return to top

PES 187 Beginning Squash (1 hour).
Introduction to the fundamental skills, knowledge, and values of the game of squash racquets including application of abilities in game situations. Return to top

PES 188 Beginning Racquetball (1 hour). Introduction to rules, strategies, and etiquette of racquetball; opportunity to play all four-wall variations of the game: singles, cut-throat, and doubles in a coed setting. Return to top

PES 189 Intermediate Racquetball (1 hour).
Designed to give the racquetball enthusiast an opportunity to explore advanced skill techniques of the game, focusing on the development of strategies for the improvement of a player's skill and understanding of the game. Return to top

PES 190 Tumbling and Trampoline (1 hour).
Introduction to skill techniques needed to perform basic moves on the mats and trampoline. Focus is on values and safety. Activities designed to develop body awareness and progression from simple to complex skills. Return to top

PES 195 Skiing (1 hour).
Development of knowledge and skills in beginner, intermediate, or advanced, intermediate snow skiing; conducted off campus. Additional fee charged. Return to top

PES 198 Adapted Physical Education Programming (1 hour). Offered to all students who, because of permanent or temporary disabilities, cannot participate in the regularly offered physical activity courses. Students will be involved in activities designed to deal with their specific problems, and receive 1 hour for their efforts. May be repeated for up to 8 hours. Return to top
PES 199 Special Programs (1 hour).
Prerequisite: Permission of department chairperson. Designed for the student who may wish, because of special interest, to receive hour for participation in recreational or sports activities not included in the courses listed above. Students wishing to receive hour for this must report to the Physical Education office to make arrangements for approval and verification of the activity. May be repeated for up to five hours. Return to top

PES 240 Modern Dance III (2 to 3 hours). Prerequisite: PES 141 or permission of instructor. Further study of modern-dance theory and skill, with emphasis on increasing physical competence and understanding of underlying theory. May be repeated for up to 8 hours. Return to top

PES 250 Ballet III (2 hours). Prerequisite: PES 151 or permission of instructor. Further study of the theory and skills of classical ballet, with emphasis on increasing physical competence and understanding of underlying theory. May be repeated for up to 8 hours. Return to top
Philosophy

Professors:
Joseph DeMarco, Richard M. Fox (Emeritus), Jane McIntyre (Chairperson), Nicholas J. Moutafakis, Nelson Pole, Samuel A. Richmond, Alan S. Rosenbaum, Mary Ellen Waithe; Associate Professors: Michael R. Baumer, Diane Steinberg, Lee F. Werth; Assistant Professors: Martin T. Harvey, Allyson Robichaud.

Note: Prerequisites for courses below may be waived with approval of the instructor. Students who have had a 4-credit course in a particular area should not take a corresponding two-credit course, and vice versa.

PHL 131 Deductive Logic I (4-0-4).
An introduction to symbolic logic, with an emphasis on the study of propositional logic. This course may also be offered via the World Wide Web. Mathematics and Logic. Return to top

PHL 171 Introduction to Philosophy (4-0-4).
Prerequisite: Open only to freshmen and sophomores or by written permission of department chairperson. An elementary survey of leading themes, thinkers, movements, branches, and problems in Western philosophy. Arts and Humanities. Return to top

PHL 181 Historical Introduction to Philosophy (4-0-4).
Traces the development of fundamental themes, problems, and ideas in the Western philosophical tradition via readings drawn from the tradition's leading historical figures. Arts and Humanities, Western Culture and Civilization. Return to top

PHL 211 Morals and Rights (4-0-4).
An introductory survey of philosophical approaches to moral problems. Emphasis will be on theories about how we ought to act and about goals, rights and responsibilities appropriate to human beings. Current moral issues are analyzed and discussed. Arts and Humanities Return to top

PHL 215 Engineering Ethics (3-0-3).
An examination of the social impact of technology and its relationship to ethics, with the objective of identifying and clarifying obligations that might arise in technological research and its applications. The course will survey a variety of moral theories, as well as Engineering codes of ethics. The case study method will be used; sources will include the history of science and technology, and reports from professional societies. Topics covered may include whistle blowing; and environmental, safety, and privacy issues. Arts and Humanities, Writing Return to top

PHL 240 Health Care Ethics (3-0-3).
An introduction to major ethical theories and the principles of bioethics. This knowledge will be applied to the analysis of ethical problems that arise in the health-care field. Arts and Humanities. Return to top

PHL 245 Science and Philosophy (4-0-4).
A survey of the interplay of key scientific concepts and philosophical ideas as these impact upon such areas as cosmology, evolution, technology, and social change. Arts and Humanities. Return to top

PHL 253 Philosophy of Feminism (4-0-4).
An examination of classical and contemporary views on the nature of woman; the variety of response within the feminist movement to the situation of women in modern society; emphasis is placed on discovery of underlying philosophical presuppositions concerning human nature, human good, equality, masculinity, and femininity. Return to top

PHL 261 Ancient Philosophy (4-0-4).
An examination of the beginnings of Western philosophic thought from Thales through the Hellenistic period, with extensive consideration of Plato and Aristotle. Classical and Medieval Studies course, Western Culture and Civilization; Arts and Humanities. Return to top

PHL 262 Medieval Philosophy (4-0-4).
A continued examination of Western philosophic thought with special emphasis on St. Augustine and Thomas Aquinas. Classical and Medieval Studies course, Western Culture and Civilization, Arts and Humanities. Return to top
PHL 263 Early Modern Philosophy (4-0-4).
A continuation of the examination of Western philosophic thought up to the 19th century, including Continental Rationalism (Descartes, Leibnitz, Spinoza, and Kant) and British Empiricism (Locke, Berkeley, and Hume). Western Culture and Civilization, Arts and Humanities, Writing. Return to top

PHL 283 Introduction to Ethics (4-0-4).
An introduction to ethics through the study of the history of ethics. This course traces the development of fundamental themes and problems of ethics in the Western philosophical tradition through readings drawn from leading philosophers. Arts and Humanities, Western Culture and Civilization. Return to top

PHL 311 Ethics (4-0-4).
Prerequisite: One course in philosophy. An examination of the assumptions, method and content of major theories of ethics, with an emphasis on contemporary approaches. Writing Return to top

PHL 321 Philosophy of Art (4-0-4).
Prerequisite: One course in philosophy. An examination of art and aesthetic experience, including personal, social and political significance. Issues explored may include artistic concepts pertaining to form and content, representation and expression, meaning and truth, critical interpretation and evaluation. Writing Return to top

PHL 331 Philosophy of Religion (4-0-4).
Prerequisite: One course in philosophy. An examination of the relations between various philosophical systems and historical religions; theories of faith and knowledge, including a discussion of proofs for the existence of God. Writing. Return to top

PHL 332 Deductive Logic II (4-0-4). Prerequisite: PHL 131 or permission of instructor. A continuation of the study of symbolic logic, with an emphasis on predicate logic. Return to top

PHL 341 Philosophy of Law (4-0-4).
Prerequisite: One course in philosophy. The meaning and role of law in human life and contemporary society, with reference to social and political problems. Writing. Return to top

PHL 345 Philosophy of Science (4-0-4).
Prerequisites: Two courses in philosophy or permission of instructor. An examination of the assumptions and methodology of scientific explanation and its philosophic implications. Writing. Return to top

PHL 351 Social and Political Philosophy (4-0-4).
Prerequisite: One course in philosophy. A philosophical examination of the nature of justice, equality, liberty, rights and political obligation. Philosophers studied may include Plato, Hobbes, Locke, Hume, Kant, Marx and Mill, as well as contemporary theorists such as Rawls, Dworkin and Feinberg. Writing. Return to top

PHL 361 20th Century Continental Philosophy (4-0-4). Prerequisite: One course in philosophy. An examination of some of the key movements in recent continental thought. Typical readings may include selections from the works of Husserl, Heidegger, Sartre, Simone de Beauvoir, Merleau-Ponty, Foucault, Gadamer, Levinas. Writing Return to top

PHL 362 American Philosophy (4-0-4).
Prerequisite: One course in philosophy. An examination of the thought of American philosophers, including Peirce, James, and Dewey. Writing. Return to top

PHL 363 19th-Century Thought (4-0-4).
Prerequisite: One course in philosophy. This course is a survey of competing 19th-century world views and methodologies. Excerpts from the works of philosophers such as Mill, Comte, Hegel, Schopenhauer, Kierkegaard, and Nietzsche will be examined, and the relevance of their views to 20th-century philosophy will be explored. Writing. Return to top

PHL 377 Philosophy and Language (4-0-4).
Prerequisite: One course in philosophy. An examination of the philosophical origins of traditional grammar and of transformational grammar; pertinent insights by thinkers, including Aristotle, Descartes, Locke, Hume, Wittgenstein, Chomsky, and Katz; special attention to the tenability of claims made by transformational grammmarians from the viewpoint of philosophical consistency. Linguistic Studies course, Writing. Return to top

PHL 405 Prominent Philosophers (4-0-4).
Prerequisites: Two courses in philosophy, at least one of which must be numbered higher than 260. Concentrated study of the writings of outstanding philosophers (normally no more than one or two philosophers in any one offering). Usually offered every semester. Writing. Return to top

PHL 410 Studies in the History of Philosophy (4-0-4).
Prerequisite: Two courses in philosophy, at least one of which must be numbered higher than 260. Study of a particular philosophical movement and its assumptions, methods, and implications. Return to top
PHL 420 Reasoning in Bioethics: Basic Issues (2-0-2).
Examines alternative approaches to bioethical reasoning - principism casuistry, and the philosophy of social justice - in relation to such questions as resource allocation, death and dying, and other issues in bioethics. Return to top

PHL 421 Reasoning in Bioethics: Contextual Approaches (2-0-2). Examines alternative approaches to bioethical reasoning - virtue theory, narrative ethics, intuitionism, and Feminist ethics - in relation to such questions as informed consent privacy, and institutional practices with special attention to cultural relativism. Return to top

PHL 422 Clinical Bioethics: Cases I (2-0-2).
This course examines reasoning regarding classic and contemporary cases in bioethics. Professional conduct, conflicts of duties and conflicts of interests, relations among professions, cultural diversity, genetic counseling, and reproductive ethics are among topics typically included. Return to top

PHL 423 Clinical Bioethics: Cases II (2-0-2).
This course examines reasoning regarding classic and contemporary cases in bioethics. Human research subjects, informed consent, competence, organ transplantation, death and dying, and futility are among topics typically included. Return to top

PHL 424 Bioethics Policy: Prevention and Access (2-0-2). This course examines health policies regarding issues such as prevention, primary care, uninsured and underserved populations, rationing, and aims of managed-care relative to theories of justice, with international comparisons. Return to top

PHL 425 Bioethics Policy: Technology (2-0-2).
This course examines the impact of rapid technological change on bioethics. Among topics typically included are DNA technology, gene therapy, enhancement of inherited traits, transplant policy, surrogacy, health and the human environment. Return to top

This course examines the foundations of human health institutions and practices in federal tax exemption legislation, federal financing (Medicare and Medicaid), state licensure laws, state insurance legislation, and proposal for health-law reform. Return to top

PHL 427 Bioethics and Law: Rights (2-0-2).
This course examines individual rights in areas such as refusal of treatment conception, birth, abortion, protection of human subjects in experimentation, the law of medical liability, and proposed patients’ rights legislation. Return to top

PHL 428 Bioethics: Special Topics (2-0-2). This course examines special topics in bioethics. Return to top

PHL 432 20th-Century Philosophy: The Analytic Tradition (4-0-4). Prerequisites: PHL 131 plus another philosophy course numbered higher than 260. Study of the development of analytic philosophy in the 20th century. Typical readings may include selections from the works of Frege, Moore, Russell, Wittgenstein, Ayer, Austin, Quine, Putnam, Kripke, and Davidson. Writing. Return to top

PHL 433 Advanced Symbolic Logic (4-0-4). Prerequisite: PHL 332 or permission of instructor. A continuation of the topics presented in PHL 332. Return to top

PHL 440 Moral Reasoning and Bioethics (4-0-4).
An examination of ethical systems and forms of argumentation as they bear upon case studies in bioethics. Dominant ethical theories will be studied and critiqued, especially from the standpoint of application. Reasoning at the levels of principles, rules, and particular judgments will be distinguished; and the relevance of institutional practices, roles, and particular circumstances will be analyzed. This course may also be offered via the World Wide Web. Return to top

PHL 441 Clinical Issues in Bioethics (4-0-4).
The course will focus on moral problems which arise in the day-to-day practice of health-care professionals, administrators, and researchers within the framework of existing institutions, social policies, and laws. It will include readings on controversial moral issues in clinical ethics and apply forms and strategies of moral reasoning to selected cases. This course may also be offered via the World Wide Web. Return to top

PHL 442 Policy Issues in Bioethics (4-0-4).
Policy issues in bioethics reviews the role of governments in developing and implementing health-care policies. Readings and discussion will cover such topics as surrogacy, transplantation, problems of financing, the allocation of resources, and experimentation. Return to top

PHL 443 Bioethics and the Law (4-0-4).
Students will learn rudimentary legal research skills, the structure of the American legal system, and constitutional foundations of health-care law as applied to some classical and contemporary legal issues which may include death and dying, transplantation, genetic and reproductive law, human subjects research, and employee testing for drug use. Return to
PHL 450 Philosophy of Mind (4-0-4). Prerequisites: Two courses in philosophy, at least one of which must be numbered higher than 260. An investigation into classical and contemporary accounts of the concepts of person and action. Issues such as the mind-body problem and the problem of other minds will be discussed. Writing. Return to top

PHL 453 Social, Political, and Legal Philosophy (4-0-4). Prerequisites: Two courses in philosophy, at least one of which must be numbered higher than 260. Concentration upon special problems of social, political, and legal philosophy; classical and contemporary views. Writing. Return to top

PHL 471 Theory of Knowledge (4-0-4). Prerequisites: Two courses in philosophy, at least one of which must be numbered higher than 260. An examination of theories concerning the nature and extent of knowledge with an emphasis on contemporary approaches. Writing. Return to top

PHL 481 Metaphysics (4-0-4). Prerequisites: Two courses in philosophy, at least one of which must be numbered higher than 260. An examination of the problems concerning the nature of reality. Writing. Return to top

PHL 496 Research in Philosophy (1 to 4 credits). Exhaustive research on a philosophic problem to assist the student in attaining proficiency in independent research. Application for permission to register for PHL 496 must be submitted to department chairperson or representative during the semester prior to the enrollment in the course. May be repeated for credit. Return to top
Undergraduate Catalog 2002-2004

Physics

Professors: Miron Kaufman (chairperson), James Lock, Jearl Walker; Professor Emeriti: Karl J. Casper, Bernard Harmermeh, Herbert Schlosser, Jack A. Soules; Associate Professors: Paul Hambourger, Ronald Haybron, Robert Klein, Thomas Taylor, G. Theodore Wood; Associate Professors Emeriti: Clyde B. Bratton, George W. Ficken, Francis C. Stephenson; Assistant Professor: Chun-Min Lo; Instructors: Anthony Stallwood, Alla Zilichikhis; Adjunct Faculty: Qin-sheng Chen, Cleveland Clinic Foundation, Christopher Deibel, Cleveland Clinic Foundation, Kenneth Flurchick, Ohio Supercomputer Center, Gennady Neyman, Cleveland Clinic Foundation, Martin Weinhaus, Cleveland Clinic Foundation, Douglas Wilkinson, Cleveland Clinic Foundation.

PHY 101 The Flying Circus of Physics: Motion and Heat (4-0-4). Prerequisite: one unit of high-school algebra. Practical and everyday aspects of physics concepts such as kitchen physics, walking on fire, mechanics of sports, and electricity. Natural Science. Return to top

PHY 102 The Flying Circus of Physics: Sound and Light (3-0-3). Prerequisite: one unit of high-school algebra. Topics include waves, optics, and modern physics, how the eye and camera work, the laser, the theory of relativity, and some basic cosmology (just what is a "black hole" anyhow?). Natural Science. Return to top

PHY 103 The Flying Circus of Physics Laboratory (0-2-1). Selected experiments in physics. PHY 101 must be taken concurrently. Natural Science with Laboratory. Return to top

PHY 115 Physics, Technology and Society (3-0-3). Focuses on a specific technology, its underlying physics and its interaction with society. Topics may include space exploration, weapons systems, exotic modes of transportation, communication systems, and data storage and retrieval. Natural Science. Return to top

PHY 193 Topics in Physics (4-0-4). Prerequisites: one unit of high-school algebra. Topics chosen by the instructor include "Science Fiction" or "Science of Photography." Natural Science. Return to top

PHY 200 Astronomy Laboratory. (0-2-1). This course provides hands-on experience with simple observational astronomy activities. It compliments the educational experience of the Astronomy lecture courses PHY 201 and PHY 202. Either PHY 201 or PHY 202 must be taken concurrently. Natural Sciences Requirement. Return to top

PHY 201 Astronomy: Stars and Galaxies (4-0-4). Prerequisite: One unit of high-school algebra. Introduction to astronomy, including stars, stellar evolution, origin of elements, galaxies, and cosmology. Natural Science. Return to top

PHY 202 Astronomy: Planets, Asteroids and Comets (4-0-4). Prerequisite: one unit of high-school algebra. Introduction to solar system, including the moon, sun, planets, asteroids, comets, and meteors. Natural Science. Return to top

PHY 203 Science and Religion I (3-0-3). Introduction to the analysis of the interplay between religious, philosophical, and scientific attempts to understand the universe. Return to top

PHY 204 Science and Religion II (3-0-3). Prerequisite: PHY 203. Continuation of PHY 203. Return to top

PHY 205 History of Science I (4-0-4). The development of scientific thought from antiquity to the 20th century and the new ideas of relativity and quantum mechanics. Key themes are the evolving universe and the development of Newtonian mechanics. Natural Science Return to top

PHY 206 History of Science II (4-0-4). The influence of modern physics on the development of scientific thought, including its influence on a new world view. The origin and the future of the universe will be discussed. Natural Science. Return to top

PHY 221 College Physics I (4-2-5). Prerequisites: three units of high-school math, three units of high-school science. Algebra-based physics, including mechanics, thermodynamics, fluids, acoustics and optics. Natural Science with Laboratory. Return to top

PHY 222 College Physics II (4-2-5). Prerequisites: three units of high-school math, three units of high-school science, PHY
PHY 241 University Physics I (4-2-5). Prerequisites: MTH 181, three units of high-school math, three units of high-school science, Corequisite: MTH 182. Calculus-based physics, including mechanics, thermodynamics, and acoustics. Natural Science with Laboratory.

PHY 242 University Physics II (4-2-5). Prerequisites: PHY 241/243, MTH 181, MTH 182, three units of high-school math, three units of high-school science, Corequisite: MTH 281. Calculus-based physics, including electricity, magnetism, optics. Natural Science with Laboratory.

PHY 243 University Physics I (4-2-5). Prerequisites: MTH 181, three units of high-school math, three units of high-school science, Corequisite: MTH 182. Calculus-based physics, including mechanics, thermodynamics, acoustics. Writing, Natural Science with Laboratory.

PHY 244 University Physics II (4-2-5). Prerequisites: PHY 241/243, MTH 181, MTH 182, three units of high-school math, three units of high-school science, Corequisite: MTH 281. Calculus-based physics, including electricity, magnetism, and optics. Writing, Natural Science with Laboratory.

PHY 301 Musical Acoustics (3-2-4). For music and speech and hearing majors. Analysis of waveforms, sound sources, transmission and detection of sound, design of musical instruments.

PHY 310 Introduction to Holography (2-4-3). Prerequisites: PHY 241 (243), PHY 242 (244). Laboratory course, production of single- and multiple-beam transmission and reflection holograms, three-dimensional cylindrical holograms.

PHY 320 Introduction to Computational Physics (4-0-4). Prerequisite: PHY 221 or PHY 241. Elements of modeling of physical and engineering phenomena using a programming package such as MATLAB. Topics covered include solving systems of equations, graphing functions, differential equations, and random processes.

PHY 325 Introduction to Theoretical Physics (4-0-4). Prerequisites: PHY 241 (243), PHY 242 (244), MTH 181, MTH 182, MTH 281. Physics applications of differentiation, integration, Fourier series, differential equations, complex numbers.

PHY 330 Introduction to Modern Physics (4-0-4). Prerequisites: PHY 241 (243), PHY 242 (244), MTH 181, MTH 182, MTH 281. Theory of special relativity, wave properties of particles and particle properties of light, atomic and nuclear structure, radioactivity, semiconductors.


PHY 350 Electricity and Magnetism (4-0-4). Prerequisites: PHY 330, MTH 181, MTH 182, MTH 281. Vector analysis; Gauss law, electrostatic potential; electric dipoles; dielectrics; Ampere law and Biot-Savart law; magnetic dipoles, law of induction, displacement currents, Maxwell equations.

PHY 360 Electronics Laboratory (2-4-3). Prerequisites: PHY 241 (243), PHY 242 (244); MTH 181, MTH 182, MTH 281. AC and DC circuit analysis; steady states and transients; equivalent circuits; diodes, transistors and microprocessors; digital integrated circuits; sequential logic circuits.

PHY 395 Physics Seminar (variable credit). Prerequisites: Junior standing, permission of instructor. Topics of current interest.

PHY 411 Advanced Physical Laboratory (variable credit). Prerequisite: Permission of instructor. Experiments in fields of current interest to physics faculty.


PHY 430 Introduction to Medical Physics (4-0-4). Prerequisite: PHY 241 (or 243), PHY 242 (or 244) or permission of the instructor. This course will introduce students to the medical applications of radiation and imaging physics. Topics covered include interactions of radiation with biological tissues, production and properties of radionuclides, radiation therapy physics, dosimetry, diagnostic radiology, nuclear medicine, and issues of radiation safety.

PHY 440 Quantum Physics I (4-0-4). Prerequisites: PHY 330, PHY 340. The uncertainty principle, the Schroedinger equation, probability and measurement, potential barrier and well problems, rigid rotator and harmonic oscillator, and the
hydrogen atom. Return to top

**PHY 441 Quantum Physics II (4-0-4).** Prerequisites: PHY 440, PHY 350. Angular momentum and magnetic moment, Pauli spin matrices, time independent and time dependent perturbation theory, variational approximation, atomic fine structure and hyperfine structure, partial wave analysis and the Born approximation for quantum mechanical scattering. Return to top

**PHY 450 Optics and Electromagnetic Waves (4-0-4).** Prerequisite: PHY 330. Maxwell equations; electromagnetic energy; electromagnetic waves; interaction of light with dielectric and metallic materials; dispersion; geometric optics; lenses and lens aberrations, mirrors, polarization, birefringence, interference, interferometer design, Fraunhoffer and Fresnel diffraction. Return to top

**PHY 455 Optics Laboratory (2-6-4).** Prerequisite: PHY 450 or permission of instructor. Advanced optics laboratory that gives students "hands-on" experience with optical instruments and techniques; experiments on dispersion in glass, interferometry, spectral analysis, diffraction, Gaussian wave optics; student-designed experiment. Return to top

**PHY 460 Laser Physics and Photonics (4-0-4).** Prerequisites: PHY 241 (243), PHY 242 (244). Basics of laser operation and photonics. Topics include spontaneous and stimulated emission, the laser principle, laser types, optical detectors, integrated optics Return to top

**PHY 470 Environmental Physics (4-0-4).** Prerequisite: PHY 221, PHY 241 or PHY 243. Study of physical phenomena underlying a set of current environmental issues. Topics include energy and entropy laws; electromagnetic radiation; forms of energy, including fuels, nuclear, solar; percolation model; chaos theory, including population dynamics, and climate; computer simulations. Return to top

**PHY 474 Thermal Physics (4-0-4).** Prerequisites: PHY 241 (243), 242 (244), MTH 181, MTH 182, MTH 281. Temperature, entropy, thermal equilibrium, equations of state, thermodynamic potentials, thermodynamic stability, and phase transitions; applications, including fluids, electromagnetic radiation, and computer simulations. Return to top

**PHY 475 Statistical Physics (4-0-4).** Prerequisites: PHY 330, PHY 474. Microcanonical, canonical, grand-canonical ensembles, fermions, bosons; and applications, including fluids, normal modes, solids, metals, electromagnetic radiation, phase transitions, and computer simulations. Return to top

**PHY 480 Introduction to Solid State Physics (4-0-4).** Prerequisites: PHY 241 (243), PHY 242 (244). Electrons in solids; principles of LED and solid-state lasers; optoelectronic properties of semiconductors; materials for optical modulation, data storage and computing; liquid crystals; flat panel displays. Return to top

**PHY 482 Introduction to Solid State Physics (4-0-4).** Prerequisites: PHY 241 (243), PHY 242 (244). Same content as PHY 480 but includes writing-requirement credit. Writing Across the Curriculum. Return to top

**PHY 493 Advanced Topics in Physics (variable credit).** Prerequisite: Senior standing. Topics approved by the physics faculty. Return to top
PSC 111 American Government (4-0-4).
History and evolution of American political processes, institutions and public policies from the founding period to the present, including importance of federalism, culture, public opinion, parties, interest groups, elections and the media, nature and quality of American democracy, political challenges, dilemmas, and reform. Social Science, Western Culture and Civilization.

PSC 112 Controversial Issues in American Politics (2-0-2).
Current controversies in American politics, including affirmative action, welfare reform, immigration policies, gay and lesbian rights, US military intervention abroad, abortion, establishment versus free-exercise of religion, gun control, crime, and civil violence. Frequent use of interactive classroom technologies, multimedia presentations, and political debates to encourage independent thinking, critical analysis, and lively discussions. Social Science.

PSC 113 Controversial Issues in World Politics (2-0-2).
Combines a brief survey of international relations literature with the use of a discussion/debate format to deal with contemporary issues involving the evolution of world politics and the international economy, national and international security, terrorism, human rights, nationalism, transnationalism, and national power and diplomacy. Social Science.

PSC 212 Controversial Issues in American Politics (4-0-4).
Focuses on current controversies in American politics, including abortion, gun control, crime, civil violence, affirmative action, welfare reform, campaign finance reform, immigration policies, gay and lesbian rights, establishment versus free-exercise of religion, and U.S. military intervention abroad. Frequent use of interactive classroom technologies, multimedia presentations, and political debates to encourage independent thinking, critical analysis, and lively discussions. Social Science.

PSC 213 Controversial Issues in World Politics (4-0-4).
Combines a brief survey of international relations literature with the use of a discussion/debate format to deal with contemporary issues involving the evolution of world politics and the international economy, national and international security, terrorism, human rights, nationalism, transnationalism, and national power and diplomacy. Social Science.

PSC 217 Urban Politics and the African-American Experience (3-0-3). An examination of urban political institutions, decision processes, and problems of the cities and their suburbs. With regard to each topic, a primary concern will be on racism and its evolving consequences for African-Americans. Human Diversity, African-American Experience; Social Science.

PSC 221 Comparative Politics (4-0-4).
Basic concepts and theories of comparative politics through an analysis of selected political systems and governments in Western and non-Western societies. Topics will include ideology, political culture, institutional development, interest group politics, political participation, decision-making, economic development and underdevelopment, collective violence and stability, and political, economic, and bureaucratic elites. Social Science.

PSC 227 Power, Authority, and Society in Non-Western Communities (3-0-3). An examination of the way selected groups of Asian, African, and Latin American societies organize themselves with respect to power and authority to cope with a set of similar social problems. Attention will also be given to how changes take place in political organization and in political cultural identity, particularly at the mass level. The course makes extensive use of popular texts and stories, photographs and video, and other primary sources from the cultures studied. Cross-listed with ANT 227, HIS 227. Non-Western Culture and Civilization, Social Science.

PSC 231 International Politics (4-0-4).
Focuses on problems of security and strategies for enhancing security and well-being in the post-Cold War era. Basic concepts and processes of world politics are illustrated through the analysis of great power and regional rivalries. Topics include strategies and instruments such as conventional and nuclear war, alternative security strategies such as economic nationalism, diplomacy, international law, and international organization; and changes in the current international system.
related to economic globalization, environmental interdependence, transnational movements and nonstate actors. Social Science.

**PSC 241 Freedom and Authority (3-0-3).**
An examination of the treatment given to the differing concepts of authority and freedom by major political theorists. Specific concern will focus on the conflicts between the two concepts. Theorists considered include Hobbes, Locke, Rousseau, Madison, Tocqueville, Mill, and Green. Social Science, Western Culture and Civilization. Return to top

**PSC 251 Introduction to Data Analysis (3-0-3).**
Sources of information for research in political science, the use of computers as a research tool, and elementary statistical analysis. Return to top

**PSC 301 Urban Politics and Policy (4-0-4).**
An overview of the development and implementation of urban public policies and programs as products of institutions and processes in cities, suburbs and metropolitan areas. Special attention will be given to the condition of African-Americans. Black Studies. Return to top

**PSC 305 Cultural Diversity in U.S. Politics (4-0-4).**
Examines the role of African-Americans, Hispanics, Native Americans, and other minorities in American politics. Particular attention is directed at barriers to participation, the critical factors in minority political successes, the problems and possibilities of coalition politics, and related policy issues. Human Diversity, Writing. Return to top

**PSC 310 Constitutional Law (4-0-4).**
Basic principles of the United States Constitution, including judicial review, separation of powers, the powers of the presidency and Congress, and federalism. Introduction to individual rights and liberties, including right to privacy and the rights of criminal defendants. Return to top

**PSC 311 Civil Rights and Civil Liberties (4-0-4).**
Constitutional principles relating to race and sex discrimination; freedom of religion; and freedom of speech, press, and assembly. Return to top

**PSC 314 State Government and Politics (4-0-4).**
Issues between states and nation with particular attention to financial relations. Consideration of the capacity of state legislative and administrative systems, and problems of evaluation and change. Examination of policy-area issues, including those of education and welfare. Writing. Return to top

**PSC 315 Public Policy and Administration (4-0-4).**
Evaluation of alternative models for the U.S. policy-making process focusing on the political, institutional and bureaucratic influences of policy decisions. Emphasis will be given to the role public bureaucracies have had in shaping and influencing the policy process in a rapidly changing environment including decision-making, organizational theory, and the historical context of the administrative state. Return to top

**PSC 317 Political Parties and Elections (4-0-4).**
Importance of political parties and elections in American political history and development of the party system; role of public opinion, parties, and interest groups in democratic politics; effects of culture, political socialization, campaign politics, and issues on voting behavior; politics of social movements, the formation of political coalitions, and partisan realignment; party activity at state and local levels. Writing. Return to top

**PSC 318 The Presidency and Congress (4-0-4).**
Patterns of cooperation and conflict between the presidency and Congress in the making of United States public policy, both foreign and domestic; examination of issues of congressional revitalization and reform, and the dramatic growth in presidential power. Western Culture and Civilization. Return to top

**PSC 319 Public Opinion (4-0-4).**
Role of public opinion in democratic theory; methods and problems of polling and survey research; nature, formation, distribution, and learning of political attitudes; issues of democratic stability; group opinions, voting behavior, and elite behavior, and their impact on the policy-making process, public policy, and the quality of American democracy. Writing. Return to top

**PSC 321 Political Violence (4-0-4).**
Background conditions leading to political violence and revolution; ideology, class, ethnicity; the state's response to civil violence; strategies to prevent or engender violence; the destruction and reconstruction of consensus in a political system; the effectiveness of violence as a method of political influence; and the basis of political order also explored. Writing. Return to top
PSC 323 African Politics (4-0-4).
Unique and common patterns of political organization in Africa presented in a comparative framework; historical patterns, nature of colonial rule, impact on precolonial societies; struggle for Pan-Africanism, nationalism and liberation movements; character of postcolonial regimes. Other factors such as settler rule, racism, world economic organization and underdevelopment; domestic political responses to revolution, internal war, ethnic conflict, personal rule, patron-client relations, democratization, military intervention, institutional development, and development of civil society are explored. Black Studies; Non-Western Culture and Civilization; Writing. Return to top

PSC 324 Russia and the Successor States (4-0-4).
This course is concerned with the rise and fall of the Soviet system as well as the politics of contemporary Russia and the other post-Soviet states. It considers the prerevolutionary background of the Russian Empire, the revolutions of 1917, the emergence of full-blown Stalinism, decay of the system, Gorbachev's effort at reform and the dissolution of the Soviet system. Focus also placed on nationality issues and the prospects for democratization and economic reform. Western Culture and Civilization, Writing. Return to top

PSC 325 Western European Politics (4-0-4).
Governmental structures and political processes in Western Europe; the European community and integration; separatist groups and disintegration; development of European human rights policies and processes; problems and prospects of parliamentary democracy. Western Culture and Civilization, Writing. Return to top

PSC 326 Politics of the Third World (4-0-4).
Problems and political dynamics of "developing states and societies" through a study of specific African, Asian, Latin-American, and Middle Eastern countries; class and ethnic conflict; the role of the military and bureaucracy; the capacity of the state to promote economic development and political order; role of global and regional system security and development; structural adjustment and regional autonomy policies. Black Studies, Non-Western Culture and Civilization, Writing. Return to top

PSC 327 Politics of Peaceful World Change (4-0-4).
Possibilities for peaceful and equitable solutions to conflicts created by inequalities in economic development; global resource scarcity, the population explosion, and threats of ecological disaster; mechanisms for resolving these conflicts, including alternatives to the present international system; international law and organization. Emphasizes skills such as policy analysis, oral advocacy, nonviolent communications, negotiation, and arbitration. Writing. Return to top

PSC 328 International Political Economy (4-0-4).
Evolution of international economic policies and theories from mercantilism, and classical liberalism; structural approaches such as Marxism and Dependency, Rational Choice; international trade; international monetary policy and debt; investment and technology exchange; economic and technical assistance; economic integration; and globalization. Writing. Return to top

PSC 330 U.S. National Security Policy (4-0-4).
An examination of issues affecting U.S. national security and the processes through which policy is made. Includes an examination of U.S. strategy, civil-military relations, regional strategic appraisals, the roles of the Department of Defense and the intelligence community, the revolution in military affairs, peacekeeping, and the challenges posed by failed states, rogue states and non-national adversaries, such as insurgents, narcotraffickers and terrorists. Return to top

PSC 331 United States Foreign Policy (4-0-4).
Major issues of American involvement in world politics; analysis of contemporary events and current international tensions; the politics of rivalry and alliance; the evolution of defense strategy; military interventions; diplomatic negotiations; the role of ideology, trade, and aid; U.S. foreign policy decision-making; theories of bureaucracy; interagency and interbranch relations; and role perceptions. Writing. Return to top

PSC 332 Politics in the Middle East (4-0-4).
Arab-Israeli conflict and relationships among the Arab states; role of the major powers in the Middle East; consideration of ideas and political manifestations of nationalism, the impact of imperialism, aspects of military strategy, problems of development, and the politics of oil; role of ethnicity, tribalism, culture and religion in explaining politics in Middle Eastern states. Non-Western Culture and Civilization, Writing. Return to top

PSC 333 Latin American Politics (4-0-4).
Introduction to politics and society in selected Latin American republics; comparison of political systems; governmental approaches to economic and social problems; the role of the military; hemispheric relations; and the U.S. role in Latin America. Course covers Central and South America. Non-Western Culture and Civilization, Writing. Return to top

An examination of U.S.-Latin American relations, focusing on security matters. Covers the historical legacy of U.S. intervention, narcotrafficking, insurgency, democratization, civil-military relations, human rights, political instability, and U.S.
PSC 335 East Asian Politics (4-0-4). Focuses on the politics of China and Japan; political origins of cultural and institutional patterns, including communism, party politics, legislative affairs, local government, the role of government in economic management in promoting social order and social change. Course may deal with several additional East Asian states. Non-Western Culture and Civilization, Writing.

PSC 337 Canadian Government and Politics (4-0-4).
Course examines how the major issues and cleavages in Canadian political life are mediated through the nation's political institutions. The cultural environment and traditions of Canada's people, and the evolution of the governing and partisan institutions of Canadian democracy are also examined. Course also focuses on relationships between Canada and the United States, and how the two nations both challenge and benefit one another. Western Culture and Civilization, Writing.

PSC 338 Central and Eastern Europe (4-0-4).
Focuses on the re-emergence of central Europe, democratization, economic change, and nationalism. Course will consider how the reunification of Germany, the end of the Cold War, and the collapse of the Soviet Union have altered the dynamics of Central and Eastern Europe; and the interplay of East and West in the area of the economic, political and cultural power of a re-united Germany. Writing, Western Culture and Civilization.

PSC 340 Foundations of Political Thought (4-0-4).
Plato, Aristotle, and other Greek-Roman political thought; main currents of medieval political theory, including Augustine. Western Culture and Civilization, Writing.

PSC 341 Modern Political Thought (4-0-4).
Political thought from the Renaissance to the present, focusing on liberalism and its critics, from Rousseau to postmodernism. Emphasis on figures such as Machiavelli, Locke, Rousseau, Marx, Foucault, and feminism as well as other theorists. Western Culture and Civilization, Writing.

PSC 342 American Political Thought (4-0-4).
Consideration of thought about American political institutions and practice. Major topics include revolutionary ideas and antecedents; framing of the Constitution and constitutional debate; 19th-century responses to slavery and large-scale industrialism; and modern social construction of race and gender. Other topics may include Jefferson, Paine, Melville, Jacksonianism, Progressivism, and modern liberal thought. Western Culture and Civilization, Writing.

PSC 391 Special Topics in Political Science (1-0-1).
Important political issues of contemporary significance with implications for future change. May include foreign or domestic issues. Topics will be announced. May be repeated for credit with departmental permission.

PSC 392 Special Topics in Political Science (2-0-2).
Important political issues of contemporary significance with implications for future change. May include foreign or domestic issues. Topics will be announced. May be repeated for credit with departmental permission.

PSC 393 Special Topics in Political Science (3-0-3).
Important political issues with contemporary significance and potential consequences for future change. May include foreign or domestic issues. Topics will be announced. May be repeated for credit with departmental permission. Writing.

PSC 394 Special Topics in Political Science (4-0-4).
Important political issues with contemporary significance and potential consequences for future change. May include foreign or domestic issues. Topics will be announced. May be repeated for credit with departmental permission. Writing.

PSC 401 City Council Internship Program (1-20-6).
Prerequisites: Introductory core and completion of the urban specialization or permission of the instructor. Fieldwork assignments with members or committees of Cleveland's City Council. Research paper required.

PSC 402 Campaign Politics Internship (1-20-6).
Prerequisites: Introductory core and completion of a specialization or permission of the instructor. Fieldwork assignments with candidates for public office, examination of the literature on campaigns and elections combined with intensive training in campaign strategy and tactics, and seminars to assess fieldwork experience. Research paper required. (Offered only in even-numbered election years.) Writing.

PSC 403 Administrative Internship Program (1-20-6).
Prerequisites: Introductory core and completion of a specialization or permission of the instructor. Fieldwork assignments with executive branch agencies of government, community, or neighborhood organizations; and other agencies whose
activities are directed toward public-sector concerns, seminars to assess fieldwork experience. Research paper required.

PSC 405 State Government Administrative Internship (1-35-6). Prerequisites: Introductory core and completion of the state specialization or permission of the instructor. Fieldwork assignments with executive branch agencies of state government, seminars to assess fieldwork experience and to examine and discuss operations of state government. Written report required.  

PSC 406 International Relations Internship (1-20-5). Prerequisites: Introductory core in political science or international relations, and completion of at least one additional 300- to 400-level course in international politics, or permission of the instructor. Fieldwork assignments with public or private sector actors or with non-governmental organizations with international operations and/or policy interests. Written report required. Does not substitute for PSC 421/422 in the IR major curriculum.

PSC 407 Summer Internship (1-20-4). Prerequisite: Introductory core or permission of the instructor. Fieldwork assignments with a city council, an administrative organization (government or non-profit), or an electoral campaign. This course does not count toward the completion of the Public Services Specialization. A research paper is required along with a final report on the internship placement.

PSC 420 Seminar in American Politics (5-0-5). Prerequisites: Introductory core and one 300-level course in American politics, or permission of the instructor. Intensive examination of selected topics in American politics. Extensive writing assignment required. Detailed description of topics and methods to be publicized in advance. May be repeated for credit with departmental permission. Writing.

PSC 421 Seminar in Comparative Politics (5-0-5). Prerequisites: Introductory core and one 300-level course in comparative politics, or permission of the instructor. Intensive examination of selected topics in comparative politics. Extensive writing assignment required. Detailed description of topics and methods to be publicized in advance. May be repeated for credit with departmental permission. Writing.

PSC 422 Seminar in International Relations (5-0-5). Prerequisites: Introductory core and one 300-level course in international politics, or permission of the instructor. Extensive writing assignment required. Detailed description of topics and methods to be publicized in advance. May be repeated for credit with departmental permission. Writing.

PSC 423 Seminar in Legal and Political Theory (5-0-5). Prerequisites: Introductory core and one 300-level course in political theory or law, or permission of the instructor. Extensive writing assignment required. Detailed description of topics and methods to be publicized in advance. May be repeated for credit with departmental permission. Writing.

PSC 424 Seminar in Urban Politics (5-0-5). Prerequisites: Introductory core and one 300-level course in urban or American politics, or permission of the instructor. Extensive writing assignment required. Detailed description of topics and methods to be publicized in advance. May be repeated for credit with departmental permission. Writing.

PSC 496 Independent Study (3-0-3). Prerequisites: Junior standing, permission of instructor. Independent study guided by faculty member. A substantial written assignment is one of the requirements.

PSC 497 Independent Study (4-0-4). Prerequisites: Junior standing, permission of instructor. Independent study guided by faculty member. A substantial written assignment is one of the requirements.
Professors:
Mark S. Rosentraub (Dean), Sanda Kaufman, Sylvester Murray, Roberta Steinbacher (Assistant Dean), Camilla Stivers, Wornie L. Reed; Associate Professors:
Jennifer Alexander, Mittie Olion Chandler (Assistant Dean for Student Services), Michael Wells (Director of Undergraduate Programs).

PSM 302 Contemporary Urban Issues (4-0-4).
The physical, social, and economic dimensions of the urban crisis emphasizing minority communities; traditional and nontraditional approaches to problem definition and solution, techniques for understanding and shaping the physical environment; and constraints to problem solving in urban areas. African-American Experience, Human Diversity, Writing. Return to top

PSM 433 Conflict Management (4-0-4).
Examines conflict as an omnipresent component of any decision-making environment. Offers tools for understanding the nature of conflict; devising individual and group strategies that minimize the destructive consequences of conflict; and identifying solutions that are satisfactory to all involved. Includes lectures, discussions, and simulation games. Return to top

PSM 451 Public Safety Management (4-0-4).
Introduction to public sector management in law enforcement, fire safety and related public safety agencies; leadership and management styles; decision-making and team building. Return to top

PSM 452 Management of Urban Organizations (4-0-4). Developing critical management skills; problem-solving, communication, and conflict resolution; introduction to Total Quality Management. Return to top

PSM 453 Managing Urban Diversity (4-0-4).
Study of diversity including circumstances faced in urban settings that are exacerbated or affected by diversity factors; exploration of a range of social, political, and economic issues related to diversity. Human Diversity. Return to top
Psychology

Professors:
Mark H. Ashcraft (Chairperson), Brian F. Blake, Bette Bonder, Stephen R. Coleman, David M. Grilly, Connie Hollinger, Boaz Kahana, Richard F. Rakos, Stephen D. Slane, Robert N. Sollod, Benjamin Wallace, John P. Wilson; Professors Emeriti: James Bard, Frank N. Marzocco, James Schuerger; Associate Professors: Leslie Fisher, Colleen McMahon, Kathleen M. McNamara, Deborah Plummer, Albert F. Smith; Associate Professors Emeriti: Phillip L. Emerson, Robert H. House; Assistant Professors: Chieh Chen Bowen, Norma Cofresi, Jennifer Druley-Tholt, Leigh Ann Forsyth, Keith Kline, Andrew Slifkin; Lecturers: Marise Alexander, Joseph C. Bedosky, Kevin Kukoleck; Adjunct Faculty: Frances Chiappa, Karen Groth, and Michael Wisniewski.

PSY 101 Introduction to Psychology (4-0-4).
Broad survey course covering topics such as research methodology; biological bases of behavior, perception, motivation and emotion; learning and memory; development; intelligence; personality; mental disturbance; and social influence. Prerequisite to most other psychology courses. Social Science. Return to top

PSY 220 Child Development (3-0-3).
This course reviews the literature on child biological, motor, perceptual, cognitive (including intelligence), language, emotional, social, and gender development. Child development history, theory, and research strategies will be discussed, as well as the effect of family, peers, media, and schooling. Social Science. Return to top

PSY 221 Adolescent Psychology (3-0-3).
Study of human development through adolescence to maturity. The role of maturational changes, and peer and family influences in the process of self-emergence and personal adjustment will be emphasized. Social Science. Return to top

PSY 223 Life Span Development (4-0-4).
An overview of cognitive, social, emotional, and physical development from conception through old age. Social Science. Return to top

PSY 255 Psychology of Women (4-0-4).
This course provides an overview of women's issues from a psychological perspective ranging from a re-examination of traditional theories of personality to current topics of research interest. Where relevant, the course draws heavily from the research literature on sex differences and sex role socialization. Women's Studies course, Social Science, Human Diversity. Return to top

PSY 293 Special Topics in Psychology (2 to 4 Credits). Prerequisite: PSY 101. Course content will be announced in quarterly course schedule. This course may be taken three times on different topics. Return to top

PSY 311 Behavioral Science Statistics (4-0-4). Prerequisite: PSY 101. Application of descriptive and inferential statistics to the analysis and interpretation of data in the social sciences, with special emphasis on hypothesis testing. Return to top

PSY 331 Industrial-Organizational Psychology (4-0-4). Prerequisite: PSY 101. Introduction to the methods used by industrial/organizational psychologists to increase organizational effectiveness and individual well-being. Topics include selection, training, appraisal, job attitudes, work motivation, leadership, job design, organizational culture, and work environment. Return to top

PSY 335 Consumer Psychology (4-0-4). Prerequisite: PSY 101. Examination of the role of psychological processes (such as attitudes, needs, personality) in influencing one's reaction to consumer goods and services. Implications for advertising, marketing, and social-service delivery will be addressed. Return to top

PSY 339 Social Psychology (4-0-4). Prerequisite: PSY 101. Theory and method in social psychology, impression formation, social cognition, attitude change, social influence, group processes, applications of social psychology. Return to top

PSY 342 Psychology of Personality (4-0-4). Prerequisite: PSY 101. This course surveys the major theories of personality and its measurement. Emphasis is placed on understanding how personality influences behavior.
Psychodynamic, humanistic, and behavioral perspectives, among other topics, will be surveyed. Return to top

**PSY 344 Intellectual and Personality Testing (4-0-4).** Prerequisite: **PSY 101.** Course covers basic theory of psychological assessment. The construction, administration, and interpretation of psychological tests of intelligence, abilities, and personality will be discussed. Depending on instructor, emphasis will be placed on measurement theory or practical applications. Return to top

**PSY 345 Abnormal Psychology (4-0-4).** Prerequisite: **PSY 101.** Examination of the field of abnormal psychology, surveying the major psychological disorders and their classification. Causes and treatments of the major disorders are explored from various theoretical perspectives. Return to top

**PSY 349 Introduction to Clinical Psychology (4-0-4).** Prerequisite: **PSY 101.** Introduction to the professional practice of clinical psychology. Clinical and research activities (assessment, therapy, consultation, system intervention), training models, settings (clinic, hospital, school, court) and professional issues (roles, ethics, laws) are among the topics examined. Return to top

**PSY 351 Personal Behavior Modification (4-0-4).** Prerequisite: **PSY 101.** Introduction to behavioral theory, assessment, and modification techniques. Consideration of several skills central to adjustment in contemporary society (such as assertion, active listening, anger and stress management, rational thinking, and decision-making) Students will be required to conduct a behavioral self-management project that attempts to change a personally relevant behavioral concern and then describe the project in a detailed paper. Writing. Return to top

**PSY 352 Human Sexuality (4-0-4).** Prerequisite: **PSY 101.** This course provides students with a balanced presentation of theory, data, and practical application in the area of human sexuality. Students will explore their attitudes, beliefs, and feelings about human sexuality. The course will help students become more comfortable with their own sexuality; develop greater sensitivity to the attitudes, beliefs, and feelings of others, and create and maintain healthy and fulfilling relationships with others. Return to top

**PSY 353 Health Psychology (4-0-4).** Prerequisite: **PSY 101.** The impact of behavior, cognition, and affect on biological function and dysfunction is examined from theoretical and empirical perspectives. Stress and coping styles, behavioral medicine (such as compliance, pain management, behavioral factors in acute and chronic illness), lifestyle choices, and habit control are among the topics considered in relation to the prevention and treatment of disease. Return to top

**PSY 356 Multicultural Psychology (4-0-4).** Prerequisite: **PSY 101.** Examination of theories of differences and their application to behavioral change. Diversity across race, gender, and class is explored. Human Diversity. Return to top

**PSY 357 Humanistic/Transpersonal Psychology (4-0-4).** Prerequisites: **PSY 101** and at least one psychology course at the 200 level, or permission of instructor. This course will introduce students to the subject matter of humanistic/transpersonal psychology both in terms of underlying concepts and in terms of selected experiential components. Humanistic/Transpersonal psychology addresses questions of value, meaning, and purpose. Some key concepts are peak experiences, self transcendence, optimal mental health, and transpersonal development. Return to top

**PSY 361 Psychology of Consciousness (4-0-4).** Prerequisite: **PSY 101.** An examination of a wide range of material relevant to the understanding of human consciousness. Topics include the nature and history of human consciousness, altered states of consciousness, sleep and dreams, meditation, biofeedback, hypnosis, and behavior-altering drugs. Return to top

**PSY 368 Perceptual Processes (4-0-4).** Prerequisite: **PSY 101.** This course is a detailed review of human sensory and perceptual processes with applications to psychological issues (such as visual form perception, auditory sensory analysis, perceptual constancies, and attention). The visual and auditory modalities will be emphasized. Return to top

**PSY 370 Psychology of Learning (4-0-4).** Prerequisite: **PSY 101.** Study of empirical phenomena and theoretical issues involved in learning processes. Course deals with habituation and sensitization, conditioning processes, contingencies of reinforcement and punishment, generalization and discrimination, concept formation, observational learning; memory, and language acquisition. Return to top

**PSY 372 Memory and Cognition (4-0-4).** Prerequisite: **PSY 101.** Examination of major areas of theory and research in cognitive psychology and psycholinguistics, including the topics of perception and attention, memory, semantics, language comprehension, production and acquisition, and the processes of reasoning and decision-making. Return to top

**PSY 385 Psychology of Motivation (4-0-4).** Prerequisite: **PSY 101.** Survey of major concepts, empirical findings, and
research strategies characterizing the development of the scientific study of motivation. Return to top

**PSY 390 Field Placement (0-4-4).** Prerequisites: **PSY 101**, at least 8 credit hours of psychology courses at the 300- to 400-level and permission of the instructor. Advanced students are placed in an applied setting in the community, presenting the opportunity to learn the process of utilizing previously acquired academic knowledge within the context of an applied setting. Placement experiences are supplemented by on-site supervision, weekly group meetings, outside reading assignments, and a written report. Up to 8 credit hours may be taken, but only eight credit hours of **PSY 390** and **PSY 396** combined can be applied toward the 36-hour requirement for psychology majors. Return to top

**PSY 393 Special Topics in Psychology (1 to 4 credits).** Prerequisite: **PSY 101**. Course content will be announced in the quarterly course schedule. May be taken three times with different topics. Return to top

**PSY 396 Independent Study (credit as arranged).** Prerequisites: **PSY 101**, **PSY 311** or equivalent, written permission of the instructor, and departmental approval. Up to 8 credit hours may be taken, but only 8 credit hours of **PSY 390** and **PSY 396** combined can be applied toward the 36-hour requirement for psychology majors. Offered every semester. Return to top

**PSY 411 Computer Applications of Statistics (4-0-4).** Prerequisites: **PSY 101** and **PSY 311** or equivalent or permission of instructor. This course is designed to help students become proficient at using statistical software (such as SAS) in order to analyze data. Emphasis will also be placed upon interpreting analyzed data. Topics covered will be ANOVA, MANOVA, multiple regression, and chi-square. Return to top

**PSY 412 Psychology Laboratory (2-6-4).** Prerequisites: **PSY 101** and **PSY 311** or equivalent. Covers methods of research design, data collection, data analysis, and reporting of research findings. Students conduct empirical research and write reports. Writing. Return to top

**PSY 429 Psychology of Aging (4-0-4).** Prerequisite: **PSY 101**. Comprehensive survey of aging - the final developmental period in the lifespan. Topics include methodological issues, theoretical perspectives on aging, changes in cognitive, social, and personality functions, and psychopathology. Human Diversity. Return to top

**PSY 448 Mental Health and Aging (4-0-4).** Prerequisites: **PSY 101** and **PSY 345**, or permission of instructor. Course focuses on the nature and problems of old age, including change, and stability associated with the aging process; mental-health issues; assessment and treatment of emotional and organic brain disorders in late life, and long-term care vs. home-care issues. Return to top

**PSY 451 Human Performance (4-0-4).** Prerequisite: **PSY 101**. A review of the major empirical studies and theoretical trends that have shed light on our understanding of the processes by which humans, and other animals, generate, control and learn goal-directed behavior (action). Topics include information processing, attention, sensory and central contributions, principles of simple movement, coordination, and learning processes. Writing. Return to top

**PSY 479 History of Psychology (4-0-4).** Prerequisites: **PSY 101**, three psychology courses (except **PSY 396**) . Examination of the development of psychology and its systems of thought as a function of philosophical and scientific antecedents. Writing. Return to top

**PSY 481 Psychopharmacology (4-0-4).** Prerequisite: **PSY 101** and **BIO 100** or equivalent. Covers the principles of drug actions in the nervous system and describes the effects of drugs on behavioral variables, deals with drugs that are used in recreational and clinical settings. Writing. Return to top

**PSY 482 Biological Basis of Behavior (4-0-4).** Prerequisites: **PSY 101** and **BIO 100** or equivalent. Reviews our knowledge of how behavior and cognition are controlled by neural and other physiological processes. The content falls into three areas: an examination of neurons and neurotransmitters; a description of sensory and motor systems; and a summary of various behavioral and cognitive phenomena (e.g., learning, memory, psychiatric disorders) and how the central nervous system is involved in their control. Writing Course. Return to top

**PSY 487 Brain and Cognition (4-0-4).** Prerequisite: **PSY 101**. Cognitive neuropsychology is the study of cognitive processes as revealed by their disruption due to brain damage, and by modern techniques of brain investigation. The course presents current topics in cognitive neuropsychology, including units on basic brain anatomy and functioning, perceptual and attentional processes, language, and memory. Return to top

**PSY 493 Special Topics in Psychology (2 to 4 credits).** Prerequisite: Psychology major, senior standing, or permission of instructor. Seminar on current research in psychology. Specific topics will be announced in the quarterly course schedule. May be taken three times on different topics. Return to top
PSY 495 Honors Seminar (4-0-4). Prerequisite: PSY 101. The Honors Seminar is designed for students who aspire to graduate with honors. As such, the seminar is designed to facilitate two major student objectives: familiarize students with current controversies in the field of psychology, and design the senior research project which will be carried out in the senior year as part of the requirement to complete the Honors Program. Return to top

PSY 497 Senior Project (4-0-4). Prerequisites: PSY 101 and PSY 495. The Senior Project is a personally designed study to be carried out during the senior year. The project may be an empirical study, an analytical thesis on a selected topic in the field of psychology or a meta-analysis of a research topic. The Senior Project is a requirement of the Honors Program which must be completed by the last quarter of the senior year. The Senior Project will be supervised by the director of the Honors Program or by other faculty in the department. Return to top
**REC 200 Leisure and Society (3 hours).**
Introduction to the concepts, foundations, and principles fundamental to the study of leisure in society. Provides an overview of recreation delivery systems, the recreation profession, and the administration of recreational programs. Examines current issues, future trends, and career options in the leisure field. [Return to top](#)

**REC 460 Outdoor Recreation (2 hours).**
Wilderness education focusing on the development and mastery of personal competency skills needed for survival and enjoyment of outdoor recreational activities. [Return to top](#)
REL 101 Understanding Religion (4-0-4).
A study of religions of the world through their myths, symbols, rituals, practices, and teachings. Arts and Humanities.
Return to top

REL 217 Religion in Black America (4-0-4).
Historical study of the religious movements of Black Americans. Black Studies, African-American Experience, Arts and Humanities, Human Diversity. Return to top

REL 227 Science and Belief (3-0-3).
Inquiry into modern scientific and religious consciousness in the light of modern scientific approaches to "reality" and the influence of Eastern religious thought in the West. Arts and Humanities. Return to top

REL 231 Introduction to the Old Testament (4-0-4). Examination of the literature of the Old Testament in the light of its historical context. Classical and Medieval Studies course, Western Culture and Civilization, Arts and Humanities. Return to top

REL 232 Jesus and the Gospels (4-0-4).
The life and teachings of Jesus in their historical context, and examination of the ways in which Jesus is interpreted in the gospel materials. Classical and Medieval Studies course, Arts and Humanities, Western Culture and Civilization. Return to top

REL 233 Paul and the Development of Christianity (4-0-4). Study of the emergence of the early Christian movement from its beginning through the time of the Apostle Paul. Classical and Medieval Studies course, Arts and Humanities, Western Culture and Civilization. Return to top

REL 234 The Later New Testament (4-0-4).
Study of the development of the early Christian movement from the middle of the first century through the second century. Classical and Medieval Studies course, Arts and Humanities, Western Culture and Civilization. Return to top

REL 236 Jesus and the Gospels (4-0-4).
The life and teachings of Jesus in their historical context, and examination of the ways in which Jesus is interpreted in the gospel materials. Same course as REL 232, but counts as Writing, Classical and Medieval Studies course, Arts and Humanities, Western Culture and Civilization. Return to top

REL 237 Paul and the Development of Christianity (4-0-4). Study of the emergence of the early Christian movement from its beginning through the time of the Apostle Paul. Same course as REL 233, but counts as Writing, Classical and Medieval Studies course, Arts and Humanities, Western Culture and Civilization. Return to top

Study of the development of the early Christian movement for the middle of the first century through the second century. Same course as REL 234, but counts as Writing, Classical and Medieval Studies course, Arts and Humanities, Western Culture and Civilization. Return to top

REL 239 Introduction to the Old Testament (4-0-4). Examination of the literature of the Old Testament in the light of its historical context. Same course as REL 231, but counts as Writing, CLAM, Arts and Humanities, Western Culture and Civilization. Return to top

REL 245 Religion in America (4-0-4).
Exploration of major religious issues arising out of the development and encounter of Protestantism, Catholicism, and Judaism in America. Arts and Humanities, Western Culture and Civilization, Writing. Return to top

REL 249 Current Moral Issues (4-0-4).
This course seeks to clarify moral frameworks for examining such important personal and social moral issues as the taking of human life, race relations and poverty, patterns of sexual behavior, and business practices. Arts and Humanities. Return to top

**REL 250 Stages of Life (3-0-3).** An overview of stages of life topologies in various spiritual traditions, such as the Hindu topology of student, householder, forest-dweller, and wandering ascetic. The course focuses on maturing to old age. Contemporary problems of the aged are addressed from the spiritual perspective. Arts and Humanities. Return to top

**REL 251 Perspectives on Death and Dying (4-0-4).** Interdisciplinary examination of death and dying as seen from the viewpoints of religion, psychology, biology, and law. Arts and Humanities. Return to top

**REL 260 Women and Religion (3-0-3).** An historical approach to the questions surrounding women and traditional religious roles, ideals, and models. Women's Studies course, Arts and Humanities. Return to top

**REL 261 Religion and the Mystery of Evil (4-0-4).** Exploration of the religious experience of evil as symbolically depicted in terms of magic, witchcraft, and the Devil. Arts and Humanities. Return to top

**REL 265 Religion and Culture (4-0-4).** Interaction of religion and culture as seen in such areas as literature, art, film, music, and theater. Arts and Humanities, Western Culture and Civilization. Return to top

**REL 268 Religion and Culture in Africa (3-0-3).** Exploration of religious traditions in selected African cultures as represented in literary texts, drama, art, and theological writing. Non-Western Culture and Civilization. Return to top

**REL 276 Eastern Religions (4-0-4).** An introduction to Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, and Shinto. A consideration of their origins, development, and contemporary trends. Asian Studies Course; Non-Western Culture and Civilization, Arts and Humanities. Return to top

**REL 280 Introduction to Mythology (4-0-4).** An introduction to ancient Greek mythology and to the theory of mythology in general. The course will focus on the Homeric Iliad and later interpretations of the Iliad. Western Culture and Civilization, Arts and Humanities. Return to top

**REL 285 Myths of Fate and Destiny (4-0-4).** A study of fate and destiny in the Hebrew story of Abraham, the Tsimshian Indian legend of Asdiwal, and the Odyssey of Homer. Arts and Humanities. Return to top

**REL 317 Religious Ethics of Malcolm X and Martin Luther King (4-0-4).** This course explores the religious ethics of Malcolm X and Martin Luther King Jr., as presented in their own speeches and writings and the works of various interpreters. Black Studies, African-American Experience, Human Diversity. Return to top

**REL 321 Contemporary Christian Thought (4-0-4).** Selected topics in the background and development of recent Christian thought. Western Culture and Civilization Return to top

**REL 336 Hellenistic and Roman Religions (4-0-4).** Study of Graeco-Roman religions of the Hellenistic period. Topics include mystery religions, emperor worship, miracle workers, magic, astrology, and savior figures. Classical and Medieval Studies course. Return to top

**REL 340 Folktale (4-0-4).** This course examines the interplay of human, demoniac, and divine elements in folktales. Return to top

**REL 341 The Origin of Judaism (4-0-4).** History, institutions, and thought of Judaism from the Exile (587 B.C.E.) to the formation of the Babylonian Talmud (circa fifth century C.E.) Classical and Medieval Studies Course. Return to top

**REL 342 The Rise of Modern Judaism (4-0-4).** Cultural, social, and religious history of the Jews in the Middle Ages and modern times, with particular emphasis on Judaism in America in the 20th century. Return to top
REL 343 Ancient and Medieval Christianity (4-0-4).
Historical development of Christianity from the early period to the Renaissance. Classical and Medieval Studies Course, Western Culture and Civilization, Writing. Return to top

REL 344 The Rise of Modern Christianity (4-0-4).
Historical development of Christianity from the Reformation to the present. Western Culture and Civilization, Writing. Return to top

REL 355 Religion After Freud and Jung (4-0-4).
Examination of the psychological interpretation of religious experience, myth, and rituals, as set forth in some of the most relevant works of Sigmund Freud and Carl Gustav Jung. Western Culture and Civilization, Writing. Return to top

REL 360 Hinduism (4-0-4).
Origin and historical development of Hinduism, including its systems of thought, religious literature, institutions, and practices. Asian Studies course, Non-Western Culture and Civilization. Return to top

REL 362 Buddhism (4-0-4).
Origin and historical development of Buddhism, including its systems of thought, religious literature, institutions, and practices. Asian Studies course, Non-Western Culture and Civilization. Return to top

REL 364 Islam (4-0-4).
Origin and historical development of Islam, including its theology, institutions, and practices. Asian Studies course, Non-Western Culture and Civilization. Return to top

REL 370 Sexual Ethics (4-0-4).
A critical examination of some current topics in sexual ethics from religious and social perspectives. Return to top

REL 376 Women in Early Christianity (4-0-4).
An examination of the attitudes toward, and roles of, women in the Greco-Roman and Jewish worlds; in the teaching of Jesus; in Paul; and in early Christianity through the second century. Classical and Medieval Studies course. Return to top

REL 380 Ancient Greek Mythology: The Gods (4-0-4).
A study of ancient Greek gods, godhead, and folk religion based primarily on Homer, The Hymns and Hesiod. Return to top

REL 463 Myth, Legends, and Folk Tales (4-0-4).
Examination of the symbolism in, and the interrelationships between, typical myths, legends, and folk tales. Several archetypal stories are read and discussed. Western Culture and Civilization, Writing. Return to top

REL 466 Advanced Topics in the Historical Jesus (4-0-4). Prerequisite: REL 232. Selected topics in the study of Jesus and the origin of the early Christian movement. May be repeated for credit with change of topic. Classical and Medieval Studies course. Return to top

REL 468 Advanced Topics in Paul (4-0-4). Prerequisite: REL 233. An advanced study in the place and significance of Paul in early Christianity. Classical and Medieval Studies course. Return to top

REL 495 Seminar in Religion (4-0-4).
Prerequisite: Two courses in religion or permission of instructor. Intensive examination of the works of specific religious thinkers and movements. Specific topics listed in the quarterly course schedule. May be repeated with a change of topic for up to 12 credit hours. Return to top

REL 496 Research in Religion (2 to 4 credits).
Guided independent research, term paper and/or examination required as appropriate. Application for permission to register must be submitted to the chairperson during the quarter prior to the enrollment in the course. May be repeated for up to 12 credit hours. Return to top
Professors: Anita K. Stoll (Chairperson).

Students with native experience of Russian may not enroll for credit in 100-level courses in Russian.

All students with training or experience in Russian other than a previous course in that language at CSU must consult a counselor in the Department of Modern Languages for assistance in deciding where to enter the Russian sequence. Failure to seek counseling may result in schedule shifts during the first week of class.

RUS 101-102 Russian I, II (4-2-5).
Prerequisite: RUS 101: None; RUS 102: Completion of RUS 101 with a "C" or better or permission of instructor. Essentials of Russian usage; practice in hearing, speaking, reading, and writing. Return to top
Sociology

Professors:
William C. Bailey, Sarah Matthews (Graduate Program Director), William R. Morgan, Wornie Reed; Professors Emeriti: Henry M. Barlow, Albert N. Cousins, Butler A. Jones, Hans Nagpaul; Associate Professors: Mareyjoyce Green, Robert Kleidman, Philip Manning, Peter Meiksin (Chairperson); Assistant Professors: James Chriss, Teresa LaGrange, Wendy Regoezci, Rongjun Sun.

SOC 101 Introduction to Sociology (3-0-3).
Introduction to the sociological perspective, forms of social relationships, groups, institutions, and societal organization. Required for majors. Social Science. Return to top

SOC 201 Race, Class and Gender (3-0-3).
Survey of major theoretical approaches to race, class and gender; examination of empirical evidence regarding the extent of these kinds of inequality, the ways in which they are produced and reproduced and their consequences. Attempts to overcome the harmful consequences of race, class, and gender inequality, both through the affirmation of identity and difference and through efforts to reduce and/or eliminate these forms of stratification will be reviewed. Social Science, Human Diversity, Women's Studies. Return to top

SOC 203 Sociology of Poverty (3-0-3).
Analysis of the evolution and significance of poverty in the United States, the characteristics of the poor and the experience of poverty, competing explanations for poverty, and evaluation of the impact of social policy on the poor and society as a whole. Black Studies, Social Science, Writing. Return to top

SOC 210 Introduction to Sociology of the Third World (3-0-3).
Explore the diversity of the Third World by examining the experiences of several specific countries and regions. Will consider the characteristics, problems, and dynamics they have in common. Special attention will be given to the origins of social conflict in the Third World and to the prospects for social change. Social Science, Non-Western Culture and Civilization. Return to top

SOC 211 American Culture and Society (3-0-3).
Analysis of major social systems and dominant themes in contemporary American culture and society. Social Science, Western Culture and Civilization. Return to top

SOC 215 Black/White Interaction (3-0-3).
Patterns of exploitation, survival, conflict, accommodation, and cooperation between white majority and black minority in a changing society. Social Science, Human Diversity, African-American Experience. Return to top

SOC 260 Deviance in the United States (3-0-3).
An examination of deviant behavior in American society. Topics covered are definitions and theories of deviance as well as various types of deviant behavior, including drug use and alcoholism, mental illness, crime, prostitution and other forms of sexual deviance. Social Science. Return to top

SOC 302 Women in Corporate America (4-0-4).
Prerequisite: Written permission of instructor. Study of life course and mobility patterns of women managers in the private, public and nonprofit employment sector. Students are introduced to action research through participant observation. Each student has an on-site assignment with three female managers. Women's Studies course, cross-listed with UST 320; Human Diversity. Return to top

SOC 305 Urban Sociology (4-0-4).
The study of metropolitan development and social life. Examines the role of economic, political, and cultural factors at the global, national, and regional levels. Explores the history of urban sociology and contemporary perspectives. Analyzes the process of social change at the metropolitan level. Writing. Return to top

SOC 310 Sociology of Marriage and Family (4-0-4).
The course focuses on contemporary issues in American family, including mate selection, marital communication, transition to parenthood, parenting, sexuality, extended kin, family disruptions, relationship between work and family, and the effects of changing gender roles. Return to top

SOC 311 Individual and Society (4-0-4).
Interaction between the individual and society; and examination of the ways in which society, and impinges upon the individual's behavior, with special emphasis upon socialization, self-concept, attitudes, and social roles. Writing. Return to top
SOC 312 Sociology of Mental Illness (4-0-4).
This course examines three central issues: our changing understanding of mental illness, the variety of approaches for the treatment of mental illness and the impact of social policy on the lives of the mentally ill. By combining historical, medical, and sociological perspectives, this course provides a broad introduction to the study of mental illness. The material is drawn primarily from the United States. Writing. Return to top

SOC 313 Sociology of Education (4-0-4).
Education as socialization; the dual role of the school as change and conservation agent, characteristics of school populations, changing roles of private and parochial education, organization and structure of authority and decision-making processes in public and private schools. Writing. Return to top

SOC 315 Population Problems (4-0-4).
Sociological significance of population size, distribution, composition, and density; population and economic development; United States population data in relation to other major countries; programs of family planning; population policies. Return to top

SOC 316 Sociology of Aging (4-0-4).
Critical analysis of the social status and participation of older persons in modern societies. Included topics such as theories of aging, demography, family ties, economic status, health-care delivery systems and long-term care, dying and death, and the U.S. as an aging society. Gerontological Studies course. Return to top

SOC 317 Sociology of Gender (4-0-4).
Examines the significance of gender differences in the experiences of women and men in social institutions (such as family, education, economic, legal, political), the theoretical perspectives utilized to analyze these differences, and the effects of changing expectations on gender roles and identities. Women's Studies course, Human Diversity. Return to top

SOC 318 Sociology of Childhood and Adolescence (4-0-4).
Explores the place of children and youth in society by examining conceptions of children that guide adults' expectations of children and social policies, and how age, gender, ethnicity/race, and social class affect the way children are treated by one another and by adults in families, schools, and neighborhoods in Western societies. Return to top

SOC 340 Criminology (4-0-4).
Examination of crime as a form of social deviance, crime and law, forms and patterns of criminal behavior, theoretical perspectives on crime and criminality, the criminal justice system, law enforcement, corrections, and effectiveness of societal responses to crime. Return to top

SOC 341 Juvenile Delinquency (4-0-4).
Examination of criminal and other forms of youthful misconduct in the context of the place of children and adolescents in American society. Particular emphasis placed upon the causes of various forms of delinquency and community-based prevention and corrective programs. Return to top

SOC 342 Sociology of Law (4-0-4).
Society and law, foundations of law, legislation and judicial interpretation for regulating behavior, law and social change, the legal profession. Writing. Return to top

SOC 343 Medical Sociology (4-0-4).
The role of social and cultural factors in health, research on the use of health services, the health professions, health-care organizations, and major issues in public policy and health care. Writing. Return to top

SOC 344 U.S. Criminal Justice Systems (4-0-4).
Course provides an overview of the development and function of the criminal justice system in the United States. Examines theories of justice and punishment; emergence and development of contemporary police and court systems; structure and functioning of corrections; corrections as a form of social control; and the roles or criminal justice personnel, including police, parole, and correctional officers. Return to top

SOC 345 Social Control (4-0-4).
Course investigates the meaning of social control, both as a formal and an informal system of constraint. Offers a historical account of the emergence and development of the prison in both Europe and the United States. Considers competing historical accounts of the birth of the prison in addition to exploring contemporary issues concerning surveillance and the use of technology to exercise control over a modern, predominantly urban population. Writing. Return to top

SOC 346 Corporate and Governmental Deviance (4-0-4). Reviews the extent, types, causes and consequence of crime and deviant behavior both within and by organizations. The focus of the course is on sociological analysis of organizations and crime. Consideration is also given to various policy options designed to deter and/or punish organizational crime. Writing. Return to top
SOC 352 Sociological Theory (4-0-4). Prerequisite: SOC 101. Study of the work of the most important contributors to the development of sociology as an academic discipline. Required for majors. Writing. Return to top

SOC 353 Methods of Social Research (4-0-4). Prerequisite: SOC 101 or permission of instructor. Introduction to the logic and practice of social research and of key methods - both qualitative and quantitative - such as surveys, experiments, participant observation, comparative case studies, and historical analysis. Required for majors. Return to top

SOC 354 Quantitative Sociological Research (4-0-4). Prerequisite: SOC 101 or permission of instructor. Introduction to the logic of quantitative data analysis, including measures of central tendency and dispersion, measures of association, and tests of significance for appropriate levels of measurement. Required for majors. Return to top

SOC 356 Database Management for Social Research (4-0-4). Prerequisite: SOC 354 or equivalent, or permission of instructor. Develop skills to access and manipulate machine-readable data files for social-science research, such as data from the U.S. Census Bureau and the General Social Survey. The course is a combination of lecture and lab with students learning by doing. Return to top

SOC 380 Racial and Ethnic Inequality (4-0-4).
Historical antecedents and cross-societal comparisons of patterns of dominant and subordinate groupings based upon ethnic, cultural, and racial differentiations; patterns of interaction within and among these groups with special attention to prejudice and discrimination. Black Studies course, Human Diversity. Return to top

SOC 382 African American Communities (4-0-4).
Analysis of the changing status of African American communities and their relationship to the class, status, and power structure of the larger community. Black Studies, Writing Across the Curriculum, Human Diversity, African-American Experience course. Return to top

SOC 383 Political Sociology (4-0-4).
Analysis of the nature, distribution, and effects of power in contemporary society. Study of the relationship between political, economic, and cultural institutions and power. Exploration of topics including the state, political parties, voting, and collective behavior and social movements. Writing. Return to top

SOC 388 Sociology of Work and Organization (4-0-4). Introduction to the sociology of work in contemporary society. Analysis of the meaning of work for men and women and of the different experiences of work in specific occupations. Topics covered include the organization of the workplace, the relationship between work and family, work and gender, and the effects of social policy on workers and employers. Writing. Return to top

SOC 389 Sociology of Non-Western Societies (4-0-4). Prerequisite: SOC 210 or permission of instructor. An analysis of social behavior and organization in the emergent institutions of new nations outside the western hemisphere, as rooted in indigenous, colonial, and eastern cultural forms. Institutions to be examined include family, education, work, and religion, utilizing modernization and social conflict perspectives on societal change. Region to be studied will be listed in the semester course schedule. Foreign culture course; Non-Western society and civilization course. Return to top

SOC 455 Ethnographic Research Methods (4-0-4).
Prerequisites: Major or minor in Sociology, completion of required core courses for major or minor, junior or senior standing, and 3.0 average in Sociology. Exceptions with permission of instructor. Collecting, analyzing, and writing research reports based on qualitative data (field notes, transcripts of intensive interviews, and archives) about an organization or setting. Ethical obligations to host organizations and to the research community. Simultaneous enrollment in SOC 490 advised. Return to top

SOC 490 Sociology Internship (4-0-4).
Prerequisites: Major or minor in Sociology, completion of required core courses for major or minor, junior or senior standing, and 3.0 average in Sociology. Exceptions with permission of department chairperson. Field placement in work settings that apply the sociological perspective on social policy, social welfare, corrections, treatment, opinion polling, or organizational development. Work expectations and evaluation procedures for each intern are contracted with instructor and placement supervisor. Approximately 4 hours on-site for each credit hour, with 4 of the 8 possible credits applicable to the major and minor credit-hour requirements. Research paper required. Return to top

SOC 493 Special Topics in Sociology (4-0-4). Prerequisite: SOC 101 or permission of instructor. Important current trends in sociology. Topics will be announced. May be taken twice for different topics, with departmental permission. Return to top

SOC 494 Special Topics in Criminology (4-0-4). Prerequisite: SOC 101 or permission of instructor. Important current trends in criminology. Topics will be announced. May be taken twice for different topics, with departmental permission. Course counts as an elective for the Sociology-Criminology concentration and Criminal Justice minor. Return to top

SOC 496 Independent Readings in Sociology (4-0-4).
Prerequisites: Senior standing, major in sociology and instructor’s permission. Faculty-supervised and directed selected
readings in areas of special interest to the student. May be repeated for credit for a maximum of 8 credit hours.
Speech and Hearing

Professors:
Arthur H. Schwartz, Benjamin Wallace (Chairperson); Professors Emeriti: David A. Metz, Howard A. Mims, Eric Sander; Associate Professor: Tony L. Sahley; Assistant Professors: Chloe Glasson, Monica Gordon-Pershey; Clinical Assistant Professor: Judith L. Heyer; Clinical Supervisors: Deanna Laurence, Sue Neff, Myrita Y. Wilhite; Adjunct Faculty: Douglas Hicks, Gordon B. Hughes, Richard H. Nodar.

SPH 131 Voice and Diction (3-0-3).
Improvement of voice, articulation, and pronunciation through analysis of each student's speech; study of the structure and functioning of the speech mechanism; directed drills and practice. Return to top

SPH 228 Phonetics (3-0-3).
Introductory course dealing with the principles of American English sounds, transcription of dialects spoken in the United States; and the use of International Phonetic Alphabet. Linguistic Studies course. Return to top

SPH 229 Speech and Language Development (3-0-3). Phonological, grammatical, and semantic development in the normal child. Linguistic Studies, Social Science. Return to top

SPH 231 Introduction to Communication Disorders (3-0-3). Survey of problems in speech, language, and hearing, and their effects on communication. Return to top

SPH 232 Introduction to Audiology (3-0-3).
Principles of psychoacoustics and of aural anatomy, physiology, and pathology; evaluation of hearing function; social and educational consequences of hearing impairment. Return to top

SPH 251 American Sign Language I (4-0-4).
Introduction to basic receptive and expressive skills utilizing fingerspelling, facial expression, body language, gestures, and signs in ASL structure. Particular emphasis will be placed on principles and techniques for communicating with hearing-impaired individuals as well as signs across cultures and geographical areas. Return to top

SPH 252 American Sign Language II (4-0-4). Prerequisite: SPH 251 or permission of instructor. Development of ASL skills utilizing idioms, humor, and expression, with special focus on conversational signs; culture of deaf people in the U.S.; problem situations, ethical issues and responsibilities of interpreting will be addressed; experience with communicating with deaf individuals via guest speakers and out-of-class assignments to various local deaf organizations. Return to top

SPH 331 Psychology of Speech and Hearing (3-0-3).
Introduction to psychological bases of the speech and hearing processes, consideration of psychological factors in speech and hearing problems. Linguistic Studies course. Return to top

SPH 335 Clinical Methods in Communication Disorders (3-0-3). Prerequisites: SPH 228, SPH 229, SPH 231. Procedures for defining, observing, and recording behavior; planning intervention objectives; managing behaviors; writing reports; and utilizing materials and equipment. Return to top

SPH 351 Anatomy and Physiology of the Speech and Hearing Mechanism (3-0-3). Description of the anatomy of the speech and hearing mechanism with particular emphasis on its function as it serves the speech and hearing process. Return to top

SPH 431 Basic Speech-Language Disorders (4-0-4). Prerequisite: SPH 229. The nature, characteristics, and clinical management of speech disorders (articulation, voice, and fluency) and language disorders in children and adults. Return to top

SPH 434 Clinical Practicum in Speech-Language Pathology (1 to 2 credits). Prerequisite: SPH 335. Supervised clinical practice with patients who have speech disorders. May be repeated for a maximum of five credit hours. Return to top

SPH 435 Organization and Administration of a Public School Speech and Hearing Program (3-0-3). Prerequisite: Senior standing or permission of instructor. Study of various aspects of instituting and maintaining a public-school speech-and-hearing program; special emphasis on remedial reading and learning disabilities, scheduling problems, screening and case selection, group therapy, and parent and child counseling. Return to top
SPH 438 Seminar in Urban Language Patterns (3-0-3). Study of certain aspects of urban language patterns with special attention to linguistic features of those persons described as culturally different; investigation and discussion of literature on oral language variations as related to listener attitudes, social and economic consequences, school success, and questions concerning approaches to the problem of speech and language specialists; analysis and evaluation of language samples. African-American Experience, Black Studies, Linguistic Studies course, Human Diversity. Return to top

SPH 481 Aural Rehabilitation (3-0-3). Prerequisite: SPH 232. Principles, history, and methods of teaching those with hearing impairments to integrate visual and auditory cues in the comprehension of the spoken language. Return to top

SPH 482 Audiometry (3-0-3). Prerequisite: SPH 232. Principles of air-conduction calibration, clinical procedures in pure tone audiometry impedance measurements, masking, speech audiometry, and report writing. Return to top

SPH 485 Speech and Hearing Science (3-0-3). Introduction to the study, analysis, and measurement of components and processes involved in production and reception of sound. Linguistic Studies course. Return to top

SPH 486 Clinical Practicum in Audiology (1 to 2 credits). Prerequisites: SPH 335, SPH 482. Supervised clinical practice with patients who have hearing disorders. May be repeated for a maximum of five credit hours. Return to top

SPH 489 Aural Rehabilitation Practicum (1 to 2 credits). Prerequisites: SPH 335, SPH 481. Supervised experience in the evaluation and treatment of communication disorders related to hearing loss. May be repeated for a maximum of four credit hours. Return to top

SPH 495 Speech Seminar (1 to 3 credits). Prerequisite: Senior standing. Limited to speech pathology and audiology majors. Return to top
Professors: Anita K. Stoll (Chairperson), Jos, J. Labrador, Laura Martin; Associate Professor: Delia V. Galván, Philippa Brown Yin; Assistant Professors: Antonio Medina-Rivera, Gabriela Olivares-Cuhat.

Additional courses in linguistics, literature, and civilization which have no prerequisites are listed under English Translations of Foreign Literatures, French, German, and Modern Languages.

Students with native experience of Spanish may not enroll for credit in 100-level courses in Spanish. See the information concerning language skill courses in the Spanish program section.

A veces los requisitos no son exigidos a los hispanohablantes. Conviene que estos consulten con un consejero de la Sección de Español antes de matricularse.

All students with training or experience in Spanish other than a previous course in that language at CSU should continue their study in accordance with their background. Failure to seek counseling may result in schedule shifts during the first week of class.

**SPN 100 200-300-400 Practicum in Spanish (1-6 Credits).** Prerequisites: Permission of instructor, departmental approval. Specially arranged projects or supervised experiences for non-native speakers in Spanish conducted in the university and in the community. Examples include special work in the Instructional Media Laboratory, or participation in a Spanish-language play, and a study or service project involving fieldwork in one of the Spanish communities. Projects arranged between individual students and instructors; title of the project will appear on the student's transcript. Available on S/U basis only. May be repeated for credit with change of topic.

**SPN 101 102 Spanish Language Skills I, II (4-2-5).** Prerequisites: SPN 101 or the equivalent course with C or better. Development of proficiency in speaking, understanding, reading, and writing Spanish with contextual cultural information. Lab fee.

**SPN 111 Spanish First Year Review (4-2-5).** Prerequisite: SPN 102 or two years of high-school Spanish. Increasing mastery of the basic skills of speaking, listening, reading, and writing. Basic grammar review and enrichment.

**SPN 196 296-396-496 Independent Study in Spanish (1 to 6 Credits).** Prerequisite: Student must have sophomore, junior, or senior standing. Proposed projects must be approved by a full-time department faculty member (who will serve as the project advisor) and the department chairman.

Student-initiated supervised projects involving Spanish language or literature, such as in-depth study of a particular writer, or special readings in linguistics. Independent study may be used to cover the materials of a listed course not offered in a given year. Projects arranged between individual students and instructor; title of project will appear on the student's transcript. May be repeated for credit with change of topic.

**General Prerequisites**

**SPN 202 and SPN 203 are prerequisites for all major courses.** The student's advisor, in consultation with the instructor concerned, may grant exceptions. These courses offer content area study and further practice in conversation and composition at the intermediate level and are appropriate for both majors and nonmajors.

**SPN 201 intermediate Spanish (4-0-4).** Prerequisite: SPN 102 or equivalent. Readings in contemporary culture and practice in conversation and composition. Refinement and expansion of grammar capabilities and activities. SPN 201 may be taken before or after SPN 202 or SPN 203. Arts and Sciences Foreign Culture course.

**SPN 202 Literature Survey (4-0-4).** Prerequisite: SPN 102 or equivalent. Reading strategies and a variety of short literary pieces, activities, and writings help develop the student's ability and background in Hispanic literature. Practice and expansion of grammar, and skills development. SPN 202 may be taken before or after SPN 201 or SPN 203.

**SPN 203 Culture and Civilization (4-0-4).** Prerequisite: SPN 102 or equivalent. Readings explore both U.S. and
Hispanic customs, attitudes, and values. Ongoing review and expansion of skills development. SPN 203 may be taken before or after SPN 202 or SPN 201. Arts and Sciences Foreign Culture course. Return to top

**SPN 205 Intermediate Spanish Studies (4-0-4).** Prerequisite: SPN 102 or equivalent. Intermediate-level work on various topics as specified in the course catalog. Topics may address concerns of contemporary society or be specific to professions or areas of study. Grammar and skill development are appropriate to the topic. Sample topics are Spanish for social services, for business, or for the medical professions. Not for Spanish major credit. Return to top

**SPN 240 340, 440 Field Study (1 to 6 credits).** Prerequisite: Permission of instructor. Study abroad in a Western hemisphere Spanish-speaking country such as Mexico, under the auspices of CSU Spanish Section faculty. Program and course content vary annually. Consult an advisor in Spanish for current information. Non-Western Culture and Civilization. Return to top

**SPN 241 341, 441 Spanish Field Study (1 to 6 credits).** Prerequisite: Permission of instructor. Study abroad in Spain under the auspices of CSU Spanish Section faculty. Program and course content vary annually. Consult an advisor in Spanish for current information. Return to top

**SPN 245 Hispanic Resources of Cleveland (3-0-3).** Field experience with aspects of the Spanish-speaking community in the Cleveland area. Informal conversation practice. Human Diversity. Return to top

**SPN 293 393-493 Special Topics in Spanish (1 to 4 credits).** Prerequisite: SPN 102 or permission of instructor. Intensive study of a particular topic in Spanish language, literature, or civilization. May be repeated for credit with change of topic. Some topics offered as Linguistic Studies courses. Return to top

**SPN 301 Advanced Spanish: Oral Skills Emphasis (4-0-4).** Prerequisites: SPN 302 or two of the following: SPN 201, 202, 203 or the equivalent, or permission of the instructor. Advanced conversation and composition; improvement of all language skills and knowledge of grammar, with special emphasis on development of oral skills. Return to top

**SPN 302 Advanced Spanish: Writing Skills Emphasis (4-0-4).** Prerequisites: SPN 301, or SPN 202 and either SPN 201 or 203 or the equivalent, or permission of the instructor. Advanced conversation and composition; improvement of all language skills and knowledge of grammar, with special emphasis on development of writing skills. Writing. Return to top

**SPN 303 Advanced Composition and Conversation for Native Speakers (4-0-4).** Prerequisite: Native speaker of Spanish or permission of instructor. Practice in composition and conversation based on short literary or cultural reading. Emphasis on development of skills particular to scholastic work, such as summaries, reports, and projects. Writing. Return to top

**SPN 315 Spanish Phonetics (3-1-3).** Prerequisites: SPN 201 and SPN 202. Physiology and articulation of Spanish sounds; application of contrastive phonology to the teaching of Spanish, intensive pronunciation drill in the Instructional Media Laboratory. Required for majors and students seeking teaching licensure in Spanish. Linguistics Studies course. Return to top

**SPN 345 Spanish Civilization (4-0-4).** Prerequisites: SPN 201 and SPN 202. Historical interpretation of Spain through the study of geography, religion, sociology, and the arts of the Iberian Peninsula. Western Culture and Civilization. Return to top

**SPN 346 Latin American Civilization (4-0-4).** Prerequisites: SPN 201 and SPN 202. Introduction to the historical, political, sociological, cultural, and artistic development of Latin America. Non-Western Culture and Civilization. Return to top

**SPN 365 Readings in Hispanic Literature (3-0-3).** Prerequisites: Any two courses on the 200 level. May be taught concurrently with ENF courses, but students will read additional selections in Spanish and will be expected to react to them in Spanish both orally and in writing. May be repeated for credit with change of topic. Return to top

**SPN 371 Introduction to Spanish Literature (4-0-4).** Prerequisites: SPN 201 and SPN 202. Introduction to the study of Spanish literature, with concentration on principal authors and their works from the Middle Ages to the present. Writing, Western Culture and Civilization. Return to top

**SPN 372 Introduction to Spanish American Literature (4-0-4).** Prerequisites: SPN 201 and SPN 202. Introduction to the study of Spanish-American literature, with concentration on principal authors and their works from the colonial period to the present. Non-Western Culture and Civilization. Writing. Return to top
SPN 405 Advanced Grammar and Stylistics (3-0-3). Prerequisite: Either SPN 301 or SPN 302, or permission of instructor. Attention to the fine points of grammar in Spanish, with an emphasis on the development of oral and written expression reflecting Spanish language patterns. Writing. Return to top

SPN 416 Studies in Spanish Linguistics (3-0-3). Prerequisite: SPN 315 or permission of instructor. Analysis of aspects of Spanish grammar or usage from the perspective of modern linguistics. May be repeated for credit with a change of topic. Linguistics Studies course. Return to top

SPN 417 History of Spanish (3-0-3). Prerequisite: SPN 315 or permission of instructor. Survey of the development of the Spanish language from Roman times to the present day. Linguistics Studies course. Return to top

SPN 445 Studies in Spanish Civilization (3-0-3). Prerequisite: SPN 345 or SPN 346 or permission of instructor. Study of the civilization or culture of a particular period or topic, such as "20th-Century Politics in Context," or "Civil War in Film and Art." Topics to be announced. May be repeated for credit with a change of topic. Return to top

SPN 446 Studies in Spanish American Civilization (3-0-3). Prerequisite: SPN 345 or SPN 346 or permission of instructor. Study of the civilization or culture of a particular period or topic, such as "Colonial Culture," "Caudillismo," "Art in the Caribbean," or "Writers of Spanish America." Topics to be announced. May be repeated for credit with a change of topic. Return to top

SPN 483 Studies in Spanish Literature (3-0-3). Prerequisite: SPN 371 or SPN 372 or permission of instructor. Study of a particular period, author, or theme, such as "The Picaresque Novel," "The Generation of 98," "Galdós," "García Lorca," "Dynamic Women in Drama." Topics to be announced in course schedules. May be repeated for credit with change of topic. Writing. Return to top

SPN 484 Studies in Spanish American Literature (3-0-3). Prerequisite: SPN 371 or SPN 372 or permission of instructor. Study of a particular period, author or theme, such as "Romanticism," "Modernism," "Dario," "García Marquez," "Magic Realism." Topics to be announced. May be repeated for credit with change of topic. Writing. Return to top

SPN 491 Senior Honors Project (3-0-3). Prerequisites: For MLA Honors Students Only. Project must be preapproved by project advisor who is a full-time faculty member, department chair, and department curriculum committee. An independent research project developed in cooperation with faculty advisor. Completed projects will be submitted in written form and presented in a public forum. Return to top

The Department of Modern Languages offers a master of arts degree in Spanish. Please see the graduate catalog for a description of the degree program. The SPN 500- to 600-series of courses may also be taken as part of the master of education degree program in Curriculum and Instruction.

SPN 501 Research Methods (2 to 4 credits). Return to top

SPN 505 Advanced Grammar and Stylistics (4-0-4). Return to top

SPN 534 Studies in Language and Linguistics (4-0-4). Return to top

SPN 540 Field Experience Abroad (2 to 4 credits). Return to top

SPN 545 Studies in Spanish Civilization (4-0-4). Return to top

SPN 546 Studies in Spanish American Civilization (4-0-4). Return to top

SPN 564 Studies in Culture and Civilization (4-0-4). Return to top

SPN 583 Studies in Spanish Literature (4-0-4). Return to top

SPN 584 Studies in Spanish American Literature (4-0-4). Return to top

SPN 589 Studies in Literature (4-0-4). Return to top

SPN 596 Independent Study (1 to 8 credits). Return to top

SPN 616 Seminar in Spanish Language (4-0-4). Return to top

SPN 631 Teaching College Spanish (1 to 8 credits). Return to top
SPN 665 Seminar in Hispanic Culture (4-0-4). Return to top

SPN 685 Seminar in Spanish Literature (4-0-4). Return to top

SPN 686 Seminar in Latin American Literature (4-0-4). Return to top

SPN 696 Independent Study (1 to 8 credits). Return to top
# Social Work

**Professors:**
Zev Harel, Maggie Jackson (chairperson), Edward A. McKinney, Murali D. Nair; Professors Emeriti: Winifred Bell, Willa M. Hemmons, Elizabeth Lewis, Ruth Ellen Lindenberg, Barbara Reynolds; **Associate Professors:** Ralph Brody, Elizabeth Cagan, Andrew W. Edwards, Larry W. Foster, Lonnie R. Helton, Mieko K. Smith, Michael R. Williams; **Assistant Professors:** Janet C. Bussey, Gloria M. Freire.

**SWK 150 The Black Experience and Contemporary Society (3-0-3).** This course is a comprehensive overview of the contemporary Black experience as viewed from the social work perspective. This perspective assumes that being Black exposes one to differential treatment by social institutions. It also strives to introduce students to effective strategies for use at the individual, family, group, and community levels which seek to offset racism's negative consequences. African-American Experience, Human Diversity. [Return to top](#)

**SWK 200 Introduction to Social Work (3-0-3).**
Introduces students to concepts, settings, and vulnerable populations related to the field of social work. Emphasis placed on purposes, values, ethics, knowledge, and skills that characterize the professional social worker. Provides an overview of theoretical and practical knowledge about the social work profession needed for entry levels of practice in social work. [Return to top](#)

**SWK 201 Contemporary Social Welfare (3-0-3).**
Examination of the social welfare system in the context of its history, function, existing social problems; and the workings of the American political, social, and economic systems. Diverse views of human needs and alternative forms of social organizations are also examined. In addition, the problems of economically and socially disadvantaged groups will be addressed, with special reference to the Black experience. [Return to top](#)

**SWK 240 Administration of Justice (3-0-3).**
Study of the criminal justice system. Topics include criminal prosecution, police and court functions, sentencing, and corrections, with critical examination of present practices and implications for change. [Return to top](#)

**SWK 259 The Child, the Family, and the Law (3-0-3).**
 Defines, describes, and analyzes the legal situation of children in an adult-oriented society. Investigates children's rights with respect to major societal institutions, such as family, schools, the justice system, and the welfare system. Assesses societal attitudes, values, and beliefs to determine their impact upon the legal position of the child within these social systems. Explores current issues in adoption, abortion rights, and deinstitutionalization. [Return to top](#)

**SWK 300 Social Welfare Policy (3-0-3).** Prerequisite: SWK 201. Examination of policy-making process from policy formulation and development to implementation, with special emphasis on conceptual and analytic models for policy analysis and evaluation in the social services. Relates practice to policy development and application. [Return to top](#)

**SWK 302 Human Behavior and Social Environment I (3-0-3).** Prerequisite: Junior standing or permission of instructor. Comparative analysis of selected theories of human behavior in the social environment through the life cycle for the purpose of understanding criteria for selection, use, and integration of theory and social intervention. [Return to top](#)

**SWK 303 Human Behavior and Social Environments II (3-0-3).** Prerequisite: Junior standing or permission of instructor. Comparative study of human behavior within the contexts of formal and informal social systems (families, small groups, neighborhoods, organizations) focusing on the relationship between social environment and human behavior. Writing. [Return to top](#)

**SWK 304 Perspectives on Social Work Research I (3-0-3).** Prerequisite: SWK 201. Introduction to the philosophy and methodology of science; acquaints the student with research techniques, strategies, and resources; develops critical readership ability; promotes consumership of research findings in social-work practice; instructs in the ethical and political considerations which are inherent in research. [Return to top](#)

**SWK 305 Perspective on Social Work Research II (3-0-3).** Prerequisite: SWK 304. This course builds on the knowledge acquired in Perspectives on Social Work Research I. This class aims to expand students' understanding of quantitative and qualitative methodologies, techniques and skills for data collection and management. It also aims to provide students with computer skills for text and data processing, and data processing techniques for descriptive and inferential statistics from research data. This course will expand students' knowledge and skills for social-work practice-related research and evaluation. [Return to top](#)
SWK 340 Legal Aspects of Human Services (3-0-3).
Course is opportunity to become familiar with legislative process, litigation and the courts, and administrative law; analysis of the relationship between individual rights and human services, including mental-health law, juvenile, narcotics, and housing laws. Return to top

SWK 341 Corrections: Institutional and Community-Based (3-0-3). Prerequisite SWK 240. Juvenile and adult correctional settings are explored. Study of the modes of organization and management which are applicable to correctional settings, examination of the resources and constraints in current community-based corrections practice as an alternative to incarceration, emphasis on new theory and innovative approaches in various countries. Return to top

SWK 342 Prisoners' Rights (3-0-3).
Overview of how the legal system deals with persons convicted of a crime or in the custody of correctional facilities, the correctional process itself as it relates to interests of defendants as well as to the interests of society, how correctional authorities mediate between these two interests and to whom they are accountable. Return to top

SWK 350 Basic Generalist Practice (3-0-3).
This course is the first of the Intervention sequence, which prepares social work majors for generalist social work practice. It is designed to develop and enhance the students' knowledge, skills and affective development in forming working relationships necessary for generalist social work practice with individuals, families, small groups, organizations, and communities within a diverse society. Return to top

SWK 351 Social Work in Community Development (3-0-3). Prerequisite: Junior standing or permission of instructor. Builds knowledge about and awareness of practice with adult community groups, including self-help, social development and advocacy. Issues and policies associated with citizen development, and citizen participation activities - whether at service/program initiation, resource development or structural change levels - are analyzed. The course is aimed at identification and understanding of the problems/issues; the policies at federal, state and local levels; and the range of agencies, programs and autonomous community organizations which have a community-development orientation. Writing. Return to top

SWK 352 Practice in Health Settings (3-0-3).
Prerequisite: Junior standing or permission of instructor. Provides content and experiences which help the student understand the impact of illness on individuals and families and the settings in which health personnel function; knowledge and skills requisite for practice are considered, along with issues stemming from current health-care policies and service delivery. Return to top

SWK 353 Child Welfare Service (3-0-3).
Prerequisite: Junior standing or permission of instructor. The history of child welfare, family problems as they affect child welfare, and issues and alternatives in child-care services; discussion of settings where services are provided, as well as perspectives concerning child welfare as an area of practice. Return to top

SWK 354 Mental Health (3-0-3).
Prerequisite: Junior standing or permission of instructor. Introduces students to conceptual alternatives in mental health and acquaints them with consequences of these various conceptual approaches, encourages a scientific perspective in the mental-health field, educates students to seek new approaches to practice in the mental health field. Return to top

SWK 355 Asian American Experience (4-0-4).
This course deals with developing a better understanding of the evolution and settlement patterns, religious and social institutions, and help-seeking patterns of Asian Americans, one of the fastest growing visible minority groups in our society. The course will focus on Indian Americans and Chinese Americans, the two largest Asian American groups in Northeast Ohio. Other Asian groups, such as Filipinos, Japanese, Korean, Vietnamese, and other Southeastern and South Asian communities will also be highlighted, with special emphasis on Asian communities in Northeast Ohio. Human Diversity. Return to top

SWK 356 Plague '90s: AIDS & Intervention (3-0-3).
Prerequisite: Junior standing or permission of instructor. Reviews the etiology of the HIV-AIDS virus, populations at risk, policies affecting public education, prevention, and treatment of AIDS. Interventions with persons, significant others/families and program/policy agencies will be identified. Return to top

SWK 360 Alcoholism (3-0-3).
Prerequisite: Junior standing or permission of instructor. Examination of the disease concept of alcoholism; including prevention, treatment, and recovery of the alcoholic and members of his/her family; considers questions of social policy and strategies and tactics in the field. Other forms of substance addiction are also considered. Return to top

SWK 371 Constitutional Criminal Procedure (3-0-3). Prerequisite: SWK 240. Course includes the major constitutional doctrines and issues relating to, and eliminating, criminal investigation (including the securing of physical and oral evidence)
and the prosecution of crime. The history and purpose of these constitutional doctrines will be studied to enable students to understand that violations of any of the guarantees of the Bill of Rights must not be viewed as "technicalities," but as attacks on the freedom of all U.S. citizens. Return to top

SWK 372 Substance Abuse in Society (3-0-3).
Prerequisite: Junior standing or permission of instructor. Course provides a historical perspective regarding the use of mind-altering substances and views the impact(s) of use/abuse on the individual, family, and society. In addition, the course will examine various treatment modalities and the impact on vulnerable groups (such as adolescents, delinquents, elderly, minorities). Return to top

SWK 374 Law Enforcement in Society (3-0-3).
Examination of law enforcement at different levels of society - local, state, federal, and international - with special emphasis upon law enforcement's role and impact upon society and vice versa; includes presentation of law enforcement's purposes, methods, structure, and community interaction. Return to top

SWK 375 Criminal Law (3-0-3).
Prerequisite: SWK 240. The nature and general provisions of criminal law; interpretation of criminal statutes; elements and parties to crime; defenses to criminal culpability; crimes against persons and property. Return to top

SWK 385 Interventions I (4-0-4). Prerequisites: SWK 201, SWK 200, SWK 300, SWK 302, SWK 303, SWK 304, SWK 305; written permission of advisor. Fundamental and basic professional course that allows students to develop, expand, and utilize knowledge of human development and social structure to initiate a framework for social-work practice; uses generalist model which requires development of skills that can be used in various social contexts. First of a two-semester sequence which encompasses a full range of strategies and skills necessary when working with individuals, families, small groups, organizations and communities. Emphasis on an inquiry model of social-work practice. A lab experience is required of all students as part of the course. Open to social-work majors only. Student must achieve a grade of B or better to continue into SWK 485, SWK 490, and SWK 495. SWK 385, SWK 390 and SWK 395 must be taken concurrently. Return to top

SWK 390 Field Practicum I (0-16-6). Prerequisite: Written permission of field coordinator. SWK 385, SWK 390, and SWK 395 must be taken concurrently. Placement in a selected community-service agency for 16 hours provides an opportunity to gain experience in the application of concepts and principles of interventions through actual problem-solving in the human service context. The student is required to demonstrate the integration of skills and a professional attitude in their work with clients and the agency. Continuation onto a second field practicum (SWK 490) and completion of the major are contingent on a grade of "B" or better. Return to top

SWK 395 Field Seminar I (2-0-2). Prerequisite: Written permission of field coordinator. This course is taken concurrently with SWK 385 and SWK 490. Students are expected to synthesize practicum learning with knowledge gained in field experience and other courses. Themes addressed are practicum agency, policies, programs, current issues, various practice strategies and approaches. Student must achieve a grade of B or better to continue into SWK 485, SWK 490, and SWK 495. A log will be required of each student. Return to top

SWK 396 Readings in Social Work (2-0-2).
Prerequisites: Written permission of instructor and chairperson. Readings and assignments in areas of special interest to the Social Work major. Return to top

SWK 398 Africa (Zimbabwe) (4-0-4).
This course will explore in detail selected social welfare, economic, and cultural issues prevalent in Zimbabwe, with special emphasis given to African University in Old Mutare, Zimbabwe, Africa. Students will have the opportunity to explore and develop a topic of choice. Visitation at community organizations, social welfare agencies, and orphanages will be arranged. Tours to historical sites will be provided to help students comprehend the complexities of Zimbabwe as a country. Activities will introduce students to the nature of social and political issues in the context of Zimbabwe. Study Abroad. Return to top

SWK 465 Aging and Social Work (3-0-3).
Prerequisite: Junior standing or permission of instructor. Conceptual and methodological perspectives for understanding the basic needs of the aging and the contingencies they face; includes the principles of and strategies for assessing needs, establishing objectives, estimating resources, and determining and evaluating interventions at individual, family, group, and community levels. Opportunity for students to become familiar with programs for the aged, service delivery networks, and strategies for influencing social policy and legislation. Return to top

SWK 470 Problems and Issues in Criminal Justice (3-0-3).
Prerequisite: SWK 240. Examination of contemporary social issues, including alcoholism, drug addiction, mental illness, poverty, family crisis, nonvictim crime, child abuse, senility, and racism as they intersect the criminal-justice system. Interaction of social issues and criminal behavior is analyzed with the focus on alternatives to arrest and incarceration through the use of community resources. Course expectations assume a
SWK 475 Alternative Health Systems (4-0-4).
This course provides an introduction to the phenomenon of America's interest in alternative and complementary health-care systems. It utilizes an ecological-systems perspective in developing the knowledge base necessary for an understanding of this phenomenon. Survey and critique of a wide variety of scientific and general literature on this topic from different professional perspectives will be highlighted. The major domains identified by the National Center for Alternative and Complementary Medicine at the National Institute of Health are also discussed in this course. The healing practices of far-eastern countries, such as India, will be highlighted. Return to top

SWK 485 Interventions II (4-0-4). Prerequisites: SWK 385, SWK 390, SWK 395 and written permission of field coordinator. SWK 485, SWK 490 and SWK 495 must be taken concurrently. Course is designed to give the student an opportunity to study the theory and develop skills related to small groups and community dynamics. Organizational dynamics and community services will be the primary focus for course. Advocacy and various strategies to promote social/organizational change will be considered. Completion of the major is contingent upon a grade of B or better. Writing. Return to top

SWK 490 Field Practicum II (0-16-6). Prerequisites: SWK 385, SWK 390, SWK 395 and written permission of field coordinator. SWK 483, SWK 490 and SWK 495 must be taken concurrently. Continuation of SWK 390 involving an additional 16 hours per week minimum in community-service agency. Students may not receive field practicum experience for concurrent job experience, however, under exceptional circumstances, the department may agree to a field experience plan that incorporates part of a student's experience into the field practicum. Completion of the major is contingent upon a grade of B or better. Return to top

SWK 493 Special Topics in Social Welfare (3-0-3).
Prerequisite: Permission of Instructor. Study of special topics not regularly appearing in curriculum, including new developments in practice, programs, policy, and fields of service; intensive study of specific problem areas. Course may be repeated for credit not more than three times. Return to top

SWK 495 Field Seminar II (2-0-2). Prerequisite: Written permission of field coordinator. This is a continuation of SWK 395 and is taken concurrently with SWK 485 and SWK 490. Specific macro practices are addressed and students are expected to be more advanced in their ability to participate in dialogue. Completion of the major is contingent upon a grade of B or better. The log continues to be required. Return to top

SWK 496 Independent Study in Social Work (3-0-3). Prerequisites: Written permission of instructor and chairperson. Individual research or project conducted by Social Work majors. Return to top

SWK 497 Independent Study in Criminal Justice (3-0-3). Prerequisites: Written permission of instructor and chairperson. Individual research and projects conducted in the domain of criminal justice. Return to top

SWK 499 India Experience: Contemporary Social Issues in India (9-0-9). This course will explore in detail selected social welfare, economic and cultural issues prevalent in India, with special emphasis given to Southwestern state of Kerala. The course will focus on such issues as adult literacy, alternate health-care practices, community development and self-sufficiency, the electronic industrialization of rural communities, and the role of women. Students will have pre-departure orientation of an interview of India: social welfare, political, socioeconomic, Malayalam language and other cultural aspects, followed by four weeks of structured learning and intensive analysis of Kerala, involving lectures by local area experts and professors from the University of Kerala, visits and mini-internships to social welfare agencies, educational and health care organizations and rural communities. Students will have an opportunity to stay and interact with university students and their family members. As part of the program students will participate in reflected discussions, write daily logs, learn to communicate in Malayalam, upload day-to-day experiences into CSU India Experience Website, prepare two major papers and give a presentation in front of an invited audience. Arts and Sciences Foreign Culture course. Study Abroad, Writing, Non-Western Culture and Civilization. Return to top
Professors:
Mark S. Rosentraub (Dean), Sanda Kaufman, W. Dennis Keating (Associate Dean), Norman Krumholz, Sylvester Murray, Dianne Rahm (Assistant Dean), Womnie Reed, Roberta Steinbacher (Assistant Dean), Camilla Stivers;

Associate Professors:
Jennifer Alexander, Virginia O. Benson, Mittie Olion Chandler (Assistant Dean for Student Services), Michael V. Wells (Director, Undergraduate Programs).

USA 380 Urban Family Development (4-0-4).
Community building through a holistic approach to family development in urban communities. Cross-listed with UST 380. Return to top

USA 410 Proposal Writing and Program Development (4-0-4). Examination of the structure and content of proposals, sources of funding, foundation decision-making, program evaluation, and social/institutional change in the urban environments; independent preparation of proposals and application of evaluation procedures. Cross-listed with UST 410. Writing. Return to top

USA 433 Conflict Management (4-0-4).
Course examines conflict as an omnipresent component of any decision-making environment. Offers tools for understanding the nature of conflict, devising individual and group strategies that minimize the destructive consequences of conflict, and identifying solutions that are satisfactory to all involved. Includes lectures, discussions, and simulation games. Cross-listed with UST 433. Return to top

USA 452 Management of Urban Organizations (4-0-4). Developing critical management skills; problem-solving, communication, and conflict resolution; introduction to Total Quality Management. Cross-listed with UST 452. Return to top

USA 453 Managing Urban Diversity (4-0-4).
Study of diversity including circumstances faced in urban settings that are exacerbated or affected by diversity factors; exploration of a range of social, political, and economic issues related to diversity. Cross-listed with UST 453. Human Diversity. Return to top

USA 455 Gender and Leadership (4-0-4).
Examination of factors influencing public acceptance of women in leadership positions; discussion of strategies for effective leadership in diverse communities, and relationships between priorities of the urban community and society's perception of women's roles. Course includes guest lectures by women currently in positions of leadership. Cross-listed with UST 455. Women's Studies course, Human Diversity. Return to top

USA 456 Institutional Development of the Nonprofit Organization (4-0-4). Examines nonprofit organizations as community institutions, and the role of institutional management and leadership in their development; the nature of leadership and management in the nonprofit sector; fundraising and financial management; governance and the respective roles of board, staff and volunteers; the political, economic and inter-organizational environment; community relations; needs assessment; and planning and performance measurement. Cross-listed with UST 456. Return to top

USA 458 Urban Policy (4-0-4).
Examination of current state and local political issues focusing on Ohio; perspectives on the legislative, judicial, and executive branches, as well as tax and spending policies, human services and education delivery systems, and the formulation of public transportation and environmental policies. Cross-listed with UST 458. Writing. Return to top

USA 459 Budgetary Policy (4-0-4).
Revenue, expenditure, and debt structures of American cities; theories of public budgeting; types of budgets and budget formats; and typical components of a budget document. Cross-listed with UST 459. Return to top

USA 490 Human Services Internship (Credit as Arranged). Prerequisite: Permission of instructor. Work experience in urban agencies for urban services administration majors. Return to top
USA 493 Human Services Issues (4-0-4).
Special topics in human services, including citizen advocacy, mental health, substance abuse, and domestic violence. Topics will be listed in the semester course schedule. [Return to top]

USA 496 Research in Human Services (Credit as Arranged). Prerequisite: Permission of instructor. Special research involvement in ongoing projects or specially developed projects for urban services administration majors under supervision of a faculty director. [Return to top]

USA 497 Readings in Human Services (Credit as Arranged). Prerequisite. Permission of instructor. Independent study for urban services administration majors. [Return to top]
Urban Studies

Professors:
Mark S. Rosentraub (Dean), Richard D. Bingham, Stan A. Duraj, Michael Gates, Edward Hill, Miron Kaufman, Sandra Kaufman, W. Dennis Keating (Associate Dean), Norman Krumholz, Larry Ledebur, Walter Leedy, Helen Liggett, Sylvester Murray, Dianne Rahm (Assistant Dean), Wornie Reed, Robert A. Simons (Director, MUPDD Program), Michael Spicer, Roberta Steinbacher (Assistant Dean), Camilla Sivers, Michael Tevesz; Associate Professors: Jennifer Alexander, Virginia O. Benson, William Bowen, Mittie Olion Chandler (Director, Urban Child Research Center), Lawrence Keller, Wendy Kellogg, Harry Margulis, Brenda Marshall, Mark Tumeo, Alan Weinstein, Michael V. Wells (Director, Undergraduate Programs); Assistant Professors: Nancy Meyer-Emerick, Brian A. Mikelbank.

UST 102 Professional Writing (3-0-3).
Basic elements of effective technical writing, decision memoranda, request for proposals, and annual reports. Equivalent to ENG 102. Return to top

UST 190 Analysis of Experiential Learning in Urban Studies (2-0-2). Prerequisite: Permission of instructor. Seminar designed to assist adult students in clarifying career, personal and educational goals with emphasis on describing college-level learning from prior experience and documenting this learning for assessment. For Urban Studies majors. Return to top

UST 200 Introduction to Urban Studies (4-0-4).
Introduction to the study of cities using an interdisciplinary approach that includes history, sociology, planning, economics, and political science; emphasis on the roots of contemporary African-American community problems; integration of the field of urban studies with the student's everyday experience. Social Science, African-American Experience, Human Diversity. Return to top

Cleveland's political, economic, and racial history as typifying older American industrial cities; origins and dynamics of periods of growth and decline with emphasis on race, housing, and poverty. Social Science, African-American Experience, Human Diversity. Return to top

UST 240 Democracy and the Bureaucratic City (4-0-4).
The rise of the modern city in terms of the organizations that have dominated its life, the shaping of the public and private sectors by large formal organizations, and the roles they plan in the life of the city and its people. Western Culture and Civilization. Return to top

UST 242 Introduction to Urban Finance (3-1-4).
Introduction to finance from personal, corporate, and municipal perspectives, and creative uses of taxation in financing urban governments, schools, and infrastructures. Specific topics include municipal bonds, other investments, risks, and trusts. Students will participate in on-site assignments designed to provide experiential learning at public agencies and private investment firms. Return to top

UST 250 The City in Film (4-0-4).
Examination of the work of contemporary artists in films which depict life in urban America; discussion of visual presentations through the perspectives of city planning, art, politics, architecture and other fields of study. Arts and Humanities. Return to top

UST 259 Natural History of the Cleveland Area (3-6-4).
General geology, ecology, flora, and fauna of the Cleveland area; field trips to parks and museums to study local rock formations, forest types, and plant and animal identification. Designed primarily for non-science majors. Cross-listed with ENV 259. Natural Science with Lab. Return to top

UST 289 Physical Geography (3-0-3).
Discussions of physical environments, stressing relationships to people; study of the surface of the earth, including meteorology, science of weather, and geomorphology, science of landforms. Formerly GEO 209. Natural Science. Return to top

UST 290 Urban Geography (4-0-4).
Social, economic, and political structures operating within cities; geographical definitions, location theories, population densities and migrations, and land-use patterns; identification of issues, problems, and policies related to urban settlements. Social Science, Writing. Return to top
UST 296 Urban Field Experience (credit as arranged). Prerequisite: Permission of instructor. Independent study for urban studies majors.  

UST 300 Economics of Policy Analysis (4-0-4). Examination of the economic content of urban and regional policy and administrative issues; housing and land use; labor markets, income distribution and poverty; education; health care; pollution; discrimination; municipal finance; municipal service delivery; and crime.  

UST 301 Urban Spatial Systems (4-0-4). Prerequisite: UST 300 or ECN 202. Evolution and changing form of the metropolitan region; linkages between cities and their suburbs, and industrial/occupational structure and labor market flows; examination of appropriate public and private sector roles and responsibilities and their associated costs.  

UST 302 Contemporary Urban Issues (4-0-4). The physical, social, and economic dimensions of the urban crisis emphasizing minority communities; traditional and non-traditional approaches to problem definition and solution, techniques for understanding and shaping the physical environment, and constraints to problem-solving in urban areas. Writing, Human Diversity, African-American Experience.  

UST 303 Urban Service Learning (4-8-4). Curriculum-based community service course; students will have the opportunity to work as volunteers with community groups and agencies, and will be guided in examining their experiences and concepts of community development, volunteerism, and citizenship.  

UST 374 American Architecture (4-0-4). A historical analysis of the built environment from the 17th century to the present; various styles and types of buildings are related to time and place, defining and identifying central characteristics, special function, cultural expression, technology and changes in architectural practice. Cross-listed with ART 374. Western Culture and Civilization, Writing.  

UST 375 Cities and Planning (4-0-4). Course examines what humans have done to form the communal environment since ancient times; social, symbolic, functional, and biotechnical domains as generators of architecture and urban planning; value systems in environmental change; policies, plans, and design proposals as record of the humanized environment. Cross-listed with ART 375. Western Culture and Civilization, Writing.  


UST 381 Practicum in Urban Planning (Credit as Arranged). Prerequisite: Permission of instructor. Independent experiential learning involving theory and practice in urban planning, design and/or development activities. For Urban Studies majors only.  

UST 382 Practicum in Urban Management (Credit as Arranged). Prerequisite: Permission of instructor. Independent experiential learning involving theory and practice in urban management, public administration, policy development and/or government finance. For Urban Studies majors only.  

UST 383 Practicum in Environmental Studies (Credit as Arranged). Prerequisite: Permission of instructor. Independent experiential learning involving urban environments. For Urban Studies majors only.  

UST 384 Practicum in Urban Studies (Credit as Arranged). Prerequisite: Permission of instructor. Independent experiential learning involving theory and practice in a specific area of urban studies, such as criminal justice, urban construction management, management-labor relations, community organizing, economic development, or conflict management. For Urban Studies majors only.  

UST 401 Computer Applications for Urban Research (4-0-4). Introduction to the use of the computer with software packages relevant to the study of the city; text editing and word processing; data base management; tabular displays and computer graphics.  

UST 403 Cartography and Graphics (2-4-4). Prerequisite: UST 401 or permission of instructor. The principles of map-making and the use of presentation graphics in urban planning and research applications; the use of maps and graphics in the analysis of social, economic, and demographic associations of the built environment; basic elements of geographic information systems.  

UST 404 Urban Data Analysis (4-0-4). Urban research decisions and procedures; procedures for obtaining empirical knowledge about urban issues and ways to extract the meaning of urban data.
UST 410 Proposal Writing and Program Development (4-0-4). Examination of the structure and content of proposals, sources of funding, foundation decision-making, program evaluation, and social/institutional change in the urban environments; independent preparation of proposals and application of evaluation procedures. Cross-listed with USA 410. Writing. Return to top

UST 415 Neighborhood Analysis (4-0-4). The concept and function of community in modern urban life; construction of a neighborhood profile using census data, tax and land records, maps, surveys, interviews, and visual materials; methods of analyzing community social structure. Return to top

UST 418 Urban Planning (4-0-4). The nature of physical planning and its relationship to social and economic planning; steps in the planning process; levels of planning; preparation and criticism of plans and planning studies. Return to top

UST 419 Neighborhood Planning (4-0-4). The process and techniques for the creation and implementation of neighborhood organizations; an introduction to local government organizations and private institutions which support neighborhood planning and federal, state, and local programs which fund neighborhood planning and development programs. Return to top

UST 420 Urban Design Seminar (4-0-4). An introduction to the topic of urban design as it relates to the private land development process; financial incentives offered by governments to stimulate development in American cities; analysis of development case studies in Cleveland, including market research and cash flow analysis to determine the feasibility of projects. Writing. Return to top

UST 433 Conflict Management (4-0-4). Examines conflict as an omnipresent component of any decision-making environment; tools for understanding the nature of conflict; devising individual and group strategies that minimize the destructive consequences of conflict; and identifying solutions that are satisfactory to all involved; includes lectures, discussions, and simulation games. Return to top

UST 434 Introduction to Geographic Information Systems (4-0-4). Principles of Geographic Information Systems (GIS) as a computer tool to provide spatial information analysis; laboratory instruction in the use of GIS software to aid in the analysis of workplace problem situations. Return to top

UST 435 Environmental Policy and Administration (4-0-4). Administration of the organizations charged with responding to environmental regulations and/or crises; decision- and policy-making processes within and around these organizations, especially as they relate to conflicting interests and values. Cross-listed with ENV 435. Writing. Return to top

UST 440 Environment and Human Affairs (4-0-4). Challenges to decision-makers in environmental policy-making; strategies appropriate to various decision situations, analysis of decision-making; negotiation and mediation techniques. Cross-listed with ENV 440. Return to top

UST 441 Environmental Planning (4-0-4). Exploration of principles and processes of environmental planning, focusing on urban, metropolitan and regional levels; presentation of frameworks and techniques in areas such as site-plan review, urban design, urban environmental restoration, open space and habitat preservation, water quality, bioregionalism, and growth management; development of organizing principles for environmentally sustainable metropolitan regions. Cross-listed with ENV 441. Return to top

UST 451 Public Safety Management (4-0-4). Introduction to public sector management in law enforcement, fire safety, and related public safety agencies; leadership and management styles; decision-making and team building. Return to top

UST 452 Management of Urban Organizations (4-0-4). Developing critical management skills, problem-solving, communication, and conflict resolution; introduction to Total Quality Management. Cross-listed with USA 452. Return to top

UST 453 Managing Urban Diversity (4-0-4). Study of diversity, including circumstances faced in urban settings that are exacerbated or affected by diversity factors; exploration of a range of social, political, and economic issues related to diversity. Cross-listed with USA 453. Human Diversity. Return to top

UST 455 Gender and Leadership (4-0-4). Examination of factors influencing public acceptance of women in leadership positions; discussion of strategies for effective leadership in diverse communities, relationships between priorities of the urban community and society's perception of women's roles; course includes guest lectures by women currently in positions of leadership. Cross-listed with USA 455. Women's Studies course, Human Diversity. Return to top

UST 456 Institutional Development of the Nonprofit Organization (4-0-4). Examines nonprofit organizations as community
institutions, and the role of institutional management and leadership in their development; the nature of leadership and management in the nonprofit sector; fundraising and financial management; governance and the respective roles of board, staff and volunteers; the political, economic and inter-organizational environment; community relations; needs assessment; and planning and performance measurement. Return to top

**UST 458 Urban Policy (4-0-4).**
Examination of current state and local political issues focusing on Ohio; perspectives on the legislative, judicial, and executive branches, as well as tax and spending policies, human services and education delivery systems, and the formulation of public transportation and environmental policies. Cross-listed with USA 458. Writing. Return to top

**UST 459 Budgetary Policy (4-0-4).**
Revenue, expenditure, and debt structures of American cities, theories of public budgeting, types of budgets and budget formats, and typical components of a budget document. Cross-listed with USA 459. Return to top

**UST 463 Housing Analysis (4-0-4).**
Housing analysis is explored from a regional perspective within a framework of supply, demand and population movement; changes produced in neighborhoods and communities as a result of regional housing dynamics are considered, and the impact that public policies have on regional housing dynamics and community change. Return to top

**UST 472 Canadian Studies (4-0-4).**
Comparative study of selected United States and Canadian urban issues, such as housing, urban planning, and historic preservation. Topics will be listed in the semester course schedule. Writing. Return to top

**UST 473 Columbus Seminar (4-0-4).**
Prerequisite: Permission of instructor. Week-long intensive governmental experience in Columbus, Ohio. Participants learn about public policy issues firsthand from state legislators, state administrators, public interest group representatives, members of the news media, and others engaged in Ohio’s policy-making processes. Offered over spring break; preparatory and follow-up sessions required. Return to top

**UST 474 Washington Seminar (4-0-4).**
Prerequisite: Permission of instructor. On-site study of federal urban policy issues. One week in Washington, D.C., exposes students to critical analysis of the federal budget and legislative process, intergovernmental relations, problems, and current urban policy issues. Offered in summer term; preparatory and follow-up sessions required. Return to top

**UST 475 Cleveland: Form and Development of an Urban Environment (4-0-4).** Prerequisite: ART 375 or permission of instructor. A workshop which examines aspects of visual communication relative to the city. Cross-listed with ART 475. Writing. Return to top

**UST 476 Historic Preservation (4-0-4).**
The roots of the preservation movement in American cities and its historical antecedents; preservation policies at the federal, state, and local levels of government; emphasis on Cleveland's historic districts, buildings, and landmarks. Return to top

**UST 477 Regional Issues (4-0-4).**
An overview of the phenomenon of suburban real estate development, sprawl and out migration; involves students in discussion with officials and specialists who represent various perspectives on the subject. Return to top

**UST 478 Sacred Landmarks (4-0-4).**
Exposes students to urban art, culture, history, and ethnicity attributed to Cleveland's sacred landmarks; examination of sacred landmark preservation efforts in Cleveland, in other American cities, and in cities worldwide. Return to top

**UST 489 Advanced Senior Seminar (2-2-4).**
Prerequisite: Senior standing. Capstone course coordinating knowledge and skills gained through fulfillment of the requirements for a major in Urban Studies. Return to top

**UST 490 Urban Internship (Credit as Arranged).**
Prerequisite: Permission of instructor. Work experience in urban agencies for Urban Studies majors. Return to top

**UST 493 Urban Issues (4-0-4).**
Special topics in urban studies, including housing rehabilitation, urban planning, law and urban policy, drug abuse, and economic development. Topics will be listed in the semester course schedule. Return to top

**UST 494 Levin Chair Seminar (4-0-4).**
Current topics and issues in urban studies led by the Albert A. Levin Professor of Urban Studies and Public Service. Topics will be listed in the semester course schedule. Return to top

**UST 496 Urban Research (Credit as Arranged).**
Prerequisite: Permission of instructor. Special research involvement in ongoing projects or specially developed projects for Urban Studies majors under supervision of a faculty director. Return to top

UST 497 Urban Readings (Credit as Arranged).
Prerequisite: Permission of instructor. Independent study for Urban Studies majors. Return to top
Women's Studies

Professors:
Bruce Beatie, Rachel Carnell, John Gerlach, Adrienne Gosselin, Edward Haymes, Sarah Matthews, Roberta Steinbacher, Mary Ellen Waithe, Associate Professors:
Elizabeth Cagan, Tama Engelking, Delia Galvan, Mareyjoyce Green, Elizabeth Lehfeldt, Helen Liggett, Carl Rak, Shelia Schwartz, Diane Steinberg, Robert Wheeler, Phillipa Yin, Assistant Professors: Jennifer Alexander, Chien-Chen Bowen, Sarah Toman; Additional Program Faculty: Paula Bloch, Beverly Bow, Margaret Payerle, Dorothy Salem.

WST 151 Introduction to Women's Studies (4-0-4).
The field of Women's Studies involves the study of women from the perspective of women themselves, and related research and scholarship. The course is a broadly interdisciplinary examination of the roles of women as they are socially constructed, and as women can determine them to be. There is emphasis upon related changes in their relations in contemporary society. Human Diversity. Return to top

WST 351 Practicum: Women's Studies (4-0-4).
Prerequisite: Approval of the Women's Comprehensive Program Director. Field experience involving the application of theory and practice in a specific area of Women's Studies. For Women's Studies students. Return to top

WST 393 Special Topics (4-0-4).
Analysis of issues in Women's Studies; topics will vary. Course may be taken for credit more than once, but no single topic may be repeated. Topics will appear in course schedule. Return to top

WST 495 Advanced Seminar in Women's Studies (4-0-4). Prerequisites: Senior standing, permission of instructor.
Required for major and for minor in Women's Studies. Review and synthesis of prior work in Women's Studies. The impact of Women's Studies in higher education is discussed with emphasis on substantive and methodological contributions, initiation of new research frontiers, as well as an overview of cross-cultural perspectives and current issues. Return to top

WST 496 Independent Study (1 to 4 credits).
Prerequisites: Senior standing, written permission of instructor, and Women's Comprehensive Program Director. Faculty supervised and directed selected readings in areas of special interest and subjects arranged with an instructor on an individual basis. May be repeated for credit for a maximum of 6 credit hours. Return to top
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Enter Faculty/Staff *(You may enter only the first four (4) letters of both or either names)*

Lastname  Firstname  Search  Clear

Select Faculty/Staff by Department

AAUP (AMERICAN ASSN UNIV PROFS)  Continue

Enter Department Name  Search  Clear  List All Departments

Legends:
Numbers with the telephone exchange "687" have been listed as a 4-digit number.

Other numbers were assigned and are listed with the exchange "523", "615", "802" and "875" plus the 4-digit number. (You may reach these numbers from campus telephones by dialing the last 4 digits.)

Four digit numbers followed by an "S" are not direct inward dial numbers. They can be reached by dialing the department number or 687-2000.

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Cleveland State University
2121 Euclid Ave.
Cleveland, Ohio 44114

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Introduction

Studies in the College of Arts and Sciences will prepare individuals for a lifetime of challenges. The college encompasses a wide spectrum of departments in the humanities, the fine and performing arts, mathematics, the health professions, the natural and physical sciences, and the social and behavioral sciences. By completing course work in a major field of interest, as well as in a variety of other subject areas, students acquire the analytical, communication, and problem-solving skills vital to critical thinking. Furthermore, students are exposed to diverse points of view and academic disciplines. These can help form values and outlooks conducive to a meaningful life, a rewarding career, and learning and intellectual growth in the future.

Website: www.csuohio.edu/a_and_s

Degrees

The College of Arts and Sciences offers undergraduate degree programs and majors in a variety of academic disciplines. For specific requirements and program descriptions, see the alphabetic listing of majors in this section.

- Bachelor's Degrees
- First College
- Interdisciplinary Majors
- Minors
- Interdisciplinary Minors
- Interdisciplinary Program
- Certificate Programs

Bachelor's Degrees

The College of Arts and Sciences offers undergraduate degree programs and majors in a variety of academic disciplines. For specific requirements and program descriptions, see the alphabetic listing of majors in this section.

Bachelor of Arts
- Anthropology
- Art
- Classical and Medieval Studies
- Communication
- Dramatic Arts
- Economics
- English
- French
- Geological Sciences
- History
- International Relations
- Liberal Studies
- Linguistic Studies

Bachelor of Music

Bachelor of Science in Nursing

Bachelor of Science
- Biology
- Biology-Medical Technology
- Chemistry
- Environmental Science
- Geological Science
- Mathematics
- Physics
First College
(See description)

First College degrees are awarded in conjunction with the College of Arts and Sciences upon satisfactory completion of First College and university requirements and one of the major programs listed for the Arts and Sciences, Urban Affairs, or a personally designed major.

- Bachelor of Arts
- Bachelor of Science

Interdisciplinary Majors

The College of Arts and Sciences offers students a unique opportunity to earn an interdisciplinary major which will involve course work drawn from several different academic departments within the college. Rather than concentrating in one area of study, students will experience both depth and breadth and, in conjunction with their faculty advisor, experience some of the most exciting areas of study in the liberal arts. For requirements and program descriptions, follow the links below.

- Classical and Medieval Studies (B.A.)
- Environmental Science (B.S.)
- International Relations (B.A.)
- Liberal Studies (B.A.)
- Linguistic Studies (B.A.)
- Social Science (B.A.)
- Social Studies (B.A.)
- Women's Studies (B.A.)

Minors

Minors are available in all departments of the College of Arts and Sciences with the exception of Health Sciences, Nursing, Social Work, and Speech and Hearing. Students should consider a minor area of study as a means to complement their major program and/or to develop expertise in an additional area of study. For additional information and a listing of requirements, students should contact the department which offers the minor.

Interdisciplinary Minors
The College of Arts and Sciences offers a number of interdisciplinary minor programs which permit a student to build upon the major and to experience courses from a wide variety of subject areas. Rather than concentrating in a single area, students cut across traditional discipline boundaries and gain the true breadth and depth of the liberal-arts experience. Interdisciplinary minors are available in the following areas:

- **American Studies**
  See description in this section and contact Department of History at (216)687-3920 for additional information.

- **Asian Studies**
  See description in this section and contact Department of History at (216)687-3920 for additional information.

- **Black Studies**
  See description in this section and contact Black Studies Program at (216)687-3655 for additional information.

- **Criminal Justice**
  See description in this section and contact Department of Sociology at (216)687-4500, or the Department of Social Work at (216)687-4560 for additional information.

- **Gerontological Studies**
  See description in this section and contact the Director of Gerontological Studies at (216)687-3598 for additional information.

- **Women’s Studies**
  See description in this section and contact the Women’s Comprehensive Program at (216)687-4674 for additional information.

**Interdisciplinary Program**

See description

The departments of Communication and Political Science offer an interdisciplinary specialization in political communication. (See listing in this section and contact the Department of Communication at (216) 687-4630 or the Department of Political Science at (216) 687-4541 for additional information.)

**Certificate Programs**

The College of Arts and Sciences offers several Certificate Programs. Certificate Programs offer a series of courses within a given area of study and permit individuals to develop a well-defined knowledge and/or skills base generally not available in either a major or minor program of study. Certificate Programs are not necessarily connected to a degree program and may be completed by either degree- or non-degree-seeking students. Certificate Programs are available in the following areas:

- **Applied Economics and Public Policy**
  See description in this section and contact the Department of Economics at (216)687-4520 for additional information.

- **Arts Management**
  See description in this section and contact the Department of Art at (216)687-2040 for additional information.

- **Bioethics**
  See description in this section and contact the Department of Philosophy at (216) 687-3900 for additional information.

- **Biotechnology**
  See description in this section and contact the Department of Biological, Geological, and Environmental Sciences at (216) 687-2440 for additional information.

  (Note: See the Fenn College of Engineering section for a description of the Certificate in Engineering Biotechnology program, and the James J. Nance College of Business Administration section for a description of the Certificate in Business Biotechnology program.)

- **Central and Eastern European Studies**
  See description in this section and contact the Department of Political Science at (216)687-4541 for additional information.
  You may also contact the Department of History at (216)687-3920 or the Department of Modern Languages at (216)687-4645.

- **Criminal Justice with Concentrations in Corrections or Law Enforcement (Department of Social Work)**
See description in this section and contact the Department of Social Work at (216)687-4560 for additional information.

Criminal Justice - Department of Sociology
See description in this section and contact the Department of Sociology at (216)687-4500 for additional information. (Note: The College of Arts and Sciences offers two Certificate Programs in Criminal Justice.)

Gerontological Studies
See description in this section and contact the Director of Gerontological Studies at (216)687-3598 for additional information.

Graphic Design
See description in this section and contact the Department of Art at (216)687-2040 for additional information.

History of the African Diaspora
See description in this section and contact the Department of History at (216)687-3920 for additional information.

International Studies
See description in this section and contact the International Services and Programs at (216) 687-6910 or the Department of Modern Languages at (216) 687-4645 for additional information.

Journalism
See description in this section and contact the Department of Communication at (216) 687-4630 for additional information.

Latin American Studies
See description in this section and contact the Department of History at 687-3920 for additional information. You may also contact the Department of Anthropology at 687-2414, the Department of Political Science at 687-4541, or the Department of Modern Languages at 687-4645.

Multimedia Advertising
See description in this section and contact the Department of Art at 687-2040 for additional information. You may also contact the Department of Communication at 687-4630.

Writing
See description in this section and contact the Department of English at 687-3950 for additional information.

Academic Philosophy

In the College of Arts and Sciences a significant portion of each student's program is unique. Compared with professional programs, course requirements in Arts and Sciences set fewer limits on individual choice and flexibility. While fulfilling college-degree requirements, students may select courses which reflect their own concerns and goals and sample courses from a variety of academic disciplines. Freshman and sophomores are especially encouraged to sample classes in order to fulfill requirements and to experience new and exciting areas of study. Sampling courses may serve as a means to clarify career objectives, and academic advising can assist a student in making course selections.

Most Arts and Sciences students acquire a well-rounded general education in their first two years of study. To further opportunities for general education, many departments offer upper-level classes parallel in content to freshman-level introductory courses. Such courses can help place the major field in perspective and provide an outlet for expanding and changing personal interests and goals.

Classroom instruction, laboratory experience, field placements, clinical supervision, and major/career advising within the College of Arts and Sciences are assumed by the approximately 270 full-time faculty members who comprise the college. Of the full-time faculty, approximately 96 percent have earned a Ph.D. degree. Students are assured a high-quality educational experience while working with a distinguished faculty that is interested in, and committed to, helping students achieve their education and career goals.
All students are strongly encouraged to consult with an academic advisor on a regular basis. The Office of Undergraduate Academic Advising is located in Room 218 of the Main Classroom Building and can be contacted at (216) 687-3963.

The advising staff will provide a wide range of services including information on college and university graduation requirements, information on academic regulations, evaluation of transfer credit, assistance in planning a course schedule, and help in preparing student petitions.

After declaring a major, students should meet regularly with their major field advisor to discuss course selection and long-range academic and career plans.

Selecting and Declaring a Major

Although Arts and Sciences students must declare a major by the beginning of their junior year, they are encouraged to declare their major as soon as possible. By doing so, students are put into contact with the faculty members who will become their major field advisors and mentors. By declaring a major early, students will also have more opportunities to work with faculty members and to participate in either the research or creative activities of their academic department.

Major programs may differ in the number and nature of credit hours required. In selecting a major, students should consider their own interests, aptitudes, and professional aspirations. Also, students should pay close attention to university, college, and major field requirements and plan a schedule to ensure that they do not unnecessarily extend the period of time it takes to complete a degree.

To declare a major, contact the academic department in question and inquire about the process for declaring a major. The Office of Undergraduate Academic Advising in Room 218 of the Main Classroom Building can provide you with a listing of majors and the appropriate telephone numbers. Call (216) 687-3963.

Evening Majors

The College of Arts and Sciences offers majors for evening students in eight areas: Biology, Chemistry, Communication, Economics, English, History, Political Science, and Psychology. Requirements for these majors, which are the same as
those of the day majors, can be found under the heading of each individual department.

Before declaring a major in the evening program, a student should consult with the chairperson of the major department to determine the pattern and frequency of offerings of evening courses. A student should also meet with a faculty advisor on a regular basis to discuss course selections, prepare a timetable for completing degree requirements, and receive advising on educational and career goals.

If a particular major field is not offered in the evening, contact the chairperson of the department to explore if possible alternatives exist.

Determining Graduation Requirements

Beginning with the fall semester of 1998, the College of Arts and Sciences has a new set of graduation requirements which are referred to as the GenEd. The college’s new GenEd requirements are applicable to all newly admitted freshmen and newly admitted transfer students who enter the College of Arts and Sciences beginning in the fall semester of 1998 and thereafter. The college's GenEd requirements are applicable to all students who enter the college as a result of a college-to-college transfer. The GenEd requirements are also applicable to all students who enter the college in the fall semester of 1998 and thereafter as a result of being readmitted or re-enrolled following an absence of one full academic year or longer, including summer. (An absence of one full academic year or longer results in a loss of catalog rights. See section on University Regulations.)

Continuing students (those who have not lost their catalog rights) who are in the Division of University Studies and transferred into the College of Arts and Sciences between fall semester 1998, and the end of the summer semester, 1999, have the option of following the GenEd requirements or the college requirements in effect at the time they entered Cleveland State University. Those who have lost catalog rights and enter the college in fall semester 1998, or thereafter will be subject to the GenEd requirements.

All continuing Arts and Sciences students (those who have not lost their catalog rights) will have the option of following the college's and university's GenEd requirements or maintaining their current college and university graduation requirements. (For a description of your graduation requirements, refer to the catalog in effect at the time you entered the College of Arts and Sciences.) Students are encouraged to consult with their academic advisor regarding which set of graduation requirements may be in their best academic and career interests. Delaying the decision or switching back and forth between sets of requirements may result in delaying a projected graduation timetable.

Earning a Second Degree

A student who wants to earn a second baccalaureate degree must meet all requirements of the university, college, and department for the second degree and must earn a 2.00 GPA or better for those hours taken to apply to the second degree. The student may receive both degrees by applying and paying the graduation fee for each.

To earn a second baccalaureate degree, a student whose first baccalaureate degree was earned at another institution must complete all degree requirements of Cleveland State University, the College of Arts and Sciences, and the major field department. Also, the student must fulfill the minimum credit-hour requirement and distribution for the university’s Residency Requirement. (See chapter on University Regulations.)

A student may not earn the same baccalaureate degree twice: e.g., two B.A. degrees with different major fields. (See Earning a Second Major.) Also, a student majoring in Geological Sciences, Mathematics, or Physics cannot be awarded both the B.A. and B.S. degrees in these fields; a student majoring in Music cannot be awarded both the B.A. and B.Mus. degrees.
A student who seeks to earn a second degree in either business or engineering must first apply to and be admitted into the College of Business or the College of Engineering. In such a case, a student will be matriculating in two colleges and will be subject to all of the requirements and regulations of each college.

Earning a Second Major

Students may elect to complete the requirements for two major fields, provided both majors lead to a bachelor of arts degree or both lead to a bachelor of science degree. However, students cannot earn a major outside of the College of Arts and Sciences.

In order to have both majors recorded on the transcript, both majors must be listed on the student's Graduation Application. Only one baccalaureate degree will be conferred.

Students who wish to obtain a bachelor of arts degree, as well as a bachelor of science degree, need to earn a second degree. (See Earning a Second Degree.)

Foreign Language Deficiency

The Foreign Language Requirement applies to all undergraduate students, including those who are not native speakers of English and students for whom English is a second language (unless specifically exempted in the policy on Foreign Language Requirement; for example, post-baccalaureate students). Such students, if deficient in foreign language studies credits upon admission to Cleveland State University, may remove the deficiency by completion of appropriate courses at CSU (see policy on Foreign Language Deficiency) or by verification of appropriate knowledge of the language through the Department of Modern Languages at CSU.

Verification of the student's knowledge of language and culture to remove the deficiency status will be assessed by a faculty member of the Department of Modern Languages who is proficient in the applicable language. In the event no faculty member is proficient in the student's non-English language, the student may request assessment by an individual outside the Department of Modern Languages who has been deemed qualified by said department to assess the students knowledge of language and culture. The Department of Modern Languages will establish criteria and guidelines for language and culture assessment, establish a bank of CSU faculty members willing to serve as language assessors, and provide them with appropriate training and guidance in language and culture assessment.

Late Adding a Course and Late Registration

Students must complete the late registration process by the end of the first week of classes in the semester in which enrollment is sought. Also, students can add courses to their registration only through the second week of classes in the semester in question.

Maximum Registration

The privilege of carrying a maximum load of as high as 18 semester credits per term without petition is granted to any student below the rank of senior who has a grade point average of 3.25 and to any senior who has a GPA of 3.00.

Students who have less than the required grade point average, or who wish to take over 18 credit hours, must submit a petition through the Arts and Sciences Advising Office, Main Classroom Building, Room 218.

Special Course Prerequisites

Courses at the 300- and 400- level in the College of Arts and Sciences may not be taken by freshmen except with the written permission of the course instructor.
Undergraduate students may be granted permission to take one or more graduate courses if all of the following conditions are met:

1. The student must be within 30 semester credit hours of graduation.
2. The student must maintain an overall grade point average of 2.75 or better through the preceding semester.
3. The student must have a 3.00 grade-point average in the major field.
4. The student must submit, at the time of registration, a completed Permission For An Undergraduate Student To Take A Graduate Course form.
5. Postgraduate students should discuss the requirements for taking a graduate course with the College of Graduate Studies.

Student Responsibility

Each student is solely responsible for meeting all curricular requirements and for knowing and following all academic regulations and policies of the College of Arts and Sciences, the university, and the major field department. Students are urged to review all appropriate sections of this catalog, in particular the chapters on University Regulations and Academic Procedures and Academic Policies for the College of Arts and Sciences.

Petitions for a waiver of a requirement or for an exception to a regulation (either for the college or university) can be obtained from the Advising Office located in the Main Classroom Building, Room 218.

Although students must assume responsibility for knowing and fulfilling graduation requirements and for knowing and following policies and regulations, advisors are available to assist them. Whenever in doubt, a student should consult with an academic advisor for assistance.

General Requirements

Introduction

The faculty of the College of Arts and Sciences awards its degrees to students who meet the following general requirements.

Successful completion of a minimum of 128 semester credit hours, of which 42 semester credit hours must be earned in 300- and/or 400-level courses. Credit toward the degree must be earned in: (1) introductory and advanced college courses in the liberal arts and sciences, (2) those practical and technical courses taught by the departments of this university, and (3) those practical and technical courses acceptable to the departments and curricula of the College of Arts and Sciences. A maximum of 11 semester credit hours of practical and technical courses not meeting conditions 2 and 3 above may be applied toward the total number of semester credit hours required for graduation.

Fulfillment of all university GenEd requirements in the following areas: English composition; mathematics and logic, arts and humanities, social sciences, natural sciences, non-western culture and civilization, western culture and civilization, African-American experience, human diversity, writing across the curriculum, and the university life course. (See section on University Requirements in the chapter on University Regulations.)

Fulfillment of all of the GenEd requirements of the College of Arts and Sciences as set forth in the GenEd semester requirements for the College of Arts and Sciences presented in this section.

Achievement of a minimum cumulative grade point average of 2.00 and other specifications as noted in the section on Graduation Requirements in the chapter on University Regulations.

Completion of the requirements, as set forth in this catalog, for a major field in the College of Arts and Sciences.

Achievement of a minimum cumulative grade point average of 2.00 in a major program in the College of Arts and Sciences. (Note: a minimum grade point average higher than 2.00 may be required by a department. Students must meet the requirements as specified by their major department.)
GenEd Semester Requirements for the College of Arts and Sciences

The GenEd semester requirements for the College of Arts and Sciences are as follows:

**English Composition:** 6 to 7 semester credit hours.
- ENG 101
- ENG 102, or approved equivalent

(The passing grade for English 101 and 102 is C or better.)

**Mathematics and Logic:** 6 semester credit hours.
- (100- and 200-level mathematics courses except as noted - offered by the Department of Mathematics or other approved course) Students may satisfy half of this requirement by completing PHL 131.

**Arts and Humanities:** 9 semester credit hours.
- (100- and 200-level courses from at least two different departments including the departments of Art, Dramatic Arts, English, History, Modern Languages, Music, Philosophy - except logic - and Religious Studies, or other approved courses.)

*Excluded are courses in the performing arts, dramatic arts, studio arts, creative writing, skills courses in first-year foreign language, English grammar, local history or parochial courses and symbolic logic.

**Social Sciences:** 9 semester credit hours.
- (100- and 200-level courses from at least two different departments including the departments of Anthropology, Communication, Economics, Political Science, Psychology, Social Work, Sociology, Urban Studies, courses labeled "Social Science," or other approved courses.)

*Excluded are noncredit continuing education courses, remedial or developmental courses, specific career preparation courses, mathematics and statistics courses, and life experience courses.

**Natural Sciences:** 8 to 9 semester credit hours.
- (100- and 200-level courses offered by the departments of Biological-Geological and Environmental Studies, Chemistry, and Physics, or other approved courses.) At least one of the courses must have a laboratory component which must carry at least 1 semester credit hour and meet on the average at least two class hours per week.

*Excluded are remedial or developmental courses, upper-division courses, and technical or pre-technical courses.

**Nonwestern Culture and Civilization:** 3 semester credit hours.
- (One approved course from either the arts and humanities or the social sciences. If at the 100- or 200-level, the course will also overlap with the university's Transfer Module.)

If the student chooses to take an additional course, the Nonwestern Culture and Civilization requirement may also be satisfied by an approved 300- or 400-level course; however, the course will not overlap with the university's Transfer Module.

**Western Culture and Civilization:** 3 semester credit hours.
- (One approved course from either the arts and humanities or the social sciences. If at the 100- or 200-level, the course will also overlap with the university's Transfer Module.)

If the student chooses to take an additional course, the Western Culture and Civilization requirement may also be satisfied by an approved 300- or 400-level course; however, the course will not overlap with the university's Transfer Module.
African-American Experience: 3 semester credit hours.

- (One approved course)

Human Diversity: 3 semester credit hours.

- (One approved course)

Notes:
Three semester credit hours of the African-American Experience and Human Diversity requirement may also be used to satisfy the Arts and Humanities or the Social Sciences requirement. The Human Diversity and the African-American Experience requirement may not be satisfied by the same course.

Transfer students with at least 60 semester credit hours or more must complete at least one course in the African-American Experience or Human Diversity areas.

Writing Across the Curriculum

- Three approved courses. Where appropriate, these courses may also fulfill other university, college and/or major field requirements.

Note:
For transfer students: Juniors (60 to 89 semester credit hours) must complete two approved courses; and seniors (90+ semester credit hours) must complete one approved course.

Foreign Language* or Foreign Culture Requirement*

(See notes following)

Bachelor of Arts:

All students seeking the B.A. degree must complete two courses in a single foreign language beyond the state entrance requirement. (See note)**

The two courses may be intermediate-level foreign-language courses in the same language used to meet the state entrance requirement. Or, students may complete two introductory-level foreign language skills courses in a single foreign language which is different from the one used to meet the state entrance requirement.

Bachelor of Science, Bachelor of Music, and Bachelor of Science in Nursing:

All students seeking a B.S., B. Mus., or B.S.N. degree must complete two approved foreign culture courses, or two courses in a foreign language beyond the state entrance requirement.

NOTES:

* Students completing three years or more of a single foreign language in high school will have fulfilled this requirement.

** The state entrance requirement is two years of a single foreign language in high school or the equivalent (one year of university study.)

Other Requirements

Upper-Division Requirement:

42 semester credit hours.
(The College of Arts and Sciences requires that all students successfully complete a minimum of 42 semester credit hours
at the 300- and/or 400-level.)

**Introduction to University Life:**

1 semester credit hour.
(Must be successfully completed by all newly admitted freshmen. Not required for a transfer student.)

**Total Minimum Number of Semester Credit Hours Required:**

128 Semester Credit Hours.
(All students must successfully complete a minimum of 128 academic semester credit hours. However, please note that some degree programs may require more than the college minimum. Students must consult with their major field program.)
American Studies Minor

American Studies is an interdisciplinary program administered jointly by the departments of English and History. The minor is intended to provide students with a variety of perspectives on American culture, society, and history and to aid them in their understanding of a varied and complex civilization. To this end, students may choose from a variety of academic fields including history, literature, politics, popular culture, society, and the visual arts. A minor in American Studies can serve as a valuable complement to majors in several fields, including but not limited to, Art History, Communication, English, History, Political Science, and Sociology. Students interested in an American Studies minor should contact either the chairperson of the Department of English (216) 687-3950, or the chairperson of the Department of History (216) 687-3920.

Requirements for an Interdisciplinary Minor in American Studies

Students wishing to minor in American Studies must develop a plan of study with the American Studies Steering Committee and must earn at least 20 semester credit hours in approved American Studies courses. The 20 semester credit hours must include:

1. American Studies Core Courses (three courses)
   - HIS 314 Introduction to American Studies
   - HIS 111 United States History to 1856 or HIS 112 United States History Since 1865
   - ENG 342 Survey of American Literature

2. Elective Courses
   - Other courses will be selected from an extensive list including courses from the departments of Art, Communication, Economics, English, History, Philosophy, Political Science, Religious Studies, and Sociology.
Asian Studies Minor

The Asian Studies minor is offered by the departments of Anthropology, Art, History, Music, Political Science, and Religious Studies. The program's objectives are to heighten awareness of the rich and diverse histories and cultures of Asia, to stimulate cross-cultural interest among students in the social sciences and the humanities, and to cultivate an appreciation of Asian arts and literatures. Students interested in an Asian Studies minor should contact the Department of History at 687-3920.

Requirements for an Interdisciplinary Minor in Asian Studies

Students wishing to minor in Asian Studies must complete:

- A minimum of 16 semester credit hours in designated Asian Studies courses from at least three different departments within the College of Arts and Sciences.
- Three courses must be concentrated in offerings related to the study of either South/Southeast Asia or East Asia.
- At least one course must be completed at the 300/400-level in an area other than the area of concentration.

Black Studies Minor

- Go to Black Studies website

The Black Studies minor is an interdisciplinary program administered by the office of the Black Studies Program. Courses are offered in the College of Arts and Sciences, the College of Education, the College of Urban Affairs and First College. Since a majority of the courses are offered in departments in the College of Arts and Sciences, the minor in Black Studies is granted by the College of Arts and Sciences. Courses to fulfill the requirements for a minor in Black Studies are to be selected from the 87 Black Studies courses listed below which are offered by 20 different departments within the four colleges.

The scope of the Black Studies courses encompasses the study of the history, geography, experiences, contribution, and lifestyles of peoples of African descent. It also covers the myriad aspects and manifestations of the arts and cultures of African peoples on the continent of Africa, and persons of African descent in the United States of America, and in other areas of the African Diaspora.

Students majoring in any discipline may pursue a minor in Black Studies. Upon graduation, students of Black Studies are welcomed into a variety of occupations and graduate and professional schools. Based on data collected by the National Council of Black Studies, Black Studies graduates do particularly well in social service areas, sales, and media communications. There is evidence that students in Black Studies receive substantive aid in their preparation for advanced graduate studies in law, education, social work, public administration, international affairs, social policy analysis, and other areas of study.

Students electing to minor in Black Studies are to inform the director of Black Studies of their intention as early as possible by completing the Declaration or Change of Minor form and submitting it to the director. The director of Black Studies, members of the Black Studies professional staff and/or designated instructors of Black Studies courses shall serve as advisors to students who elect a minor in Black Studies.

Requirements for a Minor in Black Studies

The Black Studies minor requires that 24 semester credit hours be taken in courses designated as Black Studies courses.

1. Core Courses.
The Black Studies minor requires that three core courses be taken which are designated as I, II and III below. Courses in Groups I and III below represent a temporary body of courses which will satisfy two of the core courses until it is possible to offer the permanent core courses. The permanent core courses and their temporary substitutes are listed below.

I. **Introduction to Black Studies.** One of the following courses is to be elected until the permanent core course has been staffed:
   
   a. ANT 270 Black Culture, Social Organization, and Personality  
   b. ENG 207 Black Masterpieces  
   c. REL 217 Religion in Black America  
   d. SWK 150 The Black Experience in Contemporary Society

II. **HIS 175 Introduction to the History of Africa**

III. **African-American Culture.**  
One of the following courses is to be elected until the permanent core course has been staffed:

   a. COM 388 The Rhetoric of Black America  
   b. HIS 215 The History of African-Americans to 1877  
   c. HIS 216 The History of African-Americans since 1877  
   d. PSC 217 Urban Politics and the African-American Experience

2. A minimum of 12 credit hours shall be selected from Black Studies courses at the 300-level or higher.

3. Black Studies courses selected to fulfill the requirement of a minor in Black Studies shall be selected from a minimum of three different departments or disciplines.

4. Transfer students planning to minor in Black Studies shall complete a minimum of 12 credit hours in Black Studies courses at Cleveland State University. For transfer students, a minimum of 9 credit hours of upper-level courses shall be completed at Cleveland State University. The transfer of Black Studies credits is subject to the approval of the director of Black Studies or of a person or persons designated by the director.

- ANT 227 Power, Authority, and Society in Non-Western Cultures  
- ANT 270 Black Culture, Social Organization, and Personality  
- ANT 353 Cultures of Africa  
- ANT 356 Ethiopia  
- ANT 358 Caribbean Societies  
- ART 286 Introduction to African Art  
- ART 386/586 Regional Art in Africa  
- ART 388/588 African-American Art  
- ART 394/594 Special Topics  
- ART 495/695 Seminar (Changing Topic)  
- BIO 102 Human Genetics, Reproduction, and Development  
- BIO 106 Human Biology in Health and Disease  
- BIO 260 Human Genetics  
- COM 329 Contemporary Film  
- COM 332 Interracial Communication  
- COM 348 Intercultural Communications  
- COM 359 International Communications  
- COM 388 The Rhetoric of Black America  
- COM 428 Imaging Africa  
- DRA 216 African American Theater  
- DRA 318 African American Theatre II  
- ENG 207 Black Masterpieces  
- ENG 208 Womanism/Feminism  
- ENG 347 Studies in African-American Literature  
- HIS 165 Introduction to Latin American History  
- HIS 175 Introduction to the African History  
- HIS 215 History of African-Americans to 1877  
- HIS 216 History of African-Americans Since 1877  
- HIS 227 Power and Authority in Nonwestern Societies  
- HIS 305 Social Thought of African Americans  
- HIS 324 Black Is/Black Ain’t: Defining Black America  
- HIS 325 African America Since 1945
Criminal Justice Minor (Department of Sociology)

Go to Sociology Department's information on this minor

The Criminal Justice minor is offered by the Department of Sociology. Students take courses in a variety of social science disciplines and explore different perspectives on crime, corrections, and the law. The minor introduces students to the institutions involved in society's handling of crime. It also is designed to heighten awareness of the theoretical and philosophical issues involved in defining, explaining, and deterring crime and to introduce students to social science research on the nature and extent of crime.
In conjunction with a major program, the minor in Criminal Justice provides students with the appropriate entry-level qualifications for many professional positions in criminal justice fields, and prepares them for graduate study in criminology or criminal justice. Students interested in minoring in Criminal Justice should contact the chairperson of the Department of Sociology (216) 687-4500, who coordinates the minor.

Requirements for an Interdisciplinary Minor in Criminal Justice

Students wishing to minor in Criminal Justice must complete three core, one law elective, and three general elective courses from the list below for a minimum of 23 semester credit hours:

1. Criminal Justice Core Courses
   - SOC 260 Deviance in the United States
   - SOC 340 Criminology
   - SWK 240 Administration of Justice

2. Law Electives:
   - PSC 310 Constitutional Law
   - PSC 311 Civil Rights and Civil Liberties
   - SOC 342 Sociology of Law
   - SWK 259 The Child, the Family and the Law
   - SWK 375 Criminal Law

2. Elective Courses: (A course taken as a law elective cannot also be counted as a general elective).
   - SOC 311 Individual and Society
   - SOC 341 Juvenile Delinquency
   - SOC 342 Sociology of Law
   - SOC 344 U.S. Criminal Justice System
   - SOC 345 Social Control
   - SOC 346 Corporate and Governmental Deviance
   - SOC 494 ST: Sociology of Prisons
   - SWK 259 The Child, the Family and the Law
   - SWK 341 Corrections: Institutional and Community-Based
   - SWK 371 Constitutional Criminal Procedure
   - SWK 374 Law Enforcement and Society
   - SWK 375 Criminal Law
   - SWK 470 Problems and Issues in Criminal Justice
   - PSC 310 Constitutional Law
   - PSC 311 Civil Rights and Civil Liberties
   - PSY 350 Abnormal Psychology
   - PHL 341 Philosophy of Law
   - ECN 350 Economics of Crime and Punishment

No more than four hours of internship credit may be applied toward this program.

For additional information, contact the chairperson of the Department of Sociology at (216) 687-4500.

Gerontological Studies Minor

Go to Gerontological Studies website

Recognizing the importance of aging in American society, the Gerontological Studies faculty offers a minor to those students who want to learn about aging for academic or personal reasons. The minor provides an opportunity for students to select courses in keeping with particular interests. The emphasis is upon learning about aging as a basic human experience and as
Requirements for an Interdisciplinary Minor in Gerontological Studies

Students wishing to minor in Gerontological Studies must complete a minimum of 15 to 17 semester credit hours which must include:

1. **Gerontological Core Courses** - at least two from the list below:
   - NUR 498 Health of Older Persons
   - PSY 429 Psychology of Aging
   - SOC 416 Sociology of Aging
   - SWK 465 Aging and Social Work

2. Additionally, a minimum of three courses including one at the 300- to 400-level from the core, and/or the electives identified below:
   - ANT 280 Anthropology of Aging and Adulthood
   - BIO 171 Biology of Aging
   - BIO 471 Theories of Aging
   - PSY 448 Mental Health and Aging
   - REL 250 Stages of Life
   - REL 251 Perspectives on Death and Dying

Additional elective courses are offered by various departments in the College of Arts and Sciences and students are encouraged to consider taking them. For additional information, contact the Director of Gerontological Studies at (216) 687-3598.

Return to Interdisciplinary Minors menu | Return to top

Women's Studies Minor

- Go to Women's Studies page on the Women's Comprehensive Program Site

Requirements for a minor in Women's Studies

The Women's Studies minor requires a minimum of 16 credit hours in courses designated as Women's Studies, of which 8 credit hours must be at the 300- to 400-level. There are three distribution requirements:

1. Courses must be selected from at least three different departments

2. Courses must include at least one course from the humanities:
   - ENF 214 Women Writers in English Translation (Arts & Humanities, Western Culture & Civilization, Arts and Sciences Foreign Culture Course)
   - ENF 215 Women Writers in English Translation (Arts & Humanities, Western Culture & Civilization, Arts & Sciences Foreign Cultures Course, Writing)
   - ENG 207 Black Masterpieces when taught by WST faculty (African American Experience, Human Diversity, Western Culture and Civilization)
   - ENG 208 Womanism/Feminism (African American Experience, Human Diversity, Western Culture and Civilization)
   - ENG 333 18th-Century British Lit.: Feminist Approaches to 18th-Century Fiction (Writing)
   - ENG 334 19th-Century British Lit.: Feminist Approaches to 19th-Century Fiction (Writing)
   - ENG 335 20th-Century British Lit.: Feminist Approaches to 20th-Century Fiction (Writing)
   - ENG 351 Studies in Drama: Bronte Sisters
   - ENG 363 Gender Issues in Literature (Human Diversity)
   - ENG 495 Senior Seminar: Emily Dickinson, Jane Austen (Writing)
   - FRN 365 Readings in French Decadence: Literature and Sexuality
• FST 221/321 English Workshop: Women in Literature (Arts & Humanities, Writing)
• FST 243/343 Modern Language Workshop: Guenevere's Sisters; Women in the Tales of King Arthur; Myths of the Goddess/Heroine (Arts & Humanities, Writing)
• FST 252/352 Am. History Workshop: Women's History through Autobiography, Women and Ethnicity, American Women: Famous and Not-So Famous (Arts & Humanities)
• FST 366 Religion Workshop: Sexual Ethics
• HIS 284 History of Women (Arts & Humanities, Human Diversity, Writing)
• HIS 318 History of the Family in America (Western Culture & Civilization, Writing)
• HIS 354 History of European Women (Western Culture & Civilization, Writing)
• HIS 393 Special Topics: History of Women in America, History of Black American Women
• PHL 253 Philosophy of Feminism
• REL 260 Women and Religion
• REL 370 Sexual Ethics
• REL 376 Women in Early Christianity
• SPN 484 Latin-American Women Writers in the 20th Century

2.A. and, at least one course from the Social Sciences.

• ANT 324 Anthropology of Gender
• ANT 343 Language and Gender (Human Diversity)
• COM 493 Special Topics: Gender Differences in Language
• EDB 455 Women and Education
• FST 270/370 Social Science Workshop: Women and Change in Non-Western Culture
• FST 257/357 Social Work Workshop: The Women's Movement in America
• PSY 255 Psychology of Women (Human Diversity, Social Science)
• SOC 201 Race, Class, and Gender (Human Diversity)
• SOC 302 Women in Corporate America (Human Diversity)
• SOC 310 Sociology of Marriage and the Family
• SOC 317 Sociology of Gender (Human Diversity)
• SOC 388 Sociology of Work and Organization (Writing)
• SOC 493 Special Topics: Black Women
• UST 455 Gender and Leadership (Human Diversity)
• WST 151 Intro to Women's Studies (Human Diversity)
• WST 351 Practicum
• WST 393 Special Topics
• WST 495 Advanced Seminar: Women's Studies
• WST 496 Independent Study

3. The Advanced Seminar in Women's Studies (WST 495) is required for the Minor in Women's Studies.

Up to 6 credit hours of advanced independent study, involving investigation of a topic relevant to Women's Studies, will be accepted toward the required credits. Regular procedures for independent study in the given department must be followed. In addition, the director of the Women's Comprehensive Program must approve the prospectus for independent study.

Women's Studies, administered by the Women's Comprehensive Program, is an interdisciplinary program offered jointly by 10 departments and three colleges. Its objectives are: to provide perspective, analysis, and understanding of continuity and change in gender roles and of the profound impact of these role expectations in contemporary society; to recognize contributions of women in academic disciplines and in contemporary society; to increase awareness of the expanding scholarship which focuses on women; to encourage research in neglected areas; and to prepare students for success in an increasingly competitive economy.

Students electing this minor should inform the Women's Comprehensive Program director, who will serve as advisor in cooperation with the Women's Studies faculty.

Women's Studies and You

Students majoring in any field may choose to minor in Women's Studies or to take Women's Studies courses. The Department of Labor indicates that into the next decade, two out of three new entrants to the labor force will be female and/or minority. This change in women's employment is affecting all other social institutions. Students are prepared for leadership in this new labor force. Women's Studies helps students understand reasons for these changes; provides a current, useful perspective for one's chosen employment field; and prepares the student for graduate work in Women's Studies or other professions, and for effectiveness in a changing community and work place. Thus, Women's Studies enhances career
preparation and provides a more accurate and balanced view of the society in which the student will serve.
Interdisciplinary Specialization Program

- Political Communication
- Requirements for an Interdisciplinary Specialization in Political Communication

Political Communication

- Go to Communication Web Site
- Go to Political Science Web Site

Students majoring in communication and/or political science may select political communication as a specialization. The departments of Communication and Political Science jointly administer the program, which provides students with a systematic and comprehensive orientation to political communication. This orientation will enable students to understand the role of communication in the political process.

Communication processes have always been critical to the evolution of American political institutions. Specific communication practices have helped to create support for a basic set of democratic norms and values, arouse interest and participation by various groups in the election of officeholders at all levels of government, facilitate involvement in and commitment to choices of solutions for social problems, and create support for a particular government regime and its programs.

Professionals operating in the American political process must be prepared to shape their personal impact and the impact of their decisions. It is to facilitate such an objective that this program was developed. The program should especially suit students planning careers in public administration; law; journalism; public information; or as political party organizers, elected officials, and campaign specialists.

Requirements for an Interdisciplinary Specialization in Political Communication

Students interested in this program need to obtain prior written approval from an advisor in the department of their major. Completion of the political communication sequence and the major requirements in one of the two departments involves a minimum of 40 to 44 semester credit hours. The specific requirements in addition to those for a major in one of the two departments are:

Communication Majors

1. Required introductory courses
   - COM 101 Principles of Communication
   - COM 226 Mass Media Processes and Society
   - PSC 317 Political Parties and Elections
   - AND EITHER
   - COM 303 Communication Inquiry
2. Required advanced core courses

- PSC 319 Public Opinion
- PSC 402 Campaign Politics Internship (four to six credit hours. Under special conditions an internship program may be substituted for PSC 402 with approval of the faculty committee.) The internship must be taken in conjunction with COM 493 Independent Study
- COM 347 Political Communication
- COM 455 Communication in Campaigns
- COM 496 Independent Study (four semester credit hours; must be taken in conjunction with PSC 402)

Political Science Majors

1. Required introductory core courses

- PSC 251 Introduction to Data Analysis
  OR
  COM 303 Communication Inquiry
  AND
- PSC 317 Political Parties and Elections
- COM 101 Principles of Communication
- COM 455 Communication in Campaigns

2. Required advanced core courses

- PSC 319 Public Opinion
- PSC 402 Campaign Politics
  (6 credit hours. Under special conditions an internship program may be substituted for PSC 402 with approval of the faculty committee.)
- COM 347 Political Communication

Electives

Students must complete the introductory core courses in these curricula before they may enroll in the internship program (PSC 402). Courses in the advanced core may be taken during the internship, though it is recommended that students complete PSC 319 and COM 347 before the fieldwork. In addition to the required courses, students must take at least one elective in communication and one in political science. Lists of recommended courses follow:

1. Recommended electives in Political Science:

- PSC 301 Urban Politics and Policy
- PSC 314 State Government and Politics
- PSC 315 Public Policy Administration
- PSC 318 The Presidency and Congress

2. Recommended electives in Communication:

- COM 341 Group Process and Leadership
- COM 346 Communication in Organizations
- COM 357 Principles of Public Relations
- COM 366 Communication and Conflict
- COM 370 Communication, Technology, and Social Change

The two departments will periodically schedule seminars at which faculty members and outside speakers will discuss relevant topics. Students focusing on political communication will be informed of the seminars and will be expected to attend.
Certificate Programs

The College of Arts and Sciences offers several certificate programs. These programs offer a series of courses within a given area of study and permit individuals to develop a well-defined knowledge and/or skills base generally not available in either a major or minor program of study. Certificate programs are not necessarily connected to, and do not lead to, a degree program. They may be completed by either degree or non-degree seeking students. Certificate Programs are available in the following areas:

- **Applied Economics and Public Policy**
  - Requirements
- **Arts Management**
  - Requirements
- **Bioethics**
  - Requirements
- **Biotechnology**
  - Requirements
- **Central and Eastern European Studies**
  - Requirements
- **Criminal Justice with concentrations in Corrections or Law Enforcement (Department of Social Work)**
  - Corrections Concentration Requirements
  - Law Enforcement Concentration Requirements
- **Criminal Justice (Department of Sociology)**
  - Requirements
- **Gerontological Studies**
  - Requirements
- **Graphic Design**
  - Requirements
- **The History of the African Diaspora**
  - Requirements
- **International Studies**
  - Language and Culture for Global Affairs
  - Cross-Cultural Communication
  - Language Skills for Business
- **Journalism**
  - Requirements
- **Latin American Studies**
  - Requirements
  - Curricular Philosophy
- **Multimedia Advertising**
  - Requirements
- **Writing**
  - Requirements

Applied Economics and Public Policy

- **Go to Department of Economics website**

The certificate program in applied economics and public policy is designed for students who are interested in current economic issues and the public policy for dealing with these issues. The program is intended for students with minimal previous preparation in economics. With two exceptions, the courses required for the certificate in economics require no more than a background in principles of economics.

To a limited degree, the program is interdisciplinary. One course out of the four required for the program may be taken in either Sociology or Political Science.

Requirements for certificate in Applied Economics and Public Policy

The program requires students to complete four courses (a minimum of 15 hours). The courses must be selected from the list below and must include at least three courses in economics.

- **ECN 333 Economics of Health Care** (4 hours)
- **ECN 350 Economics of Crime and Punishment** (4 hours)
- **ECN 360 Public Sector Economics** (4 hours)
- **ECN 450 Economics of Law** (4 hours)
- **ECN 470 Urban Economics** (4 hours)
- **ECN 474 Environmental and Natural Resource Economics** (4 hours)
- **ECN 482 International Economics** (4 hours)
- **SOC 203 Sociology of Poverty** (3 hours)
- **PSC 315 Public Policy and Administration** (4 hours)

There are three general paths to acquiring the certificate. For students who have completed only **ECN 202**, the certificate
can be acquired with the following courses:

- ECN 333
- ECN 350
- ECN 360
- SOC 203 or PSC 315

For students who have completed ECN 201 and ECN 202, the program can be completed by taking any four of the following six options:

- ECN 333
- ECN 350
- ECN 360
- ECN 470
- ECN 482
- SOC 203 or PSC 315

For students who have completed ECN 201, ECN 202 and ECN 302, the certificate can be earned with any four of the following eight options:

- ECN 333
- ECN 350
- ECN 360
- ECN 450
- ECN 470
- ECN 474
- ECN 482
- SOC 203 or PSC 315

Arts Management

The Certificate Program in Arts Management is designed for current or prospective administrators of public arts agencies or not-for-profit performing, visual, and literary arts organizations. The program is also beneficial to individuals who plan to continue their academic studies at the master's level in preparation for teaching, research, and/or administrative roles in higher education, museums, and other educational and research-oriented institutions. Those who are, or plan to become, self-employed arts and arts-education consultants will find the program valuable as well.

Requirements for a Certificate in Arts Management

1. Prerequisites:

- ACT 221 Introductory Accounting I
- IST 203 Software Tools

Arts Experience — 15 semester hours of course work or equivalent practical experience in one of the creative/performing arts.

2. Required core courses:

- MLR 301 Principles of Management
- MKT 301 Introduction to Marketing

3. Electives - Business

- FIN 351 Introduction to Financial Management
- MLR 340 Human Resource Management
- MLR 443 Entrepreneurship
- MKT 305 Marketing Management
4. Electives - Arts

- ART 405 Museology: Exhibition Planning and Design
- COM 225 Media Writing
- COM 357 Principles of Public Relations
- DRA 381 Theatre Organization and Management
- DRA 490 Professional Theater Internship
- ENG 301 Advanced Expository Writing
- ENG 390 Literary Magazine
- UST 410 Proposal Writing and Program Evaluation

Other Arts Courses as approved by the various departments.

For additional information, contact the appropriate department: Art Department (216) 687-2040, Creative Writing (216) 687-4522, Dance Company (216) 687-4883, Marketing Department (216) 687-4771, Music Department (216) 687-2301, Theater Arts Department (216) 875-9662.

Bioethics

- Go to Philosophy Department

The Undergraduate Certificate in Bioethics is designed primarily for persons preparing for careers in medicine, nursing, social work, psychology, education, one of the health sciences, or other health-related professions. Enrollment will be open to upper-level undergraduates, and others by petition. Both degree seeking students and non-degree students are eligible. It can also serve upper-level students preparing for careers in law or business who wish to understand health policy, law, and clinical practice in relation to philosophy and ethics. The Certificate in Bioethics will attest that the student has completed a course of study in moral theory and clinical practice, law, or policy related to bioethics.

Program of Study and Requirements

The Philosophy Department offers bioethics courses in both two-credit and four-credit formats. Students who have had a 4-credit course in a particular area should not take a corresponding 2-credit course, and vice versa.

The two-credit courses are:

- PHL 420 Reasoning in Bioethics: Basic Issues
- PHL 421 Reasoning in Bioethics: Contextual Approaches
- PHL 422 Clinical Bioethics: Cases I
- PHL 423 Clinical Bioethics: Cases II
- PHL 424 Bioethics Policy: Prevention and Access
- PHL 425 Bioethics Policy: Technology
- PHL 426 Bioethics and Law: Regulation
- PHL 427 Bioethics and Law: Rights
- PHL 428 Bioethics: Special Topics

The four-credit courses are:

- PHL 440 Moral Reasoning
- PHL 441 Clinical Issues in Bioethics
- PHL 442 Policy Issues in Bioethics
- PHL 443 Bioethics and the Law

The program requires a total of 12 semester hours in bioethics at the undergraduate level, distributed as described below, with a grade of at least 3.0 in each:

1. Moral Reasoning Requirement (4 credits), fulfilled by taking:
PHL 440, Moral Reasoning, 4 credits, OR
PHL 420, Reasoning in Bioethics: Basic Issues, 2 credits
AND
PHL 421, Reasoning in Bioethics: Contextual Approaches, 2 credits.

2. Bioethics Electives (8 credits), chosen from the other courses listed above.

For additional information, contact the Philosophy Department at (216) 687-3900.

Biotechnology

- Go to Career Services' information on Biotechnology Certificate
- Go to Department of Biological, Geological, and Environmental Sciences

The biotechnology industry is one of the fastest growing industries in northeastern Ohio. The Certificate in Biotechnology, which is administered through the Department of Biological, Geological, and Environmental Sciences, is an interdisciplinary program that builds on majors in biology or chemistry and exposes students to areas of knowledge that are not part of the typical major, but are underpinnings for the biotechnology industry. The certificate program provides students with the appropriate qualifications to enter the segment of the workforce that is responsible for the development and quality-control aspects of the biotechnology industry. Students in the Biotechnology Certificate Program are eligible to participate in the Cooperative Education Program through the Career Services Center even if they are not seeking a degree at Cleveland State University.

Requirements for a certificate in Biotechnology

1. Prerequisites:

   Either currently majoring in biology or chemistry, and completion of a year of introductory biology, biochemistry, cell biology and laboratory, microbiology and laboratory, and calculus; or a baccalaureate degree that includes the following courses: a year of introductory biology, biochemistry, cell biology and laboratory, microbiology and laboratory, a year of general chemistry, organic chemistry, and calculus.

2. Required courses:
   - MTH 147 (4-0-4) Statistical Concepts with Applications
   - ESC 120 (1-0-1) Introduction to Engineering Design
   - BIO 435 (3-0-3) Bioprocessing Engineering Principles
   - IME 465 (3-0-3) Manufacturing Systems Engineering

Central and Eastern European Studies

The re-emergence of the idea of Central Europe has been one of the most significant developments of this decade. The "lands between" as those countries have been called, have historically been deeply influenced, and at times dominated, by Russia and Germany.

Since the dissolution of the Soviet Union, the reunification of Germany, and the end of the Cold War, Germany's influence in these states has strengthened.

While Germany will play the primary role in the economic and political near-term future of Eastern and Central Europe, the influence and importance of Russia cannot be ignored. A coherent program focusing on Central and Eastern Europe, including Germany and Russia therefore makes sense. An increasing number of students are focusing on Germany, Russia, and the lands between in their studies. There are also a large number of students and potential students in the Cleveland area whose families originally came from Central and Eastern Europe who might well benefit from this program.

This certificate program should be useful to students across the university to add an international focus to their studies. Members of the Greater Cleveland community, especially those with business interests in the area, may also find this
program of particular value.

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Requirements

Students wishing to earn a Certificate in Central and Eastern European Studies must complete 16 semester hours from the following list of courses. Students must take courses from at least two different disciplines. If the student is completing a major in one of these fields, only one course taken to meet the minimum major requirement may also be counted toward the certificate.

- GER 235 Germany Today
- GER 240 Field Studies
- GER 402 Advanced Composition and Conversation (when taught as a Culture Course)
- GER 448 German Culture and Civilization
- GER 493 Special Topics in Culture and Civilization
- MLA 115 Comparative Contemporary Culture (with appropriate topic)
- ENF 216 Foreign Film (with appropriate topic)
- ENF 217 Foreign Film (with appropriate topic) (WAC)
- PSC 324 Russia and The Successor States (WAC)
- PSC 338 Central and Eastern Europe (WAC)
- PSC 394 Special Topics (with appropriate topic)
- PSC 421 Seminar in Comparative Politics (with appropriate topic) (WAC)
- HIS 360 Russian History to 1900
- HIS 361 History of Modern Russia
- HIS 362 Modern Eastern Europe
- HIS 393 Special Topics in History (with appropriate topic)

Other special topics courses in these or other departments may be taken with approval of the committee.

For additional information contact: the Department of Political Science (216)687-4541, the Department of History (216)687-3920, or the Department of Modern Languages (216)687-4645.

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Criminal Justice with Concentrations in Corrections or Law Enforcement (Department of Social Work)

- Go to the Department of Social Work
- Corrections Concentration
- Law Enforcement Concentration

The Department of Social Work offers a certificate program in Criminal Justice with a concentration in either Corrections or Law Enforcement. The concentration in Corrections helps to prepare a student for work in a career such as a probation or parole officer, a jail or prison social worker, a rehabilitation counselor, or a court mediator. The concentration in Law Enforcement helps to prepare a student for work in a career such as a police officer, a detective, a bailiff, a deputy, park ranger, federal investigator, or a customs agent.

Students enter the program from different backgrounds and with a variety of career objectives in the area of Criminal Justice. Many are interested in attending law school, others in seeking law-related professions and others wish to pursue an understanding of the relationships among law, society, and the justice system. In addition to traditional students who are seeking to complement their major program of study, those pursuing a certificate in Criminal Justice include police officers, correctional officers, ex-offenders, chemical dependency counselors, juvenile justice advisors, community advocates, and social workers. The two concentrations are designed to meet the various objectives sought by such a diverse student population.

Corrections Concentration

The concentration in Corrections prepares students for practice in community-based and institutional corrections
programs. The Corrections concentration has core courses that focus on incarceration, community-based corrections, commitment alternatives, equal protection issues, and treatment offenders.

Requirements for a certificate in Criminal Justice with a Concentration in Corrections

Students seeking a concentration in Corrections must complete a minimum of 16 semester credit hours which must include:

1. Criminal Justice required core courses:
   - PSC 310 Constitutional Law
   - SWK 240 Administration of Justice*
     *This course should be taken before the Corrections or Law Enforcement electives.
   - SWK 470 Problems and Issues in Criminal Justice

2. One Criminal Justice elective course selected from the listing below:
   - SWK 259 The Child, the Family, and the Law
   - SWK 340 Legal Aspects of Human Services
   - SWK 341 Corrections: Institutional and Community Based
   - SWK 342 Prisoner’s Rights
   AND
   - SWK: Any course from the Law Enforcement program excluding SWK 259

Law Enforcement Concentration

The concentration in Law Enforcement prepares students for a variety of careers in the Criminal Justice field and is especially appropriate for students transferring from programs in law enforcement at community colleges, and police officers who wish to further their education.

Requirements for a certificate in Criminal Justice with a concentration in Law Enforcement

Students seeking a concentration in Law Enforcement must complete a minimum of 16 semester credit hours which must include:

1. Criminal Justice required core courses:
   - PSC 310 Constitutional Law
   - SWK 240 Administration of Justice*
     *This course should be taken before the Corrections or Law Enforcement electives.
   - SWK 470 Problems and Issues in Criminal Justice

2. One Criminal Justice elective course selected from the listing below:
   - SWK 259 The Child, the Family, and the Law
   - SWK 371 Constitutional Criminal Procedure
   - SWK 374 Law Enforcement and Society
   - SWK 375 Criminal Law
   - PSC 301 Urban Politics and Policy
   - SOC 340 Criminology

For additional information, contact the Department of Social Work at (216)687-4560.
Articulation Agreements

The College of Arts and Sciences has an Articulation Agreement with Cuyahoga Community College for those students who have completed an associate of science degree in one of the following programs: Physician Assistant; Surgeon’s Assistant; or Community Mental Health Technology. The Articulation Agreement will enable the associate-degree holder to complete a baccalaureate degree in approximately two years of fulltime study and will facilitate the transfer of credits. Interested Cuyahoga Community College students should contact their advisor or the Cleveland State University Office of Admissions, at 687-3755.

Credit by Examination

Departments within the College of Arts and Sciences can determine if credit by examination is available for a specific area of study. The subject material to be covered, the method of examination, the minimal acceptable score/grade for passing, and the number of semester credit hours to be granted will be determined within the academic departments. Credit by Examination forms are available in the Arts and Sciences Office of Advising which is located in the Main Classroom Building, Room 218.

Distance Learning

During the academic year, the College of Arts and Sciences offers some of its regular courses via distance learning. One form of this type of technology is the use of a “smart-classroom” which is located on campus and which permits the electronic transmission of course lectures. In another form, course lectures are sent via public television.

The electronic offering of courses will enable some students to take courses and complete assignments while remaining at home. (Some on-campus contact with the course instructor is usually a part of the course.) These courses are listed in the university’s course schedule and are footnoted as distance-learning courses. All courses delivered in such a manner are part of the college’s regular course offerings and will fulfill the appropriate university, college, or major field requirement.
Independent Study

All of the departments of the College of Arts and Sciences can offer credit for independent study conducted under the supervision of a member of the college's faculty. A student should contact the chairperson of the appropriate department or a specific faculty member to inquire about an independent study.

Independent study is arranged by contract with the permission of a specific professor. This contract includes specifications about the quantity and quality of work expected and semester credit hours to be granted. In general, an independent study is intended for scholarly work not included in a department's formal course offerings, and should be offered only when a formal course is not available.

Although neither the university nor the College of Arts and Sciences has a limit on the number of independent study courses which may be applied toward graduation, individual academic departments can limit the number which may be applied toward the major and/or minor.

Internships

Many departments within the College of Arts and Sciences provide students with internship opportunities which will place students into actual work settings that may be related to a student's educational and career interests. Knowledge and skills learned in the classroom setting may be applied to the work situation. Likewise, the experience gained in hands-on activities may be brought back into the classroom and complement the academic component of course work. The academic department retains the right to determine if an internship will be available, requirements for eligibility, number of credits to be granted, and the quantity and quality of work to be completed for a passing grade. For information on the availability of internships, a student should contact the chairperson of the appropriate academic department.

Off-Campus Course Offerings

The College of Arts and Sciences offers several different off-campus formats. For example, the college offers junior- and senior-level courses to students in off-campus locations such as local libraries, meeting halls, churches and synagogues. These off-campus course offerings demonstrate the college's commitment to improving student access to the education resources of the university.

NOTA (North Ohio Technology Association) is a newly developed network of school districts throughout the county which, through distance-learning technology, are linked to Cleveland State University, Cuyahoga Community College, and Baldwin-Wallace College. Through its participation in NOTA, the college makes distance learning courses available to local school teachers, as well as to students.

PSEOP (Post Secondary Education Opportunities Program) permits qualified high-school students to take college-level courses. Upon request by a high school, the college can offer a course to students on-site. The College of Arts and Sciences has offered courses in areas such as art history, early Western art, calculus, English composition, and English literature. (For additional information, contact the University Studies Advising Center at 687-2402.)

Study Abroad

Study-abroad opportunities are available through various departments and programs within the College of Arts and Sciences and are coordinated by the Center for International Services and Programs (687-3910) and the Office of the Dean of the College. The academic departments which offer study abroad opportunities include, but are not limited to: Anthropology, Art, Biology, First College, History, Modern Languages, Music, and Political Science.

The study-abroad opportunities have provided Cleveland State University students with a wide variety of experiences including: archaeological field work on the Mayan civilization in Belize; ecological studies in the rain forest of Venezuela;
culture and language studies in Mexico and Spain; arts, politics, Mandarin language and the history of Confucianism in China; and contemporary issues in India.

Also, the Center for International Services and Programs encourages and assists students and other members of the university community in arranging programs of study at foreign institutions in countries such as Brazil, France, Germany, and Poland, as well as other less formal experiences abroad.

The coordinator of the center can assist with financial-aid arrangements, recommend appropriate programs (generally those affiliated with American universities from which credit is transferable) and assist with arrangements. Students who wish to earn credits abroad must consult with and work through the coordinator. Approved courses taken as part of the study-abroad experience may, where appropriate and approved by the academic unit, apply toward university, college, and/or major field requirements. The option of taking approved courses for graded credits and having these grades count in a student's grade point average is also available.

A guide to study-abroad opportunities is available from the coordinator of the Center for International Services and Programs which is located in University Center, 2121 Euclid Avenue, room 302.

**Summer and Intersession Programs**

During the summer semester and the fall/spring intersession, the College of Arts and Sciences will offer many of its regular courses and will make available to students a number of courses of special and timely interest. Also, the college will offer intensive courses in areas such as general biology, general and organic chemistry, German, French, Spanish, and physics. An intensive course will permit a student to complete one year of academic work within the summer semester. Consult the summer and intersession course schedule for a listing of these offerings.

Also, some of the study-abroad opportunities noted in this section are offered in the summer semester and will be listed in the course schedule.

**Teacher Licensure**

**Secondary Licensure**

Students seeking secondary school teaching licensure are enrolled in the College of Arts and Sciences. They complete one of the major fields which is eligible for state certification, earn their degree from Arts and Sciences, and take the necessary education courses in their junior and senior years under the supervision of the College of Education. For a listing of the academic areas eligible for state secondary certification, refer to the chapter for the College of Education in this catalog.

**University Partnership**

Cleveland State University is involved in a University Partnership program with Lorain County Community College (LCCC). The University Partnership is designed to enable LCCC students to complete a four-year Cleveland State University baccalaureate degree with CSU courses, many of which will be offered on-site at LCCC. In the fall 1997, the College of Arts and Sciences began a two-year trial program in which LCCC students can complete a bachelor of arts degree with a major in Liberal Studies.

Through a combination of on-site courses and distance learning, LCCC students will be able to complete a substantial portion of the baccalaureate degree requirements of the Liberal Studies major. For some courses, however, students can expect to come to the Cleveland State University campus. For students not yet decided about their educational/career objectives, or for students looking to further their education, many of the on-site CSU course offerings will be general liberal arts courses. For more information, contact Dr. David Richardson at (216) 687-3961.

- [Go to Liberal Studies website](#)
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- Speech and Hearing
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Anthropology (B.A.) At-a-Glance

Admission to the major:
No requirement other than good academic standing in the College of Arts and Sciences or First College

Minimum hours required for major: 36
Minimum hours required for minor: 16

Subfields: Archaeology, biological/physical anthropology, cultural anthropology, and linguistic anthropology

Advising: Students are encouraged to select a faculty advisor when they declare a major or minor in anthropology. The Handbook for Anthropology Majors and Minors, available from the Anthropology Department, Chester Building 119, contains comprehensive information regarding program requirements.

Awards: In recognition of academic excellence, the Anthropology High Academic Achievement Award is presented to seniors who have achieved a grade point average in their major courses at the highest honor level, 3.8 or above.

Student organization: CSU Anthropology Association

Anthropology is the study of the cultural and biological diversity of humanity. American anthropology has four broad subfields: archaeology, biological or physical anthropology, cultural anthropology, and linguistic anthropology. Archaeology examines the physical records of past cultures. Physical anthropology is concerned with human evolution and modern human biological variation. Cultural anthropology focuses on the customs, traditions, and rituals of contemporary human societies. Linguistic anthropology explores the relationship between language and culture in past and present human societies.

Anthropologists usually specialize in one or more geographic areas of the world, such as Mesoamerica, Oceania, or Africa. They may also focus on particular populations and locales and do field research in those areas. CSU anthropologists have conducted research on the ancient Maya civilization in Belize, the Nambicuara Indians of Brazil, the Amhara of Ethiopia, griots and language in Mali, the indigenous trade languages of Papua New Guinea, and the white minority of the English-speaking Caribbean.

The Anthropology Department offers undergraduate training in all four subfields of anthropology. Faculty research projects in archaeology, human paleontology, forensics, visual anthropology, ethnography, and sociolinguistics provide students with opportunities to gain first-hand experience in scholarly research. Students may also enroll in a variety of special topics and independent study courses.

Majors are encouraged to explore other academic disciplines in conjunction with their anthropology focus. Many students enhance their anthropology major by completing a minor or second major in another undergraduate discipline, such as biology, geology, education, linguistics, psychology, or urban studies. Conversely, a minor in anthropology is an excellent complement to majors in other disciplines.

Majors who anticipate pursuing graduate study in anthropology are encouraged to gain substantial foreign language training as undergraduates. All majors are encouraged to acquire training in computer and information sciences and to develop writing skills that exceed present minimum university requirements.
The study of anthropology fosters an understanding of human societies and problems. The bachelor's degree provides a basic introduction to the field and is especially useful in professions requiring a strong social-science background, such as law enforcement, social work, and health care. It also provides a strong foundation for graduate study in anthropology and other disciplines, including education, law, library science, linguistics, and urban studies.

CSU anthropology graduates are employed in a variety of fields including community and public relations, education, health and social services, law and law enforcement, and marketing and sales. Other graduates have traveled to other countries to teach English or serve in the Peace Corps.

### Requirements for Transfer Students

Transfer students who wish to major in anthropology must complete a minimum of 16 semester hours of anthropology courses at CSU. Transfer students who wish to minor in anthropology must complete a minimum of 8 semester hours of anthropology courses at CSU. Transfer credits for the major and minor are determined by the Anthropology Department Curriculum Committee.

### Major Field Requirements

A minimum of 36 semester hours are required for the anthropology major. A grade of C or better must be earned in courses used to fulfill requirements for the major.

#### Required Courses:

**Foundations in Anthropology (12 credit hours)**

Any 3 of 4 courses in this category:

- ANT 100 Introduction to Anthropology
- ANT 101 Human Biocultural Evolution (formerly ANT 201)
- ANT 102 Study of Culture (formerly ANT 202)
- ANT 103 Ancient Civilizations

**Anthropology Core Courses (12 semester hours)**

Any 3 of 5 courses in this category:

- ANT 301 Biological Anthropology
- ANT 302 Archaeology
- ANT 303 Cultural Anthropology
- ANT 304 Linguistic Anthropology
- ANT 305 Quantitative Anthropology

**Area Studies in Anthropology (4 credit hours)**

Any course in this category:

- ANT 351 Native North Americans
- ANT 352 Native South Americans
- ANT 353 Cultures of Africa
- ANT 354 Cultures of Oceania
- ANT 355 Cultures of Southeast Asia
- ANT 356 Ethiopia
- ANT 358 Caribbean Societies
ANT 393 Area Studies in Archaeology
ANT 394 Area Studies in Anthropology
ANT 494 Advanced Area Studies

Anthropology Electives (8 credit hours)

Any anthropology courses at or above ANT 101 (only 4 credit hours to be chosen from anthropology courses 101-300).

No more than 8 credit hours of ANT 496 Independent Study may be used to fulfill requirements for the anthropology major.

Anthropology Minor

A minor in anthropology complements majors in disciplines such as biology, geology, linguistics, psychology, and urban studies. A minimum of 16 semester hours are required for the anthropology minor. A grade of C or better must be earned in courses used to fulfill requirements for the minor.

Required Courses:

Foundations in Anthropology (4 credit hours)

Any 1 of 4 courses in this category:

- ANT 100 Introduction to Anthropology
- ANT 101 Human Biocultural Evolution (formerly ANT 201)
- ANT 102 Study of Culture (formerly ANT 202)
- ANT 103 Ancient Civilizations

Anthropology Electives (12 credit hours)

- Any anthropology courses at or above ANT 101 (only 4 credit hours to be chosen from anthropology courses 101-300).

No more than 4 semester hours of ANT 496 Independent Study may be used to fulfill requirements for the anthropology minor.
Art (B.A.)

At-a-Glance

Minimum hours required for major: 48

Minimum hours required for minor: 24

Special tracks: Art history, studio art, art education

Advising: Major professor in each track area. Department office phone: (216) 687-2040

Student organizations: Student Organization for Fine Arts (SOFA)

Additional information: Honors program. Scholarships based on merits awarded each year up to full tuition.

The creation of art and the study of its history are complementary activities that deepen a student's understanding of the aspirations of humankind. To develop both artistic skills and critical appreciation of art, the Art Department offers a broad range of courses in studio art, art history, and art education for both nonmajors and majors. The Art Department also offers a minor. Art Department courses can be taken for personal enrichment, to fulfill university and college graduation requirements, and to prepare for advanced graduate-level study.

The course offerings are wide-ranging. For example, in studio art a student can select foundation courses in basic design and drawing, then more specialized studies of drawing, painting, sculpture, printmaking, photography, ceramics, and computer graphics. In art history, there is an introductory course in art appreciation and surveys of world art, including Western, Asian, and African art. More specialized studies include courses in ancient, Medieval, renaissance, and modern art; Indian, American and African-American art; Western architecture, cities and planning; and Cleveland's urban environment. Art education offers a course that examines assessment models, and another course that studies art instruction and philosophy in different socio-vocational contexts. By selecting from these offerings, students can pursue an individualized program of study for their general knowledge, professional career, or graduate work.

With the counsel of a faculty advisor in the Art Department, students wishing to major in art may elect a program from one of three curricular options: studio art, art history, and art education. For the bachelor of arts degree, all art majors are required to take a core curriculum of subjects for general preparation and additional hours of upper-level courses for diversification.

Transfer and non-degree students must submit a portfolio to the Art Department in order for a placement level to be determined. Students are encouraged to do this during the semester before their anticipated enrollment.

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Major Field Requirements

- Studio Art
- Art History
- Art Education

Art majors in Studio Art and Art History are required to take 24 credit hours of core curriculum courses. The core consists of
12 credit hours in Studio Art and 12 credit hours in Art History. In addition, they must elect a curricular option.

**Art Major (Studio Art)**

**Core Curriculum:**

- ART 102 Introduction to 2-D Art and Design (4 credits)
- ART 103 Introduction to 3-D Art and Design (4 credits)
- ART 211 Drawing I (4 credits)
- ART 252 or ART 253 (Western Art) (4 credits)
- ART 281 or ART 286 (Non-Western Art) (4 credits)
- ART 495 Art Seminar (4 credits)

**Curricular Options:**

The option in Studio Art requires satisfactory completion of 24 credit hours beyond the core curriculum. Students take a sequence of 200-, 300-, and 400-level courses in one of the following areas: ceramics, drawing, painting, photography, printmaking, sculpture, or graphic design. Additional studio electives are required in all studio sequences except graphic design. The cumulative total of the core and studio sequence must be 48 credit hours minimum.

**Art Major (Art History):**

**Core Curriculum:**

- ART 102 Introduction to 2-D Art and Design (4 credits)
- ART 103 Introduction to 3-D Art and Design (4 credits)
- ART 211 Drawing I or ART 226 Sculpture I (4 credits)
- ART 252 Introduction to Early Western Art (4 credits)
- ART 253 Introduction to Western Art Since 1400 (4 credits)
- ART 281 Introduction to Far Eastern Art or ART 286 Introduction to African Art (4 credits)

**Curricular Options:**

The option in Art History requires satisfactory completion of 24 credit hours beyond the core curriculum. These should consist of 16 credit hours in Art History at the 300 or 400 level, 4 of which must be non-Western, and 8 credit hours in Art Seminars (ART 495). The cumulative total of the core and Art History sequence must be 48 credit hours minimum. Art majors in Art History must also complete 4 semesters in German, French, an approved alternate language or two-year equivalency.

**Art Major (Art Education: Multi-Age Licensure)**

The option in art education requires satisfactory completion of 36 hours in art studio courses, including a three-course sequence (200, 300, 400 levels) in one studio area and ART 226 OR ART 246, ART 221, ART 231, and ART 242 OR ART 244, 16 hours in Art History courses (including ART 252 and ART 253, and ART 281 OR ART 286) and 8 hours in Art Education courses (ART 341 and ART 441). The cumulative total must be 60 hours. Also required for licensure are 39 credit hours in professional education and art education courses taught in the College of Education.

**Art Minor**

In addition to the major program, the Art Department offers a minor in both Studio Art and Art History for those interested in art as a secondary field. All minors are required to take a curriculum of 24 credit hours to be determined in consultation with a faculty advisor in the Department of Art. Art majors cannot also minor in Art.
Studio Art

This option requires satisfactory completion of the following requirements: ART 102, ART 103, either ART 252 OR 253, for a total of 12 credit hours; and one studio sequence including one 200-level, one 300-level, and one 400-level course for a minimum total of 24 credit hours.

Art History

This option requires satisfactory completion of the following requirements: ART 102, ART 103, ART 252 for a total of 12 credit hours; ART 253
plus one 300-level and one 400-level Art History course, (one of which must be non-Western), for a minimum total of 24 credit hours.

Honors Program

- Studio Art
- Art History
- Art Education

Studio Art

Students of junior or senior standing who have a critical understanding of their discipline(s); and have a 3.0 cumulative grade point average and a 3.5 average in Studio Art, may be invited by a committee of three faculty members, including the chairperson, to take this option.

Acceptance demands 12 credit hours in Studio Art beyond the curriculum requirements, 4 credit hours of which would include a portfolio review by a studio committee consisting of three studio faculty. Successful completion of the program qualifies the candidate for graduation with honors in Studio Art.

Art History

Students of junior or senior standing who have shown independent critical understanding while fulfilling all core requirements; have a 3.00 cumulative grade point average with a 3.80 average in art history; and have met the language requirement, may be invited by a committee of four faculty members, including the chairperson, to take this option.

Acceptance demands at least 12 upper-level credit hours in Art History beyond curricular requirements, including the required thesis credit hours, and at least one non-Western field. Successful completion of an oral comprehensive examination in the defense of the thesis qualifies the candidate for graduation with honors in art history.

Art Education

Students of junior or senior standing who have shown independent critical understanding of their discipline, and have a 3.00 cumulative grade point average with a 3.80 average in art education and educational core requirements, may be invited by the art education faculty to take this option.

Acceptance demands 12 upper-level credit hours in art education beyond the curriculum requirements, including the thesis credit hours and supplemental independent study, and art education courses in research and/or curriculum development. Successful completion of the program qualifies the candidate for graduation with honors in art education.
Teacher Licensure

The Art Department, in cooperation with the College of Education, offers a program leading to a Provisional Multi-age Licensure requiring completion of courses as prescribed by the Department of Art, with professional education studies as prescribed by the College of Education.

For information concerning professional art and art education courses, students should confer with an advisor in the Art Department. For information concerning general education and professional education requirements for licensure, see the College of Education chapter of this Catalog.

Certificate Program: Graphic Design

This program prepares students, with or without a baccalaureate degree in art, for the conception and production of two-dimensional graphic designs, with emphasis on the utilization of software for the Macintosh computer. The certificate program is an alternative to a traditional four-year art degree, for creative and self-motivated students who specifically want to develop their technical proficiency, aesthetic sensibility, and design expertise.

The certificate program is 16 credit hours in the Department of Art. ART 102 (Introduction to 2-D Art and Design), and ART 211 (Drawing I) are prerequisites for all other courses. The required courses include ART 244 (Introduction to Macintosh), ART 344 (Advanced Raster-Image Development), ART 345 (Advanced Vector-Image Development), and ART 444 (Advanced Typography and Design) OR ART 445 (Introduction to Digital Media).

The Art Department also participates in interdisciplinary certificate programs in Arts Management and Multimedia Advertising. See Certificate Programs in this chapter of the Bulletin for additional information.

Evening Program

The Art Department offers a limited selection of courses in the evening each academic year, but at this time students cannot expect to complete a major or minor in Art with evening courses alone.
Biology (B.S.) At-a-Glance

Admission to the major: No requirements other than good academic standing in the College of Arts and Sciences

Minimum hours required for major: 72

Minimum hours required for minor: 16

Special programs:
Honors program, preprofessional programs (medicine, dentistry, veterinary science), medical technology program, secondary education teacher licensure program, Biotechnology Certificate Program

Additional information: The Doretta Thielker Award is presented annually to outstanding graduating biology major(s)

Student Organization: The Ecology & Conservation Biology Association

Description of program:
The Department of Biological, Geological and Environmental Studies offers a comprehensive program providing the education and training necessary for careers in modern biological science, including the background for admission to graduate schools and to professional schools (medicine, dentistry, veterinary science). The Biology major provides a solid foundation in fundamental areas of biology while permitting sufficient choice in course selection that majors may explore and develop areas of interest within the field.

Advising for Biology majors:
Biology and Medical Technology majors must discuss their program of study with the undergraduate advisor for Biology prior to registration each semester. Contact the biology office (216) 687-2440 to schedule an advising appointment.

Transfer students intending to major in Biology:
Transfer students intending to major in Biology must meet, prior to registering for courses, with the undergraduate advisor for biology for evaluation of their transferred science courses. Contact the biology office (216) 687-2440 to schedule an advising appointment.

Biology Minor: A minor program of study in biology consists of 16 credit hours. BIO 200, 201, 202, and 203 are required courses. The remaining eight credits must be 200-, 300-, or 400-level biology courses. BIO 400 does not qualify for the minor program.

Required Grade Point Average:
To qualify for graduation, all Biology majors must have a cumulative GPA of not less than 2.00 across all biology courses used to fulfill the major field requirements. This is in addition to the university requirement of a cumulative GPA of not less than 2.00. Check the University Regulations section of this Bulletin to determine how a GPA is calculated.

Suggested Freshman Program:
To minimize the time needed to complete the major field requirements, academically proficient students are advised to complete the Introductory Biology (BIO 200/201 and 202/203) and the General Chemistry (CHM 261/266 and 262/267) sequences in their first year.
BIO 200/201 Introductory Biology I and Laboratory
BIO 202/203 Introductory Biology II and Laboratory
BIO 300/301 Plant Biology and Laboratory
BIO 302/303 Animal Biology and Laboratory
BIO 304/305 Population Biology and Evolution, and Laboratory
BIO 306 Biochemistry and Molecular Biology
BIO 308/309 Cell Biology and Laboratory
BIO 495 or 492 Seminar

Biology Electives (at least 18 credit hours)
Select from EVS 454/455, and with approval of the biology advisor 490, 493, 494; HSC 381, 475, 476; CHE 366; and all biology courses numbered 410 to 499, except BIO 490, 491, and 492. All but one course numbered 410 to 499 must have a 300-level course as a prerequisite. A maximum of 8 credit hours from any combination of BIO 496 and 497 may be used as Biology Electives.

Chemistry Courses (16 credit hours)
- CHM 261/266 General Chemistry I and Laboratory
- CHM 262/267 General Chemistry II and Laboratory
- CHM 331/336 Organic Chemistry I and Laboratory

Mathematics or Statistics Course (four credit hours)
One of the following courses
- MTH 181 Calculus I
- MTH 147 Statistical Concepts
- ANT 305 Quantitative Anthropology
- PSY 311 Behavioral Science Statistics
- SOC 354 Quantitative Sociological Research

Physics Course (five credit hours)
- PHY 221 College Physics I

Honors Program
Biology majors with junior or senior standing, who have grade point averages of at least 3.00 overall and at least 3.20 in courses required for the Biology major, are encouraged to apply for admission to the Honors Program. The honors degree requires, in addition to the requirements for the regular Biology major, a minimum of 8 credit hours of honors research and seminar, and a successful oral defense of the written thesis.

Honors students will undertake three or four credits of research (BIO 490) in a supervising faculty member's laboratory on a project approved by the faculty member and by the Honors Program Committee. A written report on the research project must be defended before a three-person faculty review committee (BIO 491). Honors Seminar (BIO 492) must be taken twice, and an oral report on the project must be given as a research seminar when the student takes BIO 492 for the second time. Honors students do not take BIO 495. All honors courses are graded on an S/U basis, but to remain in the program the student must sustain the grade point averages required for admission to the program, as well as the approval of the faculty member supervising the student's honors research.

Upon successful completion of the honors program, the student will receive a certificate from the department, and a recommendation to the university for graduation with honors in Biology. For further information, contact the biology office (216) 687-2440.

Teacher Licensure
For information concerning the education courses required for licensure see the College of Education chapter in this catalog. Students seeking secondary teaching licensure in Biology, but not majoring in Biology, should consult with the College of Education. Students seeking secondary education licensure with a major in Biology must take the following courses (72 credit hours).
Biology Courses (34 credit hours)

- All of the Biology courses specified for the regular Biology major
- **BIO 416/417 Microbiology and Laboratory**
- Zero credit hours of Biology Electives

Chemistry Courses (16 credit hours)

- All of the chemistry courses specified for the regular Biology major

Mathematics or Statistics Course (4 credit hours)

- A mathematics or statistics course as specified for the regular Biology major
  OR
- **MTH 151-156 Mathematical Concepts**.

Physics Courses (10 credit hours)

- **PHY 221 College Physics I**
- **PHY 222 College Physics II**

Anthropology Course (4 credit hours)

- **ANT 301 Biological Anthropology**
- The Introductory Biology sequence satisfies the listed prerequisite

Geology Course (4 credit hours)

- **GEO 101 Introductory Geology**

Medical Technology Program

The Department of Biological, Geological and Environmental Sciences offers a program in medical technology that leads to a B.S. degree with a major in Biology. Students interested in the Medical Technology Program should contact the undergraduate advisor for Biology (216) 687-2440. There are two routes to prepare for clinical training in medical technology. When pursuing the first route, students declare the regular Biology major and independently prepare for their clinical training, but do not formally enter the Medical Technology Program. These students are considered by the department to be regular Biology majors. Consequently, they may not substitute **BIO 414/415 Parasitology** for **BIO 304/305 Population Biology and Evolution**, and they must complete **BIO 412/413 Elements of Immunology** and **BIO 416/417 Microbiology** as Biology electives. When pursuing the second route students declare Medical Technology as their major. Students formally enrolling in the Medical Technology Program have two options available to them.

Option I (3 + 1)

Option I consists of three years of study at Cleveland State University followed by one year of clinical laboratory training in an approved school of medical technology for which 32 semester credits are earned toward the B.S. degree. The letter grades earned during the internship appear on the student's records, but are not included in the computation of the grade-point average. Students enrolling in Option I must complete the following courses:

Biology Courses (30 credit hours)

- **BIO 200/201 Introductory Biology I and Laboratory**
- **BIO 202/203 Introductory Biology II and Laboratory**
- **BIO 306 Biochemistry and Molecular Biology**
- **BIO 308/309 Cell Biology and Laboratory**
- **BIO 400 Medical Technology Orientation**
- **BIO 412/413 Elements of Immunology and Laboratory**
- **BIO 414/415 Parasitology and Laboratory**
- **BIO 416/417 Microbiology and Laboratory**
Mathematics and Physical Science Courses (29 credit hours)

- CHM 261/266 General Chemistry I and Laboratory
- CHM 262/267 General Chemistry II and Laboratory
- CHM 310/315 Analytical Chemistry and Laboratory
- CHM 331/336 Organic Chemistry I and Laboratory
- MTH 181 Calculus I OR an approved statistics course
- PHY 221 College Physics I

Option II (4 + 1).

Option II consists of the successful completion of the B.S. degree with a major in Medical Technology prior to enrolling in an approved school of medical technology. This option is recommended for students who desire increased options for career choice and career development in the future. Students enrolling in Option II must complete the following courses:

- All Option I courses
- BIO 300/301 Plant Biology and Laboratory
- BIO 302/303 Animal Biology and Laboratory
- BIO 495 Seminar
- Biology Electives (at least three credits)
- Select from Biology courses numbered 410 to 497

Regardless of the route and option selected, students subsequently must be accepted into a school of medical technology approved by the Council on Medical Education of the American Medical Association in collaboration with the National Accrediting Agency for Clinical Laboratory Sciences as part of the requirement for taking the certifying examination in medical technology. In the Cleveland area, there is one approved and active hospital school of medical technology affiliated with Cleveland State University. However, students may attend any approved school of medical technology in the United States. Following satisfactory completion of their clinical training program, students are eligible to take the national certifying examination of the Registry of Medical Technologists (American Society of Clinical Pathologists) or of the National Certification Agency for Medical Laboratory Personnel.

Pre-Professional Studies

The curriculum for the Biology major provides students with the knowledge to take the aptitude tests required for admission by most professional schools. A suggested program of study for premedical students might consist of the following courses:

All the specified courses (biology, chemistry, mathematics, and physics) for the Biology major

Suggested Biology Electives:

- BIO 412/413 Elements of Immunology and Laboratory
- BIO 416/417 Microbiology and Laboratory
- BIO 424/425 Principles of Animal Physiology and Laboratory
- BIO 430/431 Genetics and Recitation

Suggested Additional Courses:

- CHM 332/337 Organic Chemistry II and Laboratory
- PHY 222 General Physics II
- Economics - one semester
- Psychology - one semester

The biology pre-professional advisor coordinates a seminar program for all students at which representatives from professional schools (medical, dental, veterinary, etc.) discuss their program’s admission requirements and procedures. Contact the department’s preprofessional advisor (216) 687-2440 for the seminar schedule and for preprofessional advising.

A Postbaccalaureate Program

is available to individuals with a bachelor’s degree who lack the minimal science requirements for professional schools. Those interested in the Postbaccalaureate Program should contact the department’s preprofessional advisor (216) 687-2440.
Certificate Program: Biotechnology

This program prepares students majoring in biology or chemistry, or with a baccalaureate degree that includes many biology and chemistry courses, for entry into positions in the biotechnology industry responsible for development of new products and quality control. The certificate program is interdisciplinary and enhances majors in biology or chemistry by exposing students to areas of engineering and bulk processing that are important in the biotechnology industry. The certificate program is 16 credit hours of classes taken in the colleges of Arts and Sciences, and Engineering.

Requirements for a certificate in Biotechnology

1. Prerequisites:

   Either currently majoring in biology or chemistry, and completion of a year of introductory biology, biochemistry, cell biology and laboratory, microbiology and laboratory, and calculus; or a baccalaureate degree that includes the following courses: a year of introductory biology, biochemistry, cell biology and laboratory, microbiology and laboratory, a year of general chemistry, organic chemistry, and calculus.

2. Required courses:

   - MTH 147 (4-0-4) Statistical Concepts with Applications
   - ESC 120 (1-0-1) Introduction to Engineering Design
   - BIO 435 (1-6-4) Techniques in Molecular Biology
   - CHE 366 (4-0-4) Bioprocessing Engineering Principles
   - IME 465 (3-0-3) Manufacturing Systems Engineering

See the Certificate Programs section located earlier in the College of Arts and Sciences chapter of the catalog for additional information. Students in the Biotechnology Certificate Program are eligible to participate in the Cooperative Education Program through the Career Services Center even if they are not seeking a degree at Cleveland State University.
Chemistry (B.S.) At-a-Glance

Admission to major: No additional requirements beyond the prerequisites for the required courses

Minimum hours required for major with ACS Certification: 68

Minimum hours required for pre-professional major: 42

Minimum hours required for minor: 24

Requirements for minor: General Chemistry (CHM 261, 262 or 272, 266 and 267 or 277) and 14 additional credits in chemistry courses numbered 300 or higher

Special tracks:
American Chemical Society certification, premedical/predental/preveterinarian, secondary school teacher preparation programs

Advise:
Most faculty are advisors. A handbook: "The Compleat Chemistry Major" is available from the Chemistry Department office. Phone (216) 687-2451.

Student organization: The CSU American Chemical Society Student Affiliates Chapter

Additional information: Honors General Chemistry (CHM 272 and 277) is available to students selected by the director of General Chemistry. A Chemistry major may be completed in the evening. Senior Research (CHM 489) provides an opportunity in the senior year for independent research with department faculty. The department also has a vigorous seminar program.

Prerequisite Statement

It is important that the student pay particular attention to the prerequisites and corequisites in this catalog. These courses serve as essential background, and without them the student will experience significant difficulty. If a student has not satisfied the prerequisites and/or corequisites, the instructor may have the student de-registered.

Cooperative Education Program

In earning the bachelor of science degree with A.C.S. certification, the Chemistry major may elect the Cooperative Education Program (see Special Programs Chapter) in order to alternate periods in school with periods of paid employment in chemical industry.
Bachelor of Science in Chemistry with Professional Certification by the American Chemical Society

The program leading to the bachelor of science degree provides a strong foundation in the fundamentals of chemistry, physics, and mathematics, and meets the requirements for professional certification by the American Chemical Society. This program provides the broad fundamental knowledge most suited to students planning to become professional chemists or planning to pursue graduate training.

<table>
<thead>
<tr>
<th>First Fall Semester</th>
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<tbody>
<tr>
<td>CHM 261 General Chemistry I</td>
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<tr>
<td>CHM 266 General Chem. Lab. I</td>
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<tr>
<td>MTH 181 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 101 English I</td>
<td>4</td>
</tr>
<tr>
<td>ASC 101 Orientation</td>
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<tr>
<td>CHM 262 General Chemistry II</td>
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<td>MTH 182 Calculus II</td>
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<td>ENG 102 English II</td>
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<td>CHM 331 Organic Chemistry I</td>
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<td>CHM 336 Organic Chem. Lab. I</td>
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<tr>
<td>MTH 281 Multivariable Calculus</td>
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<td>PHY 241 or 243 University Physics I</td>
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<td>CHM 401 Chemical Information</td>
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<td>PHY 242 or 244 University Physics II</td>
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<tr>
<td>CHM 311 Quantitative Analysis</td>
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<td>CHM 316 Quant. Analysis Lab</td>
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<td>CHM 402 Biochemistry</td>
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<thead>
<tr>
<th>Third Spring Semester</th>
<th>Credits</th>
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|                                |         |
### Pre-Professional Program

The B.S. program in chemistry for students who plan to continue graduate study in the medical sciences provides those courses required and strongly recommended by most medical schools and also affords an excellent base for students considering careers in medicine, medical research, dentistry, or veterinary medicine. This program does not lead to certification by the American Chemical Society.

### Bachelor of Science in Chemistry for Premedical, Predental, and Preveterinary Students

#### First Fall Semester

<table>
<thead>
<tr>
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<td>CHM 266 General Chem. Lab. I</td>
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<tr>
<td>ENG 101 English I</td>
<td>4</td>
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<tr>
<td>BIO 200 Introductory Biology I</td>
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<tr>
<td>BIO 201 Introduction to Bio. Lab 1</td>
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#### First Spring Semester

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<td>CHM 262 General Chemistry II</td>
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**Electives are to meet general requirements for B.S. degree**

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### Fourth Fall Semester

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<td>CHM 441 Adv. Inorganic Chem.</td>
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<td>CHM 446 Inorganic Chem. Lab.</td>
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<td>CHM 471 Faculty Colloquium</td>
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### Fourth Spring Semester

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<td>CHM 427 Physical Chem. Lab. II</td>
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<td>CHM 489 Senior Research</td>
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Electives are to meet general requirements for B.S. degree
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<td>CHM 320</td>
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<td>CHM 310</td>
<td>Analytical Chemistry</td>
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<td>CHM 315</td>
<td>Analytical Chem. Lab.</td>
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<td>CHM 402</td>
<td>Biochemistry</td>
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<td>BIO 308</td>
<td>Cell Biology</td>
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<td>Cell Bio. Lab</td>
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<td>BIO 302</td>
<td>Animal Biology</td>
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<td>Animal Biology Lab I</td>
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<td>Elective</td>
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<td>CHM 471</td>
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<td>*Chemistry Elective</td>
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<td></td>
<td>*300- or 400-level chemistry or biology courses</td>
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<td>BIO 416</td>
<td>Microbiology</td>
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**Fourth Spring Semester**

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<td>*300- or 400-level chemistry or biology courses</td>
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<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</tbody>
</table>

*Electives are to meet general requirements for B.S. degree
*300- or 400-level chemistry or biology courses

**Teacher Licensure**

The program in chemistry leading to the bachelor of science degree with secondary teacher licensure provides a strong foundation in the fundamentals of chemistry, physics, and mathematics, and permits completion of courses necessary for high-school teaching within a normal four-year program.

For further information concerning the general education and professional education requirements for certification, see the [College of Education](#). This program does not lead to certification by the American Chemical Society.

Students seeking secondary certification in chemistry, but not majoring in the field, also should consult the College of Education for information regarding subject field, general education, and professional education requirements.

**Recommended Program for Chemistry Teaching Licensure**

Students interested in this program should contact the [Chemistry Department](#) office in Room 397 of the Science Research Building, phone (216) 687-2451.
Classical and Medieval Studies (B.A.) At-a-Glance

Admission to major: Sophomore rank in good standing

Minimum hours required for major: 46

Minimum hours required for minor: 23

Special tracks: Student-determined concentration

Advising: Assigned faculty advisor; phone (216) 687-4645

Student organization: Voces Antiquae et Medievales

Additional information:
The CLM Program cosponsors summer excursions to theater festivals in Canada with the English Department. The CLM Program encourages its students to take advantage of foreign study opportunities.

The major in Classical and Medieval Studies (CLM) is an interdisciplinary program and draws upon the faculty of eight academic areas within the college: Art, English, History, Modern Languages, Music, Philosophy, Religious Studies, and Theater Arts.

CLM majors study the classical civilizations of ancient Greece and Rome and the transmission and development of that heritage in medieval Europe. During the course of their work, students acquire competence in an ancient language — usually Latin — and learn the particular methodologies and approaches of a variety of academic disciplines, such as history, philosophy, philology, literature and art. Completion of the CLM major provides students with an understanding of the foundations of Western civilization and a solid background in the liberal arts.

The CLM major, aside from satisfying personal interests, prepares students for a variety of academic and professional pursuits. CLM students pursue careers in teaching, law, archeology, religious ministry and education, and museum and archive work to name a few. In order to accommodate individual student interests, provision is made within the program for a student-determined concentration. The concentration is developed in consultation with the student's advisor.

Many of the courses taken to satisfy the CLM major requirements will also meet college or university general education requirements; in many instances, a CLM student will be able to complete a double major by taking only a few additional courses in one of the participating departments. Students interested in study abroad will be encouraged to take advantage of one of the many foreign study programs which exist both within and outside of the university.

Major Field Requirements

Students pursuing a CLM major must meet the requirements in the following four areas. Core courses may not be counted toward the requirements for a special concentration.

The Core - 24 credit hours

(1) Language. Two courses or 8 credit hours in Latin at the 200-level or above. Classical Greek at the 350-level or above may be substituted with permission.
(2) History. Two courses or eight credit hours selected from the following: 
HIS 330, HIS 331, HIS 340, HIS 341, HIS 342. One course must be from the 33 series and one from the 34 series.

(3) General readings. Two courses or 8 credit hours selected from the following: ART 252, ENG 280/320, 
PHL 261; and REL 235 or one course in classical mythology for a minimum of eight credit hours.

(4) The Concentration — 18 credit hours

The Concentration - 18 credit hours

Students must design, in consultation with their advisor, a coherent program with some special emphasis or focus 
consisting of at least six courses or at least 18 credit hours. Four of the six, or at least 12 credit hours, must be at the 300 
and/or 400 level. The courses in a concentration must be CLM-designated courses selected from language courses 
(Latin, Greek, modern languages) above the 100-level, literature (English, modern languages), history, the arts (art 
history, theater arts, music), religious studies, philosophy, and classical and medieval studies.

The Senior Thesis - 4 credit hours

During the last year of CLM course work, the CLM major will propose a topic to the CLM Advisory Group for approval. 
When the topic has been approved, the student will be assigned to an appropriate thesis director and will register for 
CLM 498 in one semester and CLM 499 in the subsequent semester. In most cases, the thesis will be closely related to the student’s area of concentration.

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Classical and Medieval Studies Minor

Students may earn a minor in Classical and Medieval Studies by completing the following courses: One course in Latin at 
the 102-level or higher or one course in classical Greek at the 302-level or higher (4 credit hours); one course selected 
from the CLM major core (4 credit hours); five additional CLM designated courses, (at least 15 credit hours).

Other courses which apply toward the CLM major and minor are listed below. In addition to these, certain special-topics 
courses may apply if approved by the CLM director. See individual departmental listing for course descriptions and 
prerequisites.

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Courses

Art

- ART 252 Introduction to Early Western Art
- ART 356 Gothic Art

Dramatic Arts

- DRA 211 History of the Theater I

English

- ENG 280/320 Classical Literature in Translation
- ENG 318 Analysis of Language (with an approved topic such as Sanskrit or Hittite)
- ENG 330 Studies in Ancient Literature
- ENG 331 Studies in Medieval Literature
- ENG 361 Classical Rhetoric
- ENG 370 Chaucer

Greek

- GRK 301-302 Accelerated Classical Greek Language and Culture I, II
- GRK 350-351 Accelerated Classical Greek Language and Culture IV, V
• GRK 396/496 Independent Study in Greek

History
• HIS 330 History of Greece
• HIS 331 History of Rome
• HIS 340 Fall of the Roman Empire
• HIS 341 Early Middle Ages
• HIS 342 Late Middle Ages
• HIS 343 Social History of the Black Plague
• HIS 377 History of Islamic Civilization

Latin
• LAT 101-102 Latin I, II
• LAT 111-114 Latin Flex IA-B, IIA-B
• LAT 193/293/393/493 Special Topics
• LAT 196/296/396/496 Independent Study in Latin
• LAT 200 Latin Bridge
• LAT 201 Culture and Civilization
• LAT 202 Vergil

Modern Languages
• MLA 201 Words: An Introduction to Etymology
• MLA 230 Introduction to Mythology
• MLA 273/373 King Arthur in History, Legend, and Literature

Music
• MUS 411 Music History I

Philosophy
• PHL 261 Ancient Philosophy
• PHL 262 Medieval Philosophy

Religious Studies
• REL 231/239 Introduction to the Old Testament
• REL 232/236 Jesus and the Gospels
• REL 233/237 Paul and the Development of Christianity
• REL 234/238 The Later New Testament
• REL 280 Introduction to Mythology
• REL 285 Myths of Fate and Destiny
• REL 336 Hellenistic and Roman Religions
• REL 341 The Origin of Judaism
• REL 343 Ancient and Medieval Christianity
• REL 376 Women in Early Christianity
• REL 380 Ancient Greek Mythology: the Gods
• REL 463 Myths, Legends and Folktales
• REL 466 Images of Jesus in Early Christianity
• REL 468 Advanced Topics in Paul
Students preparing to teach will fulfill the requirements for the B.A. in Classical and Medieval Studies and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12).

The PreK-12 Licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency. Modern Language Methods courses should be taken the semester preceding student teaching.
Communication (B.A.) At-a-Glance

Minimum hours required for major: 36

Minimum hours required for minor: 20

Joint Program Available: Political Communication with Department of Political Science

Evening Program: Yes

Foreign Study Program: Yes

Advising: (216) 687-4630

Financial aid: Several, including Max Axelrod Scholarship, and Robert O. and Naomi W. Walker Memorial Scholarship

The purpose of communication studies is to understand communication processes and problems. The program is thus designed to examine communication behaviors as they occur in social contexts, such as mass media and social systems, public address, large organizations, small groups, and interpersonal interactions. The conceptual framework of the program is based in the behavioral sciences.

The department prepares students to work in the rapidly growing communication sector, which is expected to double within the next decade, encompassing roughly half of the workforce. The department lays a strong conceptual and practical foundation in advertising, public relations, journalism, organizational communication, interpersonal communication, conflict mediation, health communication, and telecommunication.

Students elect a major in Communication for a variety of reasons. Some undertake an undergraduate program as preparation for graduate study, teaching, or consulting. Others choose this major in preparation for a professional career in which communication occupies a central role.

The program is designed to provide both theoretical and practical training in communication, especially in the areas of applied research or areas designed to prepare students for communication-related professions. In several courses, for example, students are encouraged to apply in-class training to communication problems found in the urban community. In other courses, students are oriented toward professions in the fields of journalism, promotional communication, and broadcasting.

Major Field Requirements

All majors are required to take a minimum total of 36 semester credit hours in Communication and maintain a 2.25 GPA across all communication courses to graduate with a major in Communication. Two core courses (COM 101: Principles of Communication; COM 303: Communication Inquiry), 8 credit hours of theory courses, 4 credit hours of a capstone course, and 16 credit hours of elective courses are required for the major. Transfer students must obtain at least 20 credit hours from Communication courses at Cleveland State University.

Areas of Emphases

Students may earn a general Communication degree or may concentrate in one or more of the areas of emphasis of
advertising, electronic journalism, film studies, health communication, journalism, mediation, organizational communication management, public relations/advertising, relational communication, video/audio production, or video/audio management.

Below is a list of all communication courses. Students are encouraged to consult the Department of Communication Handbook to see how these courses apply to the specific areas of emphasis.

- COM 100, 200, 300 Communication Lab
- COM 101 Principles of Communication
- COM 131 Media Mystery Tour: Insiders’ Perspective
- COM 204 Single Source Video/Audio Production and Editing
- COM 211 Communicating in Personal Relationships
- COM 221 Introduction to Film
- COM 225 Media Writing
- COM 226 Mass Media and Society
- COM 231 Evolution of Mass Media
- COM 242 Public and Professional Speaking
- COM 303 Communication Inquiry
- COM 320 History of the Moving Image
- COM 321 Documentary Form in Film & Television
- COM 326 Advanced Reporting & Specialized Writing for the Media
- COM 327 Media Criticism
- COM 329 Contemporary Film
- COM 330 Nonverbal Communication
- COM 331 Gender and Communication
- COM 332 Interracial Communication
- COM 341 Group Process and Leadership
- COM 346 Communication in Organizations
- COM 347 Political Communication
- COM 348 Intercultural Communication
- COM 350 Persuasive Communication and Attitude Change
- COM 351 Audio Production for Radio
- COM 352 Multi-Source Video Production
- COM 353 Media Electronics
- COM 357 Principles of Public Relations
- COM 358 Media Law, Economics and Ethics
- COM 359 International Communication
- COM 360 Principles of Advertising
- COM 362 Health Communication
- COM 366 Communication and Conflict
- COM 368 Introduction to Language
- COM 370 Communication Technology & Social Change
- COM 379 Communication and Negotiation
- COM 380 Family Communication
- COM 388 Rhetoric of Black America
- COM 400 Studio & Media Production Department Management
- COM 401 Advanced Video/Audio Production
- COM 403 Advanced Video/Audio Editing
- COM 404 Performance for the Screen: Broadcast and Film
- COM 405 Electronic Journalism
- COM 425 Editing and Graphics
- COM 426 Laboratory Newspaper I
- COM 427 Laboratory Newspaper II
- COM 428 Imaging Africa
- COM 444 Mediation and Collaborative Problem-Solving
- COM 447 Public Relations Writing
- COM 448 Managing Organizational Teams
- COM 449 Advanced Issues in Health Communication
- COM 450 Media Programming and Research
- COM 455 Communication Campaigns
- COM 460 Advertising Copywriting and Layout Design
- COM 490 Internship in Communication
- COM 493 Special Topics in Communication
- COM 495 Seminar in Communication
- COM 496 Independent Study
Communication Minor

All minors are required to take a total of 20 credit hours in communication courses. Eight hours are to include COM 101 and COM 303. A total of 12 hours should include 4 hours of a theory course and 8 hours of elective courses. Transfer students must obtain at least 12 credit hours from communication courses at Cleveland State University.

Journalism

The Department of Communication Certificate Program in Journalism provides college undergraduates and professionals with an educational program that exposes students to an array of skills characterizing modern media: writing in various journalistic forms and styles; reporting principles and strategies; ethics; and expertise appropriate to various media: basic photography, computer design and layout, the Internet; and editing. The program introduces students to contemporary practices and theories while integrating traditional skills with emerging technologies such as computer graphics and design, and the Internet.

Requirements for the Certificate in Journalism

The certificate requires 16 semester hours of core courses in journalism. A list of recommended optional electives allows those who wish to specialize to also focus their program in broadcast journalism. The following courses make up the certificate program.

Prerequisite:
- COM 225 Media Writing

Required Courses:
- COM 326 Advanced Reporting and Specialized Writing for the Media
- COM 425 Editing and Graphics
- COM 426 Lab Newspaper I

Options: Students must choose one of the following for a capstone course:
- COM 405 Electronic Journalism
- COM 427 Lab Newspaper II
- COM 490 Internship in Communication

Suggested electives (not included in the certificate courses):
- COM 347 Political Communication
- COM 359 International Communication
- COM 447 Public Relations Writing
- COM 493 Special Topics in Communication (when appropriate)

Multimedia Advertising

This is an interdisciplinary program jointly offered by the departments of Art and Communication in the College of Arts & Sciences and the Marketing Department in the James J. Nance College of Business Administration. The program provides students with a breadth of information and practical know-how in advertising communication, marketing strategy, graphics, copywriting, and design. It introduces contemporary advertising theories and practices by integrating traditional media — such as print and broadcasting — with new media — such as computer graphics and the Internet.

Requirements for an Interdisciplinary Certificate in Multimedia Advertising

The certificate program includes 16 semester hours of core courses in visual art, advertising principles, advertising applications, and marketing analysis. The following courses are prerequisites to those required for the certificate.

Prerequisites:
ART 102 Introduction to Studio Art
MKT 301 Introduction to Marketing
COM 350 Persuasive Communication and Attitude Change

Required Core Courses:

- ART 244 Introduction to Macintosh
- COM 360 Principles of Advertising or MKT 441 Advertising and Promotion
- COM 450 Media Programming and Research or COM 455 Communication Campaigns or COM 460 Advertising Copywriting and Layout Design
- MKT 420 Buyer Behavior or MKT 431 Marketing Research

Recommended Electives:

- ART 344 Advanced Raster-Image Development
- ART 345 Advanced Vector-Image Development
- ART 444 Advanced Typography and Design
- ART 445 Introduction to Digital Media
- COM 204 Single-Source Video/Audio Production and Editing
- COM 352 Multi-Source Video Production
- COM 357 Principles of Public Relations
- COM 358 Media Law, Economics, and Ethics
- COM 370 Communication Technology and Social Change
- MKT 305 Marketing Management
- MKT 461 Global Marketing

For more information please contact the appropriate department: Art Department (216) 687-2040, Communication Department (216) 687-4630, Marketing Department (216) 687-4771.
Dramatic Arts (B.A.) At-a-Glance

Minimum hours required for major: 41
Minimum hours required for minor: 24

The major in Dramatic Arts is designed to enable students to study theater for the purpose of entering the commercial theater, preparing for graduate work with the expectation of teaching, or building a base which is useful in association with the fields of recreation, public relations, community development, and human communication.

Theater at CSU is viewed in the liberal-arts tradition as being part of the cultural heritage of our civilization. In both its practice and its content, theater is presumed to be relevant to 20th-century life in all phases. Through classes and strong production orientation, students with this major can expect improvement in oral expression; motor skills; increased understanding of themselves and others; and illumination of major social, political, philosophical, moral, and psychological issues.

Major Field Requirements

All Dramatic Arts majors are required to successfully complete a minimum of 41 credit hours consisting of the core curriculum (22 hours) and one specialization track (19 to 26 hours).

Core Curriculum to be completed by graduation:

- DRA 101 Production Practicum (6 credits with a minimum of 2 hours each in technical and performance activity)
- DRA 211 History of the Theatre I (3 credits)
- DRA 212 History of the Theatre II (3 credits)
- DRA 213 History of the Theatre III (3 credits)
- DRA 225 Principles of Acting (3 credits)
- DRA 491 Comprehensive Exam (4 credits)

TOTAL 22 credit hours

Specialization tracks:

The specialization tracks are designed to offer the student the main areas of concentration demanded by professional theater or expected of the modern academician.

1. Acting track:

The acting track focuses on acting skills while emphasizing the relation of acting to the necessary sister disciplines that directly affect the actor. An actor who does not know and understand the work of the director and the various designers and artisans of the "technical theater" is an actor ill-prepared to meet the challenges of a professional career or a graduate experience. A successful actor is an entrepreneur with a knowledge and understanding of the business of the theater,
hence the mandatory inclusion of DRA 381 Theatre Organization and Management.

- **DRA 200 Intro to Tech Theatre** (3 credits)
- **DRA 321 Voice and Movement** (4 credits)
- **DRA 325 Intermediate Acting** (4 credits)
- **DRA 331 Principles of Directing** (3 credits) or
  - **DRA 333 Directing a High School Production** (3 credits)
- **DRA 381 Theatre Organization and Management** (4 credits) or
  - **DRA 451 Theatre Criticism** (4 credits)
- **DRA 425 Advanced Acting** (4 credits) or
  - **DRA 426 Stand-up Comedy** (3 credits)
- **DRA 331 Principles of Directing** (3 credits)
- **DRA 333 Directing a High School Production** (3 credits)
- **DRA 332 Advanced Directing** (4 credits)
- **DRA 494 Studio Production Lab** (1-4 credits)

**TOTAL 22-26 credit hours**

### 2. Directing track:

The successful director is one who is able to make informed decisions about every aspect of production from acting and design to movement and staging. The emphasis on directing courses augments a broad range of necessary skills courses needed to pursue an academic or professional career.

- **DRA 200 Intro to Tech Theatre** (3 credits)
- **DRA 300 Stage Management** (3 credits) or
  - **DRA 301 Lighting Design** (3 credits) or
    - **DRA 351 Theatre Makeup** (3 credits) or
    - **DRA 352 Creative Dramatics** (3 credits) or
    - **DRA 353 Children's Theatre** (3 credits) or
    - **DRA 354 Puppet Production** (3 credits)
- **DRA 325 Intermediate Acting** (4 credits) or
  - **DRA 425 Advanced Acting** (4 credits) or
    - **DRA 461 (ENG 305) Playwriting** (4 credits)
- **DRA 331 Principles of Directing** (3 credits) or
  - **DRA 333 Directing a High School Production** (3 credits)
- **DRA 332 Advanced Directing** (4 credits)
- **DRA 494 Studio Directing Lab** (2-4 credits)

**TOTAL 19 to 21 credit hours**

### 3. Technical Theatre track

Professional design unions and graduate programs in design now require two areas of specialization. In practice, design students and designers generally include lighting design as one specialty since lighting materially affects both costuming and scene design. Most professional designers choose to specialize in either costuming or scene design, hence the costuming and scene design subtracks. As in the other specialties, a designer needs to know what his collaborators bring to the creative process. A designer who has never been onstage will be unfamiliar with an actor's needs. A designer without a director's outlook will not be able to communicate with the organizing creator of theatrical performance. And practical experience and a portfolio are essentials for both the professional theater and admission to a graduate program in Technical Theatre.

- **DRA 200 Introduction to Technical Theatre** (3 credits)
- **DRA 301 Lighting Design** (3 credits)
- **DRA 331 Principles of Directing** (3 credits) or
  - **DRA 333 Directing a High School Production** (3 credits)
- **DRA 494 Studio Production Lab** (2 - 4 credits)

**Subtotal 11: to 13 credit hours**

#### a. Costuming subtrack:

- **DRA 391 Costume History & Design** (3 credits)
- **DRA 496 Construction & Drafting IS** (3 credits)
- **DRA 496 Millinery and Accessories IS** (2 credits)

**Costume Subtotal 8 credit hours**
b. Scene Design subtrack

- DRA 371 Scene Design I (4 credits)
- DRA 372 Scene Design II (4 credits)

Scene design Subtotal 8 credit hours

TOTAL Technical Theatre Track 19 to 21 credit hours

4. Playwriting track:

"Playwrights who know nothing of the practical aspects of the theater are writing for the closet not the stage." George Bernard Shaw. This major track, designed in collaboration with Creative Writing, will be a unique program focusing on plays in performance.

- DRA 200 Intro to Tech Theatre (3 credits)
- ENG 303 Creative Writing (4 credits)
- DRA 321 (ENG 351) Contemporary Theatre (4 credits)
- DRA 331 Principles of Directing (3 credits)
- DRA 461 (ENG 305) Playwriting (4 credits)
- DRA 494 Studio Production Lab (1 to 4 credits)

TOTAL 19-22 credit hours

5. Dramatic Arts Content for Teaching track:

This track is designed for students contemplating a career in teaching at the elementary, middle-school, or high-school levels. This course of study is to be completed before commencing a Post Baccalaureate Teacher Preparation Program in the College of Education. (See note below.)

- DRA 200 Introduction to Technical Theatre (3 credits)
- DRA 300 Stage Management (3 credits) or DRA 391 Costume History & Design (3 credits)
- DRA 333 Directing a High School Production (3 credits) or DRA 331 Principles of Directing (3 credits)
- DRA 352 Creative Dramatics (3 credits)
- DRA 353 Children's Theatre (3 credits) or DRA 354 Puppet Production (3 credits)
- DRA 381 Theatre Organization and Management (4 credits)

TOTAL 19 credit hours

Note:
Students wishing to pursue a career teaching dramatic arts should investigate the certification or licensing requirements of the state in which they would like to teach. Post-Baccalaureate Teacher Preparation Programs are available through the College of Education, which offers a variety of teacher preparation programs for college graduates who have had little or no professional training in education. While most of these programs lead to licensure, most of the course work they require cannot be applied to a graduate degree. The course work in the professional education track is designed to fulfill licensing requirements for a teacher of the arts in Ohio in the coming years. Currently no undergraduate program for teaching theater exists in the College of Education at CSU.

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Drama Minor

Requirements

Minimum Total

24 credit hours total (minimum):

- DRA 101 Production Practicum (2 credits)
• DRA 200 Introduction to Technical Theatre (3 credits)
• DRA 211 Theatre History I (3 credits) or
  DRA 212 Theatre History II (3 credits) or
  DRA 213 Theatre History III (3 credits)
• DRA 225 Principles of Acting (3 credits)

From the following groups (at least one from each group) for a total of 12 hours:

GROUP A
• DRA 300 Stage Management (3 credits)
• DRA 301 Lighting Design (3 credits)
• DRA 351 Theatre Makeup (3 credits)
• DRA 371 Scene Design I (4 credits)
• DRA 391 Costume History and Design (3 credits)

Group B
• DRA 216 African American Theatre (3 credits)
• DRA 314 Plays in Performance I (3 credits)
• DRA 321 Contemporary Drama (4 credits)
• DRA 381 Theatre Organization and Management (4 credits)
• DRA 451 Theatre Criticism (4 credits)

Group C
• DRA 325 Intermediate Acting (4 credits)
• DRA 326 Voice and Movement (4 credits)
• DRA 331 Principles of Directing (3 credits)
• DRA 333 Directing a High School Production (3 credits)
• DRA 354 Puppet Production (3 credits)
• DRA 461 Playwriting (4 credits)
Economics (B.A.) At-a-Glance

Admission to major: No requirements other than good academic standing in the College of Arts and Sciences

Minimum hours required for major:
31 hours of course work in economics, 3 hours in statistics, and an additional 6 hours of 100- to 200-level mathematics, and computer science course IST 203.

Minimum hours required for minor: 16

Advising:
Advising is done by faculty members in the Department of Economics. Students who are thinking of majoring in economics should contact the chairperson of the Economics Department's Undergraduate Committee. Phone: (216) 687-4520.

Student organization: Omicon Delta Epsilon

Additional information:
The Economics Department offers an honors program to those who have maintained a GPA of 3.3 or better both in overall course work and in major-field requirements. An annual award is made to the year's most outstanding senior economics major. A cash prize has been given to the recipient of this award in recent years. A Business Economics major is available to students in the College of Business Administration. Secondary teacher certification in economics (as a second teaching field) is available to students in the College of Education. Nonmajors should consult the Economics Department about elective courses to complement their majors.

A knowledge of economics is essential if one is to understand the nature of the economic problems confronting individuals, firms, and society. Economics is an appropriate major for those wishing to pursue careers in business, law, journalism, and industrial relations, as well as for those who wish to become professional economists.

An economics major provides an excellent background for graduate study in economics and other related fields. Economists are employed by universities; corporations; government agencies at the federal, state and local levels; labor organizations; trade associations; and professional societies. Economics majors are trained to develop the analytical skills needed to understand economic problems and to arrive at possible solutions.

Major Field Requirements

Economics majors in a regular B.A. program must complete a total of 31 hours of course work in economics as well as additional hours in statistics and mathematics.

Core Courses. Core requirements are fulfilled by completing 12 hours from the following courses:

- ECN 201 Principles of Macroeconomics
Economics Electives.
In addition to the core courses for the economics major, with the exception of students in the Honors Program, five economics elective courses amounting to 19 credit hours must be completed. These elective courses should be chosen in consultation with a department advisor.

Statistics. Introductory course in statistics (MTH 147, OMS 201, PSY 311, SOC 354, or equivalent)

Mathematics.
Students must select a minimum of 2 courses (6 hours) of 100 to 200-level mathematics courses fulfilling the university's General Education Requirement in mathematics. Students may not choose PHL 131, or other logic course, to partially satisfy this requirement. Statistics courses cannot be used to satisfy this mathematics requirement.

Computer Literacy Requirement
- IST 203 Software Tools for Personal Productivity, 3 credit hours

Business Economics Major
The Economics Department, in cooperation with the College of Business Administration, offers a program in business economics which leads to a B.B.A. degree. For further information on the business economics major, see the section describing programs in the College of Business Administration.

Economics Minor
Students working toward undergraduate degrees from other departments and colleges at Cleveland State University are eligible to earn a minor in economics to complement their baccalaureate degrees from other disciplines. A minor in economics consists of 16 hours of three required and two elective courses.

Required Courses: ECN 201, ECN 202, ECN 301 or ECN 302.

Elective Courses: Seven hours of 300- to 400-level economics courses.

Honors Program
Students in the Economics Honors Program must complete the core requirements and statistics sequence for economics majors; however, the elective requirement is fulfilled by completing ECN 322, ECN 355, ECN 497 (Honors Essay), IST 203 or CIS 500, and two additional economics electives which have as a prerequisite at least one course in principles of economics. In addition, MTH 181 must be completed. For students planning to pursue graduate studies in economics, more than this minimum is recommended.

An honors candidate must have and maintain a 3.3 overall grade point average and a 3.3 GPA in major-field requirements. Information about the honors program will be provided to all students at the time a major is declared in economics. For further information, contact the Department of Economics.

Applied Economics and Public Policy
The certificate program in Applied Economics and Public Policy is designed for students who are interested in current economic issues and the public policy for dealing with these issues. The program is intended for students with minimal previous preparation in economics. With two exceptions, the courses required for the certificate in economics require no more than a background in principles of economics.

To a limited degree, the program is interdisciplinary. One course out of the four required for the program may be taken in either Sociology or Political Science.

**Requirements for Certificate in Applied Economics and Public Policy**

The program requires students to complete four courses (a minimum of 15 hours). The courses must be selected from the list below and must include at least three courses in economics.

- ECN 333 *Economics of Health Care* (4 hours)
- ECN 350 *Economics of Crime and Punishment* (4 hours)
- ECN 360 *Public Sector Economics* (4 hours)
- ECN 450 *Economics of Law* (4 hours)
- ECN 470 *Urban Economics* (4 hours)
- ECN 474 *Environmental and Natural Resource Economics* (4 hours)
- ECN 482 *International Economics* (4 hours)
- SOC 203 *Sociology of Poverty* (3 hours)
- PSC 315 *Public Policy and Administration* (4 hours)

There are three general paths to acquiring the certificate. For students who have completed only ECN 202, the certificate can be acquired with the following courses:

- ECN 333
- ECN 350
- ECN 360
- SOC 203 or PSC 315

For students who have completed ECN 201 and ECN 202, the program can be completed by taking any four of the following six options:

- ECN 333
- ECN 350
- ECN 360
- ECN 470
- ECN 482
- SOC 203 or PSC 315

For students who have completed ECN 201, ECN 202 and ECN 302, the certificate can be earned with any four of the following eight options:

- ECN 333
- ECN 350
- ECN 360
- ECN 450
- ECN 470
- ECN 474
- ECN 482
- SOC 203 or PSC 315
English (B.A.)
At-a-Glance

Admission to major: Completion of ENG 240, 241 (or equivalent)

Minimum hours required for major: 38

Minimum hours required for minor: 21

Special tracks:
The English major emphasizes the study of British and American literature. In addition to literary study, special tracks or concentrations are available in creative writing, linguistics, prelaw, secondary English licensure, and Multicultural/Multiethnic Literature. The department also offers a Writing Certificate.

Advising: Contact Dr. Donna Burns Phillips, Director of Undergraduate Studies, at (216) 523-7145.

Student activities: Student organization: Whiskey Island (creative writing magazine). Poetry Center activities include workshops and readings by students, writers in the Cleveland community, and distinguished visiting writers.

Scholarship information: Each year, the department offers Plain Dealer awards to recognize excellence in expository writing, tuition scholarships as prizes in creative writing, and English Alumni Association contests, as well as the Gulbenkian award as a cash prize to honor a distinguished graduating senior.

Career information: Students preparing to teach English in high school must meet the State of Ohio licensure requirements. Please contact the College of Education for further information on licensure. For students preparing for careers in writing, editing and publishing, the department offers a creative writing concentration. The linguistics concentration includes courses in linguistics as well as literature. Students preparing for law school should take the prelaw concentration. The English major is an ideal liberal arts major for students desiring to develop capabilities in research, writing, critical thinking, and textual analysis combined with the study of literature and language.

Freshman English and English as a Second Language Placement

Consult the course description section of this catalog under English for information about placement examinations and placement of students into basic writing, freshman English, and English as a Second Language courses.

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Major Field Requirements

Courses required for the major are as follows (38 credit minimum):

1. Introductory courses (8 credits): ENG 240, 241
2. Electives: 26 credits in courses numbered ENG 300 and above
3. Senior seminar: ENG 495: 4 credits minimum

Equivalency rule for transfer students: A student who transfers to Cleveland State with 3 credits or more of 200-level literature course may take ENG 300 in lieu of either ENG 240 or 241. A student who transfers with 6 credits of more of 200-level literature course may take ENG 300 and one other upper-level literature course in lieu of ENG 240 or 241.

Special Concentrations

Concentration in Creative Writing

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. ENG 303 Creative Writing (4 credits; prerequisite for ENG 305)
3. Two courses in creative writing (8 credits): ENG 305 Creative Writing Workshop (fiction, poetry, playwrighting, special topics; may be repeated with change of topic)
4. Electives: 14 credits in courses numbered ENG 300 and above
5. Senior seminar: ENG 495 (4 credits minimum)

Linguistics Concentration

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. ENG 311 Elements of Linguistics (4 credits)
3. Two courses in linguistics (8 credits): ENG 313 (topics include American dialects, history of the English language, historical linguistics, sociolinguistics, semantics; may be repeated with change of topic)
4. Electives: 14 credits in courses numbered ENG 300 and above
5. Senior seminar: ENG 495 (4 credits minimum)

Pre-Law Concentration

The most significant attributes of baccalaureate education for a prelaw student are critical reading of primary texts, development of a mature writing style, critical and analytical thinking, knowledge of American history, and knowledge of Enlightenment thought as the basis for modern American and European legal and political institutions and philosophy. The prelaw concentration in English is designed to prepare students for law school based on these criteria.

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. Language analysis (4 credits): one course from the ENG 310-313 series. ENG 310 is
3. Argument (4 credits): ENG 302, 307 or 361. ENG 302 is recommended.

4. Electives: 14 credits in courses numbered ENG 300 and above. At least one course in British or American Enlightenment literature is recommended.

5. Senior Seminar: ENG 495 (4 credits minimum)

We recommend that pre-law concentrators in English take a double major or a minor in history, philosophy, or political science.

Secondary English Licensure

Note: The department expects to redefine the English component of the licensure program beginning fall 2002. Please check in RT 1815 for the new requirement or check the English department website.

Students desiring to teach English in high school must complete 38 credits of English including courses required in the secondary English licensure track. This track includes courses that satisfy requirements of the Ohio Board of Education and NCATE accreditation; students should note that except for ENG 240 and 241, the sophomore-level courses do not count toward the English major.

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)

2. British literature survey (4 credits): ENG 321 or 322

3. American literature survey (4 credits): ENG 342

4. World literature (minimum 3 credits): Nonwestern literature course taken as a general education requirement (not counting toward the 38 credits needed to earn an English major). Examples of Nonwestern courses include ENG 204, 210, 348 (when offered as Native American Literature). Consult the department handbook for details about courses available each year.

5. Language requirement (4 credits): one course from the ENG 310-314 series.

6. Advanced composition & rhetoric (4 credits): ENG 302, 307, 308 or 309

7. Multicultural American literature (minimum 3 credits). This requirement can be satisfied in either of two ways: by taking ENG 207 or 208 as a general education requirement (not counted toward the English major), or by taking ENG 347 or 348 or another upper-division course on multicultural or African-American literature. The upper-division course counts toward the English major.

8. Women's literature (minimum 3 credits): ENG 208, or another 200-level ENG or ENF course in women's literature, or ENG 363 or an upper-division course on major women author(s) or feminist criticism.

9. Senior seminar (4 credits): ENG 495

For education requirements see the College of Education section of this catalog for details.

Concentration in Multicultural/Multiethnic Literature

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)

2. ENG 495 Senior Seminar (4 credits)
3. English electives: at least 10 credits of ENG 300-400 level courses

4. Multicultural literature electives: 16 credits from the following list. (At least 8 credits must be taken in the English department):

- ENG 347 Studies in African-American Literature
- ENG 348 Studies in Multicultural Literature
- ENG 349 Multicultural Literature: Theory and Methods

Other 300-400 level ENG courses may be counted when they have a multicultural/multiethnic topic. Examples include ENG 330 Studies in Ancient Literature (when taught as "Feminist Approaches to the Classics"), ENG 335 Studies in 20th-Century British Literature, ENG 345 Studies in American Literature, ENG 346 Studies in American Fiction, ENG 350 Studies in Fiction, ENG 351 Studies in Drama, ENG 352 Studies in Poetry, ENG 355 Major Themes or Genres, ENG 363 Gender Issues in Literature, ENG 364 Popular Culture, ENG 375 Major Author, ENG 495 Senior Seminar.

Extra-departmental Electives

Students may count up to 8 credits of the following extra-departmental electives toward the English major. This option applies only to students who are completing the Multicultural/Multiethnic Literature Concentration.

African-American and African Literature Courses

- FRN 375 Francophone African Literature, Pan-Africanism, and Black Nationalism
- COM 428 Imaging Africa (with relevant topic only)

General Multiethnic Literature Courses

- DRA 317 Society and Minority Theater
- ENF 317 Images of Fascism in Film

Latino/Spanish Literature Courses

- SPN 365 Readings
- SPN 372 Introduction to Spanish American Literature
- SPN 484 Studies in Spanish American Literature

Language and Methods Courses

- ANT 322 Writing About Culture
- ANT 342 Languages in Contact
- COM 332 Interracial Communication
- MLA 341 Languages and Cultures in Contact

World Literature Courses

- FST 323 World Literature Workshop

Writing Certificate Program (20 credits)

The Writing Certificate program is open to all CSU undergraduate and graduate students, as well as to CSU alumni and students and alumni at other colleges and universities. Students must be enrolled in a baccalaureate degree program, or already have a baccalaureate degree, in order to be eligible for a Writing Certificate. The Writing Certificate Program is housed in the English Department. Students
who intend to take the Writing Certificate program should register in the English department office, Rhodes Tower 1815, (216) 687-3951. There is no registration fee. To register by email, contact Dr. John Gerlach at j.gerlach@csuohio.edu.

Certificate Requirements:
20 credit hours, taken from at least three of the participating departments (Art, Communication, English, Urban Studies). Students must earn a grade of C or better in each course, and a grade point average of 2.5 in the courses applied to the Writing Certificate. No more than 4 credits may be taken on a satisfactory/unsatisfactory basis. Up to 12 credits may be transferred from other institutions. At least three courses must be designated as "Writing Courses."

Courses in the Writing Certificate program
Some of the courses in the Writing Certificate program (viz. ART 242, ART 244, COM 326, COM 357, COM 405, and UST 403) have specific course requirements. Students desiring to take these courses as part of the Certificate program must, therefore, take the prerequisites, in addition to the 20 credits required for the Certificate.

- ART 242 Introduction to Typographic Principles and Design (2-6-4)
- ART 244 Introduction to Macintosh (2-6-4)
- COM 225 Media Writing (4 credits)
- COM 326 Advanced Reporting and Specialized Writing for the Media (4 credits)
- COM 327 Media Criticism (4 credits)
- COM 357 Principles of Public Relations (4 credits)
- COM 368 Introduction to Language Studies (4 credits)
- COM 405 Electronic Journalism (4 credits)
- COM 425 Editing and Graphics (4 credits)
- COM 460 Advertising Copywriting and Layout Design (4 credits)
- COM 490 Internship in Communication (2 to 8 credits)
- ENG 201 Grammar and Writing (3-0-3)
- ENG 301 Advanced Expository Writing (4-0-4)
- ENG 302 Rhetoric of the Law (4-0-4)
- ENG 303 Creative Writing (4-0-4)
- ENG 307 Style (4-0-4)
- ENG 309 Writing Center Practicum (1-4-2)
- ENG 310 Traditional Grammar (2 or 4 credits)
- ENG 361 Classical Rhetoric (4-0-4)
- ENG 397 Portfolio Preparation (1 credit)
- ENG 490 Professional Internship (1 or 2 credits)
- UST 403 Cartography and Graphics (2-3-3)
- UST 410 Proposal Writing and Program Evaluation (4-0-4)

Minor in English

Courses required for the minor in English (21 credits) are as follows:

1. Introductory courses (8 credits): ENG 240, 241 (or equivalent)
2. Electives: 13 credits in courses numbered ENG 300 and above
Evening and Weekend Program

Students may obtain a major or minor in English by taking courses on evenings and weekends. Course selection is restricted, and each required course generally is offered once every other year.
Environmental Science (B.S.)

The B.S. in Environmental Science is a multidisciplinary degree offered through the Department of Biological, Geological, and Environmental Sciences (BGES) that provides a solid foundation in the basic sciences while permitting specialization in an area of focused study.

At-a-Glance

Hours required for major: 80

Special Tracks: Environmental Biology, Environmental Geology, Environmental Chemistry, Environmental Technology, Environmental Planning

Advising: Consult the BGES office (216)687-2440 or email bges@csuohio.edu

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Major Field Requirements

All majors must take 61 credits of core courses and 19 elective credits in one of the special environmental foci.

A. Required Core Courses (61 credits)

- MTH 181 Calculus I
- MTH 147 Statistical Concepts with Applications (or one of the following: ANT 305, PSY 311, SOC 354, BIO 538)
- PHY 221 College Physics I (or PHY 241, University Physics I)
- PHY 470 Environmental Physics (or PHY 222, College Physics II, or PHY 242, University Physics II)
- CHM 261/266 General Chemistry I
- CHM 262/267 General Chemistry II (or CHM 272/277, Honors General Chemistry)
- BIO 200/201 Introductory Biology I
- BIO 202/203 Introductory Biology II
- GEO 223 Map Interpretation and the Visualization of Space (or UST 403, Cartography and Graphics)
- GEO 230 Natural Resources
- EVS 206 Introduction to Environmental Science
- ENV 435 Environmental Policy
- ENV 441 Environmental Planning
- ENV 442 Environmental Finance and Capital Budgeting

and one of the following capstone courses:

- EVS 490 Internship in Environmental Science
- EVS 496 Independent Study in Environmental Science
- EVS 497 Research in Environmental Science

B. Elective Environmental Focus (19 credits)

Students earning a B. S. in Environmental Science must choose a focus area by selecting elective courses (totaling at least 19 credits) from among those given in one of the following course lists.
• Environmental Biology
• Environmental Geology
• Environmental Chemistry
• Environmental Technology
• Environmental Planning

**Environmental Biology**

- MTH 182 Calculus II
- BIO 300/301 Plant Biology
- BIO 302/303 Animal Biology
- BIO 304/305 Population Biology and Evolution
- BIO 416/417 Microbiology
- BIO 420/421 Comparative Vertebrate Anatomy
- BIO 424/425 Principles of Animal Physiology
- BIO 450/451 Evolutionary Biology
- BIO 453 Field Experience in Ecology and Conservation
- BIO 454/455 Ecology
- BIO 471 Summer Local Flora
- BIO 473 Spring Local Flora
- BIO 476/477 Plant Physiology
- BIO 478/479 Morphology of Angiosperms
- EVS 454 Conservation Biology
- EVS 455 Conservation Biology Laboratory

**Environmental Geology**

- MTH 182 Calculus II
- GEO 304/305 Mineralogy
- GEO 306/307 Petrology
- GEO 312/313 Stratigraphy and Sedimentation
- GEO 354 Geochemistry
- GEO 420/421 Rivers and Watershed of Northeast Ohio
- GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
- GEO 427 Advanced Topics in Geographic Information Systems & Remote Sensing
- GEO 444/445 Hydrogeology
- GEO 460/461 Geomorphology
- UST 434 Introduction to Geographic Information Systems

**Environmental Chemistry**

- MTH 182 Calculus II
- CHM 310/315 Survey Analytical Chemistry
- CHM 311/316 Quantitative Analysis
- CHM 320 Survey of Physical Chemistry
- CHM 331/336 Organic Chemistry I
- CHM 332/337 Organic Chemistry II
- CHM 404/406 Environmental Chemistry

**Environmental Technology**

- MTH 182 Calculus II
• ESC 203 Statics and Dynamics
• ESC 250 Differential Equations for Engineers
• ESC 301 Fluid Mechanics
• CHE 461 Principles of Air Pollution Control
• CVE 211/212 Surveying
• CVE 361 Hydraulic Engineering
• CVE 371 Environmental Engineering I
• CVE 372/373 Environmental Engineering II
• CVE 450 Environmental Technology
• CVE 471 Environmental Law, Regulation, and Compliance
• CVE 475 Solid Waste Engineering Management

Environmental Planning

• MTH 182 Calculus II
• GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
• GEO 427 Advanced Topics in Geographic Information Systems and Remote Sensing
• UST 300 Economics of Policy Analysis
• UST 302 Contemporary Urban Issues
• UST 375 Cities and Planning
• UST 401 Computer Applications for Urban Research
• UST 403 Cartography and Graphics
• UST 434 Introduction to Geographic Information Systems
• ENV 440 Environment and Human Affairs
• ENV 443 Environmental Regulatory Compliance
• MLR 301 Principles of Management

With the approval of the departmental advisor, a student may petition the Department's Undergraduate Curriculum Committee to request approval of an alternative selection of focused electives from the above lists.

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French (B.A.) At-a-Glance

Admissions to major: Completion of FRN 102 or equivalent

Minimum hours required for major: 36

Minimum hours required for minor: 18

Advising: Two designated faculty advisors; phone (216) 687-4645

Student organization: Le club francophone de CSU

Additional information:
Year and semester exchange programs to Chambéry and Clermont-Ferrand in France; summer study abroad programs in France and Canada

Languages are invaluable tools in a variety of human activities. But they are more than just tools. They open the way to knowledge of, and communication with, a world of other peoples, civilizations, and literatures. Moreover, study and knowledge of a language other than one’s mother tongue opens the door of perception to phenomena otherwise inaccessible.

A student majoring in French will find career opportunities in teaching, foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself (philology, linguistics), its literature, culture, pedagogy, or its place and role in world affairs — business, politics, geography, history.

A student who has completed French course work in high school or at another institution who wishes to continue the study of that language must begin course work for credit at the level consistent with her or his academic background. A placement test is required for all students with less than three years of high school French or the equivalent. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. As a general guideline, students who read and write French fluently must begin course work for credit at the 300-level or higher. Students considering a major in French must consult with an advisor in the Department of Modern Languages concerning projected plans of study.

Retroactive Credit.
Students are eligible to earn up to 14 retroactive credits for previous knowledge of French. This policy is for students who have completed a foreign-language skills course and who earned a B or better in that course. For example, if your first French skills course is FRN 102 and you receive an A or B, you can receive credit for FRN 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

Credit by Examination.
Students who successfully pass the College Level Placement Examination (CLEP test) in French may earn 14 credit hours for previous knowledge of French. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center (216) 687-2277. Students who receive a score of 3, 4, or 5 on the Advanced Placement French language examination may earn 18 credit hours for FRN (101, 102, 201, and 202).

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Major Field Requirements

Students seeking a major in French must complete 36 credit hours in French above the 100 level, distributed as follows:

a. 8 credit hours of course in composition-conversation (FRN 301, 402)
b. 8 credit hours of courses in literature (two of the following: FRN 371, 372, 375)
c. A minimum of 28 credit hours at the 300- or 400-level
d. 2 courses in French at the 400-level, distributed as follows: FRN 402, plus one course at the 400 level taught in French
e. Among the 36 hours, no more than 8 hours of French courses may be at the 200 level

Transfer Students.
Transfer students must complete at least 18 credit hours of the 36 required for the major in residence at Cleveland State University in order to earn a degree.

Major Credit.
Up to 8 credit hours of English literature, practicum in language, independent study, literature in translation, or credit by examination may count toward the major.

No grade below C in a major course may count toward the major.

Minors

A minor consists of 18 credit hours beyond the 100 level, of which 8 must be at the 300- or 400-level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in French must have a departmental advisor to assist in the selection of courses. No grade below C in a minor course may count toward the minor.

Study Abroad

Majors and minors are encouraged to take advantage of CSU's exchange programs in Chambéry or Clermont Ferrand; and/or a summer study trip to France. Normally up to 18 semester hours of study abroad may count toward the major requirements (additional credit may count toward the total hours needed for graduation). Majors should seek departmental approval of foreign study plans before departure, and must complete at least two 300- or 400-level courses in their major area after return from study abroad. (See also the Foreign Study section listed under "Arts and Sciences.")

For further information regarding the possibility of foreign study and summer programs available through the Modern Languages contact the department office, (216) 687-4645, or Dr. Engelking, (216) 523-7167.

Teacher Licensure

Students preparing to teach will fulfill the requirements for the B.A. in French and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12).

Students seeking a B.A. in French with teaching licensure must, in fulfilling the major requirements, take one course in civilization, one course in phonetics, and literature courses acquainting the student with the major genres of drama,
poetry, and the novel.

The PreK-12 Licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency. Modern Language methods courses should be taken the semester preceding student teaching.
Geological Sciences (B.S., B.A.)

At-a-Glance

Geology is the study of the composition, structure, and history of the earth and its planetary neighbors. It deals with phenomena on, above, and below the surface of the earth, including those that take place on land, in the oceans, and in the air. It is a basic entry point for studies of natural resources and the human environment. It is a multidisciplinary science, drawing upon and, in turn, contributing to, the body of knowledge in the fields of chemistry, physics, biology, and mathematics. In recognition of this fact, the undergraduate geology programs which are offered through the Department of Biological, Geological, and Environmental Sciences are designed to provide broad training in geological sciences. Students interested in either a B.S. degree in Environmental Sciences or a B.A. degree in Environmental Studies should consult the catalog listing for those programs.

All geology programs are modular. They include a common core in the earth sciences and a series of courses common to the B.A. and/or B.S. degree. A grade of C is the minimum passing grade for all required major courses offered by the department. A major program in geology is not available for evening students.

Common Core in the Earth Sciences

All geology majors must take the following first- and second-year courses in geology, basic science, and mathematics:

- GEO 100 Introductory Geology
- GEO 101 Introductory Geology Laboratory
- GEO 223 Map Interpretation and the Visualization of Space
- CHM 261/266 and 262/267 General Chemistry
- MTH 181 and 182 Calculus (required for the B.S.; optional for B.A.)
  or 6 credit hours from the MTH 150 series (required for B.A. if calculus is not taken)
- PHY 221 and 222 College Physics,
  or 241 and 242 University Physics

All geology majors must take a capstone course chosen from the following:

- GEO 451 Field Geology (4 credits minimum)
- GEO 490 Internship in Geology (3 credits minimum)
- GEO 496 Independent Study in Geology (3 credits minimum)
- GEO 497 Research in Geology (3 credits minimum)
- EST 482 Student Teaching (3 credits minimum)

Degree Programs in Geology

The bachelor of arts and the bachelor of science degree programs in Geology are designed for students who intend to pursue careers in geology or closely related fields. They provide a solid grounding in the earth sciences, as well as the ancillary subject areas upon which the earth sciences depend. The bachelor of science degree is recommended for students wishing to go on to graduate school in the sciences or engineering and whose career directions are primarily technical or scientific. The bachelor of arts degree is recommended for students who intend to pursue careers in teaching, law, planning, or business.
Candidates for the degree of bachelor of science must take 28 credit hours of courses chosen from the following list, and candidates for the degree of bachelor of arts must take 20 credit hours of courses chosen from the following list. The array of courses taken will be determined by the student, in consultation with the departmental academic advisor, (216) 687-3506:

- GEO 202/203 Paleontology
- EVS 206 Introduction to Environmental Science
- GEO 230 Natural Resources
- GEO 304/305 Mineralogy
- GEO 306/307 Petrology
- GEO 312/313 Sedimentation and Stratigraphy
- GEO 320/321 Structural Geology
- GEO 354 Geochemistry
- GEO 424/425 Introduction to Geographic Information Systems and Remote Sensing
- GEO 444/445 Hydrogeology
- GEO 451 Field Geology (4 credits minimum; may also count toward capstone requirement)
- GEO 460/461 Geomorphology

Geological Sciences Minor

The minor in Geological Sciences is intended as a flexible opportunity for students to incorporate significant course work dealing with the earth sciences into their university careers. All Geology minors must be approved by the departmental advisor and must meet the following criteria:

1. The geology minor consists of GEO 100/101 (Introductory Geology) and at least 13 credit hours above the 100 level. At least 9 credit hours must be above the 200 level.

2. The courses making up a geology minor must comprise a consistent set of courses that make sense to be taken together as a sequence. The sequence of courses will depend on the particular needs of the individual student, but the sequence as a whole must be approved in advance by the departmental advisor.

A grade of C is the minimum passing grade for all courses offered by the department and applied toward a minor. A minor program in geology is available for evening students.

Students interested in the minor program should consult with the departmental advisor.

Teacher Licensure

Students in Geological Sciences who also want to complete the requirements for secondary-teaching licensure in earth sciences should see the College of Education chapter in this catalog for information concerning the general education and professional education requirements for certification. Similarly, students seeking secondary-teaching licensure in earth sciences, but not majoring in Geological Sciences, should consult the College of Education chapter of this catalog for information regarding subject field, general education, and professional education requirements.
German

At-a-Glance

(Major is presently suspended)

Hours required for minor: 18

Advising: Three designated faculty advisors; phone (216) 687-4645

Additional information: Foreign field study trips to Germany are offered on a regular basis during summers.

A student minoring in German may find career opportunities in foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself (philology, linguistics), its literature, culture, or pedagogy.

A student who has completed German course work in high school or at another institution who wishes to continue the study of that language must begin course work for credit at the level consistent with his or her academic background. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. As a general guideline, students who read and write German fluently must begin course work for credit at the 300-level or higher. Students considering a minor in German must consult with an advisor in the Department of Modern Languages concerning projected plans of study.

Retroactive Credit.
Students are eligible to earn up to 14 retroactive credits for previous knowledge of German. This policy is for students who have completed a foreign-language skills course and who earned a B or better in that course. For example, if your first German skills course is GER 102 and you receive an A or B, you can receive credit for GER 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

Credit by Examination. Students who successfully pass the College Level Placement Examination (CLEP test) in German may earn 14 credit hours for previous knowledge of German. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center (216) 687-2277. Students who receive a score of 3, 4 or 5 on the Advanced Placement German language examination may earn 18 credit hours for GER (101, 102, 201, and 202).

Contact the department office (216) 687-4645 for information about credit for course work.

Minors

A minor in German consists of 18 credit hours beyond the 100-level, of which 8 credit hours must be at the 300 and/or 400 level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in German must have a departmental advisor to assist in the selection of the courses. No grade below a C in a minor course may count toward the minor.

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Study Abroad

For further information regarding the possibility of foreign study and summer programs available through the Department of Modern Languages, contact the department office, (216) 687-4645.

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Teacher Licensure

For information, contact the Department of Modern Languages at (216) 687-4645.

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History (B.A.) At-a-Glance

Minimum hours required for the major: 32 distributed in three fields

Minimum hours required for the minor: 20

Areas of Specialization:
Europe, including England; United States; Non-Western, including Africa, Latin America and East Asia, African Diaspora, and Social History

Student Honor Society: Phi Alpha Theta (advisor: Dr. Gregory Conerly, (216) 687-3928)

Awards: Senior History prize


For Information: Call Dr. Donald Ramos or the History Department, (216) 687-3920.

The Program

History is the essential foundation of knowledge. It provides the context for a liberal education, the tools to understand ourselves and our contemporary world, and the skills for an educated person to live a more fulfilled and gratifying life in a wide range of careers. Because of these various functions, we study history for many reasons:

- to better understand our society and the times in which we live
- to better understand ourselves
- to place our own society in historical perspective
- to balance present-mindedness with historical memory
- to acquire skills such as conducting research, communicating effectively through writing or oral communication, critical thinking, evaluating evidence, and problem-solving
- to understand the roles which individuals and groups have played in shaping their worlds
- for the enjoyment of examining societies very different or very similar to our own

This is possible because history at the university-level is far more than a collection of facts, names, and dates. The emphasis is on accessing and analyzing information, the critical use of historical sources, learning to communicate the results, and the excitement which comes from exploring important ideas. To study history is to enter a time machine to explore the far reaches of the human experience — from classical times to the present; from the lives of great thinkers and kings to that of average people; from dramatic moments such as the Civil War to the routine. The past becomes the universe, all corners of which can be explored.

The department offers course work in European, U.S., African, Latin-American, and East Asian history and thematic foci on social and urban history and the History of the African Diaspora. The major program not only prepares students for teaching and for graduate study in history but many students have found history an appropriate preparatory foundation for careers in law, library science, international work, the foreign service, the ministry, business, government and archival and museum work.
History can be of inestimable value to nonmajors. This can be done through the minor, the certificate programs, or by taking appropriate courses. Thus, literature majors could benefit from taking history courses in the areas they are studying. Business students could take HIS 328 (History of American Business). Social Work or Sociology majors could gain historical perspective on contemporary issues by taking HIS 318 (History of the Family in America) or HIS 305 (Social Thought of Black Americans) or HIS 309 (History of U.S. Immigration).

Major Field Requirements

Thirty-two semester hours of history are required to complete a major. All students must include the history of different parts of the world and different chronological periods. These credits are to be distributed as follows:

- A minimum of 16 credits (12 of which are upper-level) must be taken in one of the three following fields: United States, European, and non-Western histories
- A total of 12 upper-level credits must be spread over the two remaining fields
- At least one two-course sequence (8 hours) must be included along with at least two upper-division courses (8 hours) dealing with preindustrial societies. (A list is available online or from the department office.)
- Overall a minimum of 24 credits must be at the 300-level or above
- One course should be in Public History or devoted to an internship in the field of historical studies

First College and transfer students must complete at least 20 credits in history courses taken within the Department of History at Cleveland State University in order to major in history.

History Minor

A minor in history consists of 20 credits in history, of which at least 12 must be earned at the 300-level or above. No more than one course may be taken on an S/U basis. Transfer students must earn at least 12 credits in the Department of History at Cleveland State University in order to complete a minor in history.

Certificate Program: The History of the African Diaspora

The African Diaspora constitutes one of the largest and most consequential migrations in the history of mankind. This forced migration of over 10 million human beings transformed many areas of Africa and the Americas. This certificate program recognizes the significance of this historical process and its enduring importance as the subject of study. Students are called upon to examine the Diaspora in its comparative perspective by focusing on the history of Africa, the Untied States and Latin America.

Certificate Requirements

The Certificate Program is 24 hours (6 courses) of which at least:

- 8 credits (2 courses) must be in African history
- 4 credits (1 course) must be in African-American (U.S.) history
- 4 credits (1 course) must be in Latin-American history
- 4 credits (1 course) must be an independent study research project involving any two of the three areas

For further information contact the History Department office.

Also, see Certificate in Central and European Studies, and Certificate in Latin American Studies.

Honors Program
The honors program is designed for the History major completing the last two years of study for an undergraduate degree who at the time of application has a 3.00 cumulative GPA and a 3.25 average in history. Application for admission to the program must be made 30 days before the semester in which the applicant wishes to enter.

The successful completion of the requirements for the program leads to a recommendation by the departmental Honors Committee for graduation with honors in History. For further information and application forms, contact the Department of History office, (216) 687-3920.

Evening Program

The requirements for both the major and minor program also apply to evening students. The History Department makes every effort to schedule courses in such a way as to make it possible for evening students to fulfill these requirements.

Teaching Licensure

New licensing requirements are being implemented by the Ohio State Board of Education. Students interested in teaching history/social studies at the high-school level in the state of Ohio must complete the requirements for both the bachelor of arts in Social Studies and the Adolescent & Young Adult Teaching License in Integrated Social Studies (offered through the College of Education). For further information, contact Dr. Lee Makela in the Department of History (216) 687-3927. To clarify licensing requirements during this period of transition, contact the College of Education.
International Relations (B.A.)

At-a-Glance

Minimum hours required for major:
35 hours — 17-hour core in political science, 3 hours in economics, and 15 to 16 hours in political science, other arts and sciences, or in business, depending on the specific concentration.

Language Competence:
Students must demonstrate mastery in a major world language of relevance to their concentration comparable to that obtained from two years of college-level instruction. Competence may be demonstrated by examination.

Admission to Major:
No requirement other than good academic standing in the College of Arts and Sciences. Double majors are encouraged.

Evening Program:
Because courses are offered in a variety of departments, no assurance can be given that the major can be fully completed at night. All core courses will be available (in political science and economics) over a two-year cycle.

Foreign Study Programs:
Students may apply for credit toward their concentration for study abroad programs including programs at Clermont (France), Germany, and China, as well as for other programs administered through the Center for International Services and Programs at CSU.

Internship Opportunities:
Students can acquire valuable work experience, and can earn up to 5 credit hours through an internship in the U.S. or abroad (sign up for PSC 406). The Political Science department maintains a list of established internship opportunities, particularly in international business. Specific intern assignments will be worked out on an individual basis by the department's International Relations Intern advisor. Hours earned will not reduce the minimum 35 required to satisfy the major.

Advising:
When a student signs up as an IR major, the director of the International Relations program assigns the student an advisor. Phone (216) 687-4541, or email d.schulz02@csuohio.edu.

Additional Information:
This major is designed to give students the opportunity to engage in a multidisciplinary study of the variety of subjects concerned with international affairs. Successful completion of the major does not assure job placement in an international career. It does offer a number of advantages to students seeking entry placement in domestic and overseas private-sector firms and nongovernmental organizations where a premium is placed on the ability to interact successfully with people and economic and political practices in other cultures. It also provides an excellent foundation for more specialized graduate study in international studies, and for taking entry-level examinations into international service.

All students follow a series of core courses in political science and economics. In addition, students choose from one or a number of concentrations in the areas of international business and economics, Western European studies, Central Europe and the former Soviet Union, Asia, Latin America, and a combined concentration in Africa and the Middle East. For each of these concentrations, students take four courses from a recommended list. Students, with the agreement of the IR Director, may also design their own concentration if a grouping of appropriate courses is available.

In addition to the analytic tools of political science and economics, all International Relations majors are required to demonstrate competence in at least one major world foreign language at a level comparable to two years of college.
instruction. Competence may be demonstrated either by completing course work or passing an examination. Non-native English speakers may submit English as their foreign language. All other students must obtain approval for their language and show its relevance to their area of concentration. IR majors are encouraged to gain or deepen their language competence through a period of residence and/or study abroad. The department works closely with the Center for International Services and Programs to develop study abroad opportunities for International Relations majors. In some cases scholarship support may be available to assist with travel expenses. Foreign language majors or minors are welcome to double major in International Relations.

The Department of Political Science also encourages students to benefit from an internship program which will further deepen their knowledge of international affairs and improve their marketability. The director of the International Relations program will work with interested students to arrange internship opportunities in Cleveland, elsewhere in the United States or in some instances with foreign corporations or organizations abroad. Students can consult a list of existing opportunities, or additional ones can be developed on an individual basis.

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**Major Requirements**

The curriculum for the International Relations major consists of a common core and an area of concentration. The following courses are required of all International Relations majors:

**The Core:**

- **PSC 231 International Politics** (4 hours)
- **PSC 328 International Political Economy** (4 hours)
- **PSC 421/422 Seminar in Comparative Politics or International Politics** (5 hours)
- **ECN 201 Macroeconomics** (3 credit hours)

Plus

one additional 300-level elective (4 hours) from among the following:

- **PSC 321 Political Violence**
- **PSC 323 Politics of Africa**
- **PSC 324 Politics of Russia and the Successor States**
- **PSC 325 Western European Politics**
- **PSC 326 Politics of the Third World**
- **PSC 327 Politics of Peaceful World Change**
- **PSC 331 U.S. Foreign Policy**
- **PSC 332 Politics in the Middle East**
- **PSC 333 Latin American Politics**
- **PSC 335 East Asian Politics**
- **PSC 337 Canadian Government and Politics**
- **PSC 338 Central and East European Politics**
- **PSC 393, PSC 394 Special Topics in International and Comparative Politics**

**The Concentration:**

(15 to 16 hours all at the 300-level or above, except for PSC 221, in area studies concentrations)

The purpose of the concentration is to enable students to pursue an in-depth study of one area of international studies corresponding to their intellectual and/or career interests. Courses in the concentration may be chosen from among a variety of courses in different disciplines of Arts and Sciences and from the College of Business. All courses selected for the concentration must be approved by the student's advisor or by the director of the International Relations major. Students can select from among the four concentrations listed below, or may create their own concentration with the approval of their advisor. Courses listed below for each concentration are indicative and may not all be available as needed. Students should see their advisors to work out their specific set of concentration courses.
1. Concentration in International Business and Economics (four of the following):

- PSC 394 Special Topics in Political Economy
- ECN 482 International Economics
- MKT 301 Introduction to Marketing (3 hours)
- MKT 305 Marketing Management
- MKT 321 International Business
- MKT 431 Marketing Research
- MKT 461 Global Marketing

or one of the above plus:

- MLR 301 Principles of Management (3 hours)
- MLR 302 Principles of Labor and Industrial Relations (3 hours)
- MLR 421 Comparative Labor Systems (3 hours)
- MLR 487 International Management (3 hours)

Note: To take advanced courses in marketing, students must take MKT 301; to take advanced courses in management, students must take MLR 301.

2. Asia Studies (four of the following):

- PSC 221 Comparative Politics
- PSC 335 East Asian Politics
- PSC 394 Special Topics when specified to deal with Asia, such as "Art and Politics in China"
- ANT 355 Cultures of Southeast Asia
- ART 383 Indian Art
- ART 385 The Hindu Temple
- HIS 372 Early Modern Japan
- HIS 373 Modern Japan
- HIS 374 Revolutionary Movements in Modern China
- REL 360 Hinduism
- REL 362 Buddhism
- REL 364 Islam

3. Central Europe, Russia and the Successor States

- PSC 221 Comparative Politics
- PSC 324 Russia and the Successor States
- PSC 338 Politics of Central and East Europe
- HIS 360 History of Russia to 1900
- HIS 361 History of Modern Russia
- HIS 362 History of Eastern Europe

4. Africa and the Middle East:

- PSC 221 Comparative Politics
- PSC 323 African Politics
- PSC 332 Politics in the Middle East
- ANT 353 Cultures of Africa
- ART 386 Regional Art in Africa
- HIS 375 Pre-Colonial Africa to 1880
- HIS 376 Modern Africa
- HIS 377 History of Islamic Civilizations
- REL 341 Origins of Judaism
- REL 364 Islam

5. Latin America and the Caribbean:
- PSC 221 Comparative Politics
- PSC 326 Politics of the Third World
- PSC 333 Latin American Politics
- PSC 334 U.S.-Latin American Security Issues
- ANT 352 Native South Americans
- ENF 210-211 Nonwestern Literature in English Translation (depends on specific content)
- HIS 165 Introduction to Latin American History
- HIS 367 Latin America Since 1825
Liberal Studies (B.A.) At-a-Glance

Telephone: (216) 687-3961

Internet: http://www.csuohio.edu/liberalst/

The bachelor of arts in Liberal Studies is administered by the College of Arts and Sciences. This degree provides a broad-based liberal education in the sciences and humanities. It is especially appropriate for students who wish to take an active role in shaping their studies.

The B.A. in Liberal Studies differs from traditional degree programs in allowing maximum freedom and flexibility in course selection. Students may organize programs that suit their own academic, professional, or other personal goals such as foundations for graduate study, as prerequisites for professional training, or as exploratory intellectual experiences in their own right. (Some graduate or professional careers require more specialized backgrounds than Liberal Studies permits, so for them a more traditional B.A. might be more appropriate. For a program that can be both individualized and specialized, see the Personally Designed Major [PDM] in CSU's First College.)

Admission to the Bachelor of Arts in Liberal Studies Program

After admission to the university, a student makes an appointment with a Liberal Studies advisor in the College of Arts and Sciences located in Main Classroom 218. The advisor explains the nature of the program (including its advantages and disadvantages) and helps to determine whether such a broad-based education is in the student's best educational and career interests. Transfer credits from other schools and from other colleges within Cleveland State are also explained and evaluated. To enter the program, a student must have a minimum GPA of 2.75 either cumulatively or in the last 24 semester hours taken before admission.

The student then consults with the director of Liberal Studies or a faculty advisor about applying for admission to the program — ideally before attaining senior status. A letter of application requests admission to Liberal Studies and must include the following:

- a statement of understanding about the freedom of choice associated with this degree
- a statement of future plans to use this degree for itself, for further study, or for employment
- an outline of a projected course of study and date of graduation

The letter is reviewed by the program's director and advisory committee. When an application is approved, the student's major becomes effective in the following term. Exceptions require a special petition and are approved only in unusual cases.

Advising

 Majors in Liberal Studies meet each term with the director or an advisor assigned by the director to discuss progress in the program and to register for the following term. They are also encouraged to seek additional advising from specific departments and programs, especially if they are planning graduate study or other professional training after graduation.
Time for Completing the Degree

The B.A. in Liberal Studies can be completed in four years of full-time study, or longer through part-time attendance. Some transfer credits from other schools and from other colleges within Cleveland State may reduce the time required. Students entering the program in their junior year or later may require additional time.

Degree Requirements

A. Liberal Studies majors must complete all university residence and distribution requirements as well as all general requirements of the College of Arts and Sciences.
B. In addition to university and college requirements, a B.A. in Liberal Studies includes 66 semester credits of C or better:
   - 16 in Social and Behavioral Sciences
   - 16 in Natural Sciences and Mathematics
   - 16 in Humanities and Fine Arts
   - 18 in Electives

   These 66 credits may be broadly distributed across the four areas, they may be concentrated in various areas of interest (including certificates or formal minors in other departments), or they may be organized in a formal program of study of one or more major themes (such as critical thinking, cultural heritage, science and technology). No more than 18 credits in any one department will normally be counted toward the 66 credits of the major.
C. A Liberal Studies major must be enrolled in the program for at least two academic terms and earn at least 26 upper-level credits after admission. Completion of an exit questionnaire or other document is required for graduation.
D. Upon petition to the director and advisory committee, a student may include in the Liberal Studies major up to 42 transfer credits from other colleges within Cleveland State — typically for courses that have specific counterparts in Arts and Sciences courses. A maximum of 31 credits in business courses may be counted toward the 66 credits of the major.
Linguistics (B.A.)

At-a-Glance

Minimum hours required for major: 33

Minimum hours required for minor: 18

Special requirement: In order to earn a B.A. in Linguistics, a student must maintain an overall grade point average of 2.5 or better, and a grade point average of 3.0 or better in courses applied to the major.

Advising information: Freshmen and sophomores who are interested in majoring or minoring in Linguistics are advised to take LIN 260 Language, Society, and Culture (3 credits), which counts toward the social sciences graduation requirement and as a Linguistics elective. This course is cross-listed as ANT 260 and ENG 260. Students interested in majoring in Linguistics should contact John Greppin, director, Program in Linguistics, FT 1002 (216) 687-3967.

Foreign language requirement:
The arts and sciences foreign language requirement may be satisfied by taking a two-semester sequence of LIN 318 Language Analysis (4 credits each, cross-listed as ENG 318 or MLA 310) and offered as Sanskrit, Old English, Old Norse, Mayan, or other languages. These count as core courses in the Linguistics major and minor.

Career information:
Students preparing to teach English as a Second Language are advised to take courses in phonetics and phonology, English grammar, applied linguistics, teaching ESL, and ESL internship. For preprofessional and general liberal-arts majors, linguistics contributes to analytical and research skills that enhance a professional résumé. Opportunities are varied and include linguistic analysis of primary texts, the study of language diversity in social and educational contexts, field experiences, and internships. The Linguistics major is drawn from courses in anthropology, communication, education, English, modern languages, philosophy, psychology, and speech and hearing. Some students have found it advantageous to take a double major, combining linguistics with one of these fields.

Major Field Requirements

To earn a major in Linguistics, students must take at least 33 credits distributed among at least 9 courses. The number of credits in each course varies from 2 to 4. Course requirements are defined as follows:

1. Introductory course (one of the following):
   - ANT 304 Linguistic Anthropology
   - MLA 325 Introduction to Linguistics
   - ENG 311/LIN 311 Elements of Linguistics

2. Linguistic core courses (4 courses from the following list):
   - ANT 304 Linguistic Anthropology (may apply either as an introductory course or as a core course)
   - ANT 340/LIN 340 Phonology
   - ANT 341/LIN 341 Morphology and Syntax
   - ANT 342/LIN 342 Languages in Contact
   - ANT 344/LIN 313 Sociolinguistics
   - ENG 312/LIN 312 Modern English Grammar
   - ENG 313/LIN 313 Studies in Linguistics (may be repeated with change of topic)
3. Electives in language and linguistics

(four courses or more as needed to bring the total number of credits to 33; at least three electives must be upper-division courses). Electives may include any courses from the core list, and courses from the following:

- ANT 343 Language and Gender
- EDL 406 Second Language Learning and Pedagogy
- EDL 407 TESOL Methods
- ENG 310/LIN 310 Traditional Grammar
- ENG 314/LIN 314 Applied Linguistics
- ENG/LIN 490 Professional Internship: Teaching Adult ESL
- FRN 315/LIN 315 French Phonetics and Diction
- FRN 434 Studies in French Linguistics
- GER 415/LIN 315 Phonetics and Contrastive Structures
- LIN 480/MLA 493 Special Topic in Linguistics
- LIN 496 Independent Study in Linguistics
- MLA 201 Words: An Introduction to Etymology
- PHL 377 Language and Philosophy
- PHL 432 Analytic and Linguistic Philosophy
- PSY 372 Memory and Cognition
- SPH 341 Language Disorders
- SPH 438/LIN 438 Urban Language Patterns
- SPN 293/393/493 Special Topics in Spanish (with linguistic topic)
- SPN 315/LIN 315 Spanish Phonetics
- SPN 416 Studies in Spanish Linguistics

Linguistics Minor

The minor in Linguistics requires at least 18 credits, with courses distributed as follows:

1. Introductory course: ANT 304, ENG 311/LIN 311 or MLA 325

2. Two Linguistic core courses (from Section 2 above)

3. Two or more elective courses (from Sections 2 and 3 above)

Return to top
Mathematics (B.A., B.S.)

At-a-Glance

Admission to major: MTH 181, MTH 182 with a grade of C or better in each

Minimum hours required for major: 42

Hours required for minor: 24

Special tracks: Actuarial, applied mathematics, pure mathematics, statistics, secondary education licensure

Teacher licensure: Yes

Student organization: Math Club, Pi Mu Epsilon

For further information: (216) 687-4680 or http://www.csuohio.edu/math

Each course offered by the Mathematics Department is designed to provide one or more of the following:

- part of the mathematical component of a liberal education
- the mathematical tools needed by students in business, computer science, education, engineering, and the biological, physical, and social sciences
- training beyond the introductory level in the major areas of pure and applied mathematics

For students interested in the third category, the department offers the bachelor of arts degree and the bachelor of science degree in mathematics. The mathematics requirements for the two degrees are identical; the difference between them is the number of science credits that are required (see below: BA, BS)

The core mathematics requirements for a bachelor's degree form the fundamental building blocks for almost every field of mathematics. By choosing suitable mathematics electives, students may obtain bachelor's degrees that prepare them for mathematical work in business or industry, for the actuarial profession, or for graduate study in mathematics.

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Major Field Requirements

All mathematics majors must complete a minimum of 42 credits in mathematics. These credits must include the following courses:

- MTH 181 Calculus I
- MTH 182 Calculus II
- Three courses from the following four:
  - MTH 220 Discrete Mathematics
  - MTH 281 Multivariable Calculus
  - MTH 286 Introduction to Differential Equations
  - MTH 288 Linear Algebra
- MTH 495 Senior Seminar (The two-credit course MTH 495 must be taken during the student's senior year.)
The remaining 20 credits must be in mathematics courses numbered 300 or above (excluding MTH 321 and MTH 347). Two of these courses must be numbered 400 or above.

A grade of C or better must be earned in each of MTH 181, MTH 182, MTH 220, MTH 281, MTH 286, and MTH 288.

For the bachelor of arts degree a Mathematics major must complete a minimum of 11 science credits, distributed in the following three fields: biological, geological, and environmental sciences; chemistry; and physics.

For the bachelor of science degree a mathematics major must complete a minimum of 24 science credits distributed in the following four fields: biological, geological, and environmental sciences; chemistry; physics; and computer and information science. These 24 credits must include PHY 241 (or PHY 243) and PHY 242 (or PHY 244). Any courses in computer and information science used to meet this requirement must be courses that satisfy CIS major field requirements.

Prospective Mathematics majors should make every effort to complete 100- and 200-level mathematics courses by the end of their sophomore year. Otherwise they may have difficulty in scheduling required advanced courses and electives. Students who decide to major in Mathematics should consult an advisor in the Mathematics Department early in the sophomore year to work out a program of advanced courses suited to their career objectives and capabilities. When preparing for this meeting, students should carefully consider the following recommendations.

**Recommended Electives for Various Major Concentrations**

1. Actuarial: MTH 301, MTH 323, and MTH 424
2. Applied mathematics with emphasis on engineering and the physical sciences: MTH 301, MTH 311, MTH 386, MTH 389, MTH 401, MTH 434, and MTH 487
3. Applied mathematics with emphasis on numerical computation: MTH 301, MTH 311, MTH 386, and MTH 487
4. Pure mathematics: MTH 301, MTH 358, MTH 381, MTH 420, and MTH 434
5. Statistics: MTH 301, MTH 323, and MTH 424
6. Secondary school teaching: MTH 301, MTH 323, MTH 333, MTH 358, MTH 401, and MTH 420
7. Another possible elective is MTH 493 (Special Topics in Mathematics). Its content varies widely from year to year; consult the Mathematics Department for current information. A student may also arrange to take an individual reading course (MTH 497) on an advanced mathematical topic not included in the regular course offerings of the department. Such reading courses are subject to departmental approval.

**Second Major for Computer Science Students**

Students in either the CIS or CSC program who choose a concentration in mathematics can, by suitably choosing electives and with no additional course work, complete all mathematics requirements for the bachelor of science degree with a major in Mathematics. Students can receive this additional degree by satisfying the College of Arts and Sciences foreign language and culture requirement in addition to CIS/CSC requirements. See your CIS Department advisor and an advisor in the Mathematics Department for further information.

**Mathematics Minor**

A minor in mathematics consists of 24 credits in mathematics, including:

- MTH 181 Calculus I
- MTH 182 Calculus II
- 8 credits chosen from among:
  - MTH 220 Discrete Mathematics
  - MTH 281 Multivariable Calculus
MTH 283 Multivariable Calculus for Engineers
MTH 284 Matrices for Engineers
MTH 286 Introduction to Differential Equations
MTH 288 Linear Algebra

Note: MTH 281 and MTH 283 may not both be used.
MTH 284 and MTH 288 may not both be used.

The remaining 8 credits must be in mathematics courses numbered 300 or above.

Teacher Licensure

Students who complete the requirements for a bachelor's degree in Mathematics, including MTH 301, MTH 323, MTH 333, MTH 358, and MTH 401 as elective courses will need 46 credits in mathematics to fulfill the subject field requirements for secondary teaching license in mathematics. For information on the general education and professional educational requirements for certification, see the College of Education chapter of this catalog.

Students seeking secondary licensure in mathematics as a second teaching field must complete a minor in mathematics, plus 8 additional credits in mathematics courses numbered 200 or above. These students should consult the College of Education for information on general education and professional education requirements.
## Modern Languages

- Back to Arts & Sciences Degree Listing

See
- French (B.A.)
- and
- Spanish (B.A.)
French (B.A.) At-a-Glance

Admissions to major: Completion of FRN 102 or equivalent

Minimum hours required for major: 36

Minimum hours required for minor: 18

Advising: Two designated faculty advisors; phone (216) 687-4645

Student organization: Le club francophone de CSU

Additional information:
Year and semester exchange programs to Chambéry and Clermont-Ferrand in France; summer study abroad programs in France and Canada

Languages are invaluable tools in a variety of human activities. But they are more than just tools. They open the way to knowledge of, and communication with, a world of other peoples, civilizations, and literatures. Moreover, study and knowledge of a language other than one’s mother tongue opens the door of perception to phenomena otherwise inaccessible.

A student majoring in French will find career opportunities in teaching, foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself (philology, linguistics), its literature, culture, pedagogy, or its place and role in world affairs — business, politics, geography, history.

A student who has completed French course work in high school or at another institution who wishes to continue the study of that language must begin course work for credit at the level consistent with her or his academic background. A placement test is required for all students with less than three years of high school French or the equivalent. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. As a general guideline, students who read and write French fluently must begin course work for credit at the 300-level or higher. Students considering a major in French must consult with an advisor in the Department of Modern Languages concerning projected plans of study.

Retroactive Credit.
Students are eligible to earn up to 14 retroactive credits for previous knowledge of French. This policy is for students who have completed a foreign-language skills course and who earned a B or better in that course. For example, if your French skills course is FRN 102 and you receive an A or B, you can receive credit for FRN 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

Credit by Examination.
Students who successfully pass the College Level Placement Examination (CLEP test) in French may earn 14 credit hours for previous knowledge of French. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center (216) 687-2277. Students who receive a score of 3, 4, or 5 on the Advanced Placement French language examination may earn 18 credit hours for FRN (101, 102, 201, and 202).

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Major Field Requirements

Students seeking a major in French must complete 36 credit hours in French above the 100 level, distributed as follows:

a. 8 credit hours of course in composition-conversation (FRN 301, 402)

b. 8 credit hours of courses in literature (two of the following: FRN 371, 372, 375)

c. A minimum of 28 credit hours at the 300- or 400-level

d. 2 courses in French at the 400-level, distributed as follows: FRN 402, plus one course at the 400 level taught in French

e. Among the 36 hours, no more than 8 hours of French courses may be at the 200 level

Transfer Students.
Transfer students must complete at least 18 credit hours of the 36 required for the major in residence at Cleveland State University in order to earn a degree.

Major Credit.
Up to 8 credit hours of English literature, practicum in language, independent study, literature in translation, or credit by examination may count toward the major.

No grade below C in a major course may count toward the major.

Minors

A minor consists of 18 credit hours beyond the 100 level, of which 8 must be at the 300- or 400 level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in French must have a departmental advisor to assist in the selection of courses. No grade below C in a minor course may count toward the minor.

Study Abroad

Majors and minors are encouraged to take advantage of CSU’s exchange programs in Chambéry or Clermont Ferrand; and/or a summer study trip to France. Normally up to 18 semester hours of study abroad may count toward the major requirements (additional credit may count toward the total hours needed for graduation). Majors should seek departmental approval of foreign study plans before departure, and must complete at least two 300- or 400-level courses in their major area after return from study abroad. (See also the Foreign Study section listed under “Arts and Sciences.”)

For further information regarding the possibility of foreign study and summer programs available through the Modern Languages contact the department office, (216) 687-4645, or Dr. Engelking, (216) 523-7167.

Teacher Licensure

Students preparing to teach will fulfill the requirements for the B.A. in French and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12).

Students seeking a B.A. in French with teaching licensure must, in fulfilling the major requirements, take one course in civilization, one course in phonetics, and literature courses acquainting the student with the major genres of drama,
poetry, and the novel.

The PreK-12 Licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency. Modern Language methods courses should be taken the semester preceding student teaching.
Spanish (B.A)

At-a-Glance

**Admission to major:** Completion of SPN 102 or equivalent

**Minimum hours required for major:** 36

**Minimum hours required for minor:** 18

**Special tracks:** Peninsular and Latin-American literature and culture

**Advising:** Faculty advisors for majors, minors and prospective students. Phone (216) 687-4645

**Student organizations:** Los Latinos Unidos, Sigma Delta Pi Honorary Society, Phi Sigma Iota Honorary Society

**Additional information:** Study-Abroad programs in Mexico and Spain

The sequence of courses in Spanish leads from competence in Spanish language skills to thorough understanding of Hispanic language, civilization, and literature. Programs concentrate equally on Spanish and Hispanic-American content through a cyclical offering of courses. Programs in the Spanish minor, major, and graduate studies are available, including the B.A. with Honors in Spanish. Spanish is also a valuable adjunct skill to any other major program or career. Over the next few decades virtually every area of professional activity in this country will become more and more involved with Spanish-speaking Americans and with corporations in Spanish-speaking countries.

A student majoring in Spanish will find career opportunities in teaching, foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself, its literature, culture, or pedagogy.

**Language Skill Courses:**

A student who has completed Spanish course work in high school or at another institution who wishes to continue the study of Spanish must begin course work for credit at the level consistent with academic background. A placement test is required for all students with less than three years of high-school Spanish or the equivalent. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. **Native speakers:**

as a general guideline, students who read and write Spanish fluently must begin course work for credit at the 300-level or higher. Students considering a major in Spanish should consult an advisor in the Department of Modern Languages as early as possible to plan an effective course of study.

**Retroactive Credit.**

Students are eligible to earn up to 14 "retroactive" credits for previous knowledge of Spanish. This policy is for students who have completed a foreign language skills course and who earned a B or better in that course. For example, if your first Spanish skills course is SPN 102 and you receive an A or B, you can receive credit for SPN 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

**Credit by Examination.**

Students who successfully pass the College Level Placement Examination (CLEP test) in Spanish may earn 14 credit-hours for previous knowledge of Spanish. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center
Major Field Requirements

Students seeking a major in Spanish must complete 36 credit hours in Spanish above the 100 level, distributed as follows:

Core A: Composition and Conversation Requirements:
- Sixteen credit hours of courses in composition and conversation: SPN 202, 203, 301, 302, 303, 393 (Business Spanish); 405; or equivalent as determined by the Spanish faculty, of which no more than 8 credit hours can be at the 200 level. Students beginning at the 300 level will take 8 credit hours at the 300- and 400-level.

Core B: Distribution Requirements:
- One course each in phonetics (SPN 315), in literature (SPN 371 or SPN 372), and in culture and civilization (SPN 345 or SPN 346) are required (three courses total).

Notes: No more than 8 credit hours at the 200 level will be counted. At least 9 credit-hours must be at the 400 level. At least 28 credit hours must be in upper-division courses at the 300- or 400-level. Up to 6 credit hours of practicum in Spanish or independent study may count toward the major. These credits must be approved by the Spanish faculty. No grade below C may count toward the major.

Transfer Students.
Transfer students are required to complete at least 18 credit hours while in residence at Cleveland State University in order to earn a degree.

Minors
A minor in Spanish consists of 18 credit hours beyond the 100 level, of which 9 credit hours must be at the 300- and 400-level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in Spanish must have an advisor in Spanish to assist in the selection of courses. No grade below a C in a minor course may count toward the minor.

Study Abroad
Majors are encouraged to arrange for study in a Spanish-speaking country. The department administers summer programs in Mexico and Spain. Credit earned on these programs is considered part of the CSU Spanish sequence.

Students may also undertake independent study abroad at other institutions. Normally, up to 16 hours of independent study abroad may count toward their major requirements (additional credit may count toward the total hours needed for graduation). Majors should seek departmental approval of foreign-study plans before departure, and must complete at least two 300-level or 400-level courses in Spanish after return from independent study abroad. (See also the Study Abroad section listed under "Arts and Sciences").

For further information regarding the possibility of foreign study and summer programs available through the Department of Modern Languages, contact the department office, (216) 687-4645.
Students preparing to teach will fulfill the requirements for the B.A. in Spanish and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12). They must also pass national examinations and fulfill state requirements.

The PreK-12 licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency by completing at least one conversation and composition course at the 300 level with a C or better. Modern Language methods courses should be taken the semester preceding student teaching.
Music (B.Mus., B.A.)

At-a-Glance

Minimum hours required for B.A.: 49
Minimum hours required for B.-Mus. Composition: 86
Minimum hours required for B.-Mus. Education: 93
Minimum hours required for B.-Mus. Performance: 78
Minimum hours required for minor: 24

Two degree programs are offered: the bachelor of music, for the student who seeks primarily professional training, and the bachelor of arts with a major in music, for the student who seeks to study music in its wider cultural context. The Music Department offers training for music majors in the areas of music education, theory/composition and applied music. These programs have been accredited by the National Association of Schools of Music.

Private lessons in applied music are offered on campus. Students may register for either one or two half-hour lessons weekly. The last digit of the applied music course number indicates the amount of credit earned. Those who register for one half-hour lesson earn one semester hour; two half-hour lessons earn two semester hours. Special tuition fees are assessed for these courses. A successful performance audition is required for admission to music major status.

All music students are urged to obtain the Music Department Student Handbook for further clarification of the degree requirements listed below.

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Bachelor of Music Degree

In addition to fulfilling the general course requirements of the university and the College of Arts and Sciences, B.Mus. majors are required to complete course work in areas of common experience in music and in courses specific to one of three areas of concentration: music education, composition, or applied music.

1. Course work in areas of common experience includes performance experience in applied music and in ensembles, development of basic musicianship skills, knowledge of musical structures and styles in broad historical and cultural contexts.

The courses required in the common experience are:
- MUS 112 Macromusic
- MUS 113 Writing About Music
- MUA 102 and 103 Keyboard Skills I, II
- MUS 231 through 234 Harmony and Form I, II, III, IV
- MUS 241 through 244 Musicianship I, II, III, IV
- MUS 411 and 412 Music History I, II
- MUS 414 Ethnomusicology

2. In addition each major area of concentration requires applied music and ensemble participation as follows:
- Composition: seven semesters of applied music and seven semesters of major ensembles
- Music education: seven semesters of applied music and seven semesters of major ensembles
- Performance: six semesters of applied music and six semesters of major ensembles
Applied music:
eight semesters of applied music (includes eight credits at the 100-level and eight credits at the 300-level) and 12 semester hours of ensembles

Appropriate proficiency levels as defined by the Department of Music faculty must be passed for students to progress to upper-level applied music study.

3. Each area of concentration also requires degree candidates to present at least one recital as follows:
   ○ Music education: a 30-minute senior recital
   ○ Composition: a recital of representative works
   ○ Applied Music: two 60-minute recitals

Areas of Concentration

Music Education
A student choosing the option of music education must complete the following courses in addition to the common experiences listed above:

- MUS 205 Orientation to Music Education
- MUS 290 Elementary Music Field Experience
- MUS 300 Secondary Music Field Experience
- MUS 351 Teaching String Instruments
- MUS 352 Teaching Woodwind Instruments
- MUS 353 Teaching Brass Instruments
- MUS 354 Teaching Percussion Instruments
- MUS 355 Teaching Vocal/Choral Music
- MUS 443 Music Literacy and Learning
- MUS 444 Elementary Music Curriculum and Methods
- MUS 445 Secondary Music Curriculum and Methods
- MUS 461 Conducting School Ensembles
- EDB 305 Teaching and Management - Secondary School
- EDC 300 Diversity in Education Settings
- ESE 400 Teaching Students of Varying Abilities
- EST 483 Multiage Student Teaching (10 hrs.)

Composition.
A student choosing the option in composition must complete the following music courses in addition to the common experiences listed above:

- MUS 320 Composition (four semesters)
- MUS 321 Composition Forum (six semesters)
- MUS 341 Counterpoint
- MUS 427, 428 Computer Music and MIDI I, II
- MUS 451 Orchestration
- Electives seven semester hours

Applied Music
A student choosing the option in applied music must complete the following courses in addition to the common experiences listed above:

- MUS 310 The Business of Music
- Electives in Music: 6 semester hours chosen from among the following: MUS 108 Opera Theater Workshop; MUS 341 Counterpoint; MUS 356 Diction; MUS 427, 428 Computer Music and MIDI I, II; MUS 381, 382 Jazz Improvisation I, II; MUS 451 Orchestration; MUS 461 Conducting School Ensembles.
- Other electives: 11 semester hours. Voice majors must take two semesters of German and two semesters of a Romance language.

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Bachelor of Arts Degree

Major Field Requirements

The program leading to a B.A. with a major in Music requires a total of 128 semester hours. The 33 semester hours listed under Common Experiences (Section 1 above) are required of B.A. candidates. Eight semester hours in applied music or ensemble, 11 semester hours of music electives and a three-semester-hour senior project are also required.

The Music major provides for numerous electives (26 semester hours) outside of music as well as for the general course requirements of the university and the College of Arts and Sciences. The major's elective requirement provides the opportunity for broad coverage and even intensive work in other academic areas of interest. It also provides the additional background for an individually designed senior project which culminates the degree.

A full-time faculty member will be the principal advisor to and administrator of the program. Acceptance into the B.A. program in music requires an interview with the program advisor and written confirmation from the program advisor of the student's acceptance as a candidate for the B.A. in music. A successful entrance audition before a faculty committee is required of students whose focus in the B.A. program is to be performance. An entrance audition will also be required of applicants who have less than one year of private applied lessons at a recognized institution of higher education.

Music Minor

A minor in Music consists of 24 semester hours. Students accepted for the minor in music are required to select 8 semester hours from the Materials of Music, Harmony and Form, and Musicianship sequences; MUS 412 Music History II. Five semester hours in applied music and/or ensembles are required.

A minimum of 8 semester hours shall be at the 300-400 level.

A full-time faculty member will be principal advisor to and administrator of the program, coordinating students' interests with available course choices and documenting completion of the required courses and credits for official registry of the music minor on the students' transcripts. Acceptance as a minor in music requires an interview with the minor advisor and written confirmation from the advisor of the student's acceptance as a minor in music.
Nursing (B.S.N.)

At-a-Glance

Degree granted: Bachelor of Science in Nursing

Admission to major:
Admission is selective and will be granted only after successful completion of prerequisite courses. Minimum overall GPA of 2.50 is required in prerequisite courses. Applications for fall semester must be submitted by March 1. Those students with a prerequisite GPA of 3.0 or above may apply for consideration of early admission status. Deadline for receipt of applications for early admission is January 1.

Minimum hours required in the major: 68 hours for basic students, 28 hours for R.N. students

Registered Nurses:
Two-year program for registered nurses with associate degree or diploma in nursing. Nursing courses for the R.N. are one day a week except for the last half of spring semester of the senior year. 12 hours a week for clinical are then required. Part-time program available to all students in major.

Advising:
One recruiter/advisor for prospective students; phone 687-3810. Faculty serve as advisors for students in major.

Student organization: Student Nurse Association (SNA)

Membership and Accreditation:
The Department of Nursing is a member of the Council of Baccalaureate and Higher Degree Programs, the National League for Nursing, and the American Association of Colleges of Nursing.

The Department of Nursing offers an undergraduate curriculum in professional nursing leading to the bachelor of science in nursing (B.S.N.) The professional nursing curriculum is approved by the Ohio Board of Nursing, and is accredited by the National League for Nursing Accreditation Commission, 350 Hudson Street, New York, New York 10014.

Overview:
The program is available to men and women who have been admitted to CSU and the College of Arts and Sciences. High-school graduates and licensed practical nurses who fulfill admission requirements are considered for admission to the program. A special educational track is designed for registered nurses. Another track is especially designed for students who already have a bachelor's degree in a non-nursing field. This track, an accelerated option, permits qualified students to take nursing major courses at a fast pace to obtain a second bachelor's degree.

The baccalaureate nursing curriculum includes courses from the liberal arts and sciences and the professional Nursing major. The liberal arts component provides a foundation of knowledge from the natural and behavioral sciences and the humanities. The Nursing major provides students with the opportunity to develop attitudes, values, and skills essential for enacting the practice of professional nursing.

Students develop the ability to use a conceptual framework to implement the nursing process with clients. The
A baccalaureate nursing program prepares graduates to use critical thinking and therapeutic nursing interventions to provide direct and indirect care to individuals, families, groups, and communities. Clinical experience is provided in a variety of community-based settings: hospitals, ambulatory and long-term care facilities, and community health agencies in the Greater Cleveland area.

The purposes of the program are to prepare graduates for professional nursing practice, for undertaking graduate study in nursing, and for leadership in health care. Graduates are committed to the health and well-being of people and demonstrate respect for their dignity, worth, cultural diversity, and autonomy. The baccalaureate nursing curriculum provides learning opportunities that foster the development of self-direction, creativity, analytical thinking, and discriminative judgement.

Nursing Program Requirements

Pre-Nursing Program for Basic Students

Persons interested in the nursing program must first complete an application to Cleveland State University, listing college choice as Arts and Sciences and intended major as nursing.

Prospective students are required to make an appointment with the department's recruiter/advisor to discuss the nursing program and to plan a course of study. Prerequisite courses may be completed throughout the summer the year admission is sought.*

*Students with a prerequisite GPA of 3.00 or above may apply by January 1 and will be considered for early admission. Such students will be notified of their admission status by the end of January.

Admission to the Nursing Major

Admission to the Nursing major is selective and is granted on a competitive basis. Selection of students for the Nursing major is based on a number of criteria including prerequisite and overall grade point averages, essays, and related health-care experience. The number of available spaces in the program is limited. Students are notified of their acceptance by the end of the spring semester. Students not admitted may formally reapply to the program for admission in the following year. Students who are accepted and who choose not to enter the program in the year for which they have been accepted will not be deferred to the following year. They must reapply to the program. Prior acceptance does not guarantee acceptance at a later date.

All admission requirements must be completed prior to the beginning of the fall semester to begin the Nursing major. Admission requirements include:

1. Admission to Cleveland State University and the College of Arts and Sciences. Applications are available through the Office of Admissions and should be submitted at least one month prior to the program application deadline (March 1).
2. Application for fall semester admission to the nursing program must be submitted to the Department of Nursing by March 1 of that year. Applications are available in the Department of Nursing.
3. Completion of all prerequisite courses by fall semester with a prerequisite grade point average of 2.50 or above and at least a C in each prerequisite course. Please note that all former grades earned in prerequisite courses are factored into the prerequisite G.P.A. Students who have more than two failing grades may not meet admission criteria. See university policy regarding freshman forgiveness.
4. Successful completion of two of the following science courses by the end of fall semester: BIO 264, BIO 266, BIO 267, CHM 251/256, CHM 252, 257.
5. A cumulative overall grade point average of 2.00 or above in all course work.
6. Required meeting with recruiter/advisor.
7. English for Speakers of Other Languages (ESOL): Students who have received their secondary or tertiary education in a language other than English will be required to contact the English as a Second Language Department and arrange for additional prerequisites that must be completed by the student prior to enrollment in
Transferring From Other Nursing Programs

Students previously enrolled in a nursing program at another institution who are interested in transferring to Cleveland State University should contact the recruiter/advisor to begin a transcript evaluation. Acceptance of transfer students into CSU's nursing program depends on the student's profile, prior standing in the previous nursing school, a nursing GPA above 2.3 each term in the nursing major from the previous school, and space availability. The level of the program into which the student transfers (sophomore, junior, or senior) depends on the evaluation of previous nursing course work by the Admission, Progression, and Academic Standard Committee of the Department of Nursing.

Students accepted via transfer must complete a minimum of 20 semester credits in the Nursing major. Students who need to complete a nursing course at CSU in order to graduate from another institution will be reviewed on an individual basis.

Licensed Practical Nurses

LPNs follow the basic student sequence but have the opportunity to test out of selected skill portions of the curriculum.

Registered Nurse Students

Admission requirements include:

1. Completion of items 1 to 3, and 5 to 7 above
2. Current Ohio license as a Registered Nurse

Credit for previous nursing course work will be awarded based on the department's participation in the Access in Nursing Model. Ohio graduates of both community colleges and diploma nursing programs will receive credit for prior nursing courses in which a grade of C or above was obtained. These credits granted at time of admission by CSU's Office of Admission will be held in escrow until the student has successfully completed the junior year in the Nursing major. These credits will only count toward a baccalaureate degree in nursing.

Graduates from schools of nursing outside of Ohio will have their prior nursing course work evaluated on an individual basis.

Elective Courses

The department offers several elective courses that are open to all university students. These include: NUR 110, NUR 250, and NUR 498.

Prerequisite Courses for Basic Students

All prerequisite courses must be completed prior to entry into the program in the fall semester. The prerequisite GPA is composed of all grades earned in the following courses:

- BIO 264/265 Introductory Microbiology, Medical
Prerequisite Courses for R.N. Students

All prerequisite courses must be completed prior to entry into the program in the fall semester. The prerequisite GPA is composed of all grades earned in the following courses:

- BIO 264/265 Introductory Microbiology, Medical
- BIO 266/267 Anatomy and Physiology, Human I
- BIO 268/269 Anatomy and Physiology, Human II
- CHM 252/257 College Chemistry II
- ENG 101 English I
- ENG 102 English II
- PSY 101 Principles of Psychology
- SOC 101 Principles of Sociology

AND

one of the following courses in statistics:

- COM 303 Communication Inquiry/Behavioral Science Statistics
- PSY 311 Quantitative Methods
- SOC 354 Quantitative Sociologic Research

Support Courses for Basic Students

Support courses are prerequisite or corequisite to nursing courses. Their content is required for courses in the nursing curriculum. They may be completed at any time prior to the nursing course for which they are prerequisite. See Course Descriptions section of this catalog for required sequence.

- PHL 211 Morals and Rights
  AND
  one of the following courses in statistics:
  - COM 303 Communication Inquiry/Behavioral Science Statistics
  - PSY 311 Quantitative Methods
  - SOC 354 Quantitative Sociologic Research

Support Courses for R.N. Students

Support courses are corequisite to nursing courses. Their content is required for courses in the nursing curriculum. They may be completed at any time prior to the nursing course for which they are prerequisite. See Course Descriptions section of this Bulletin for required sequence.

- PHL 211 Morals and Rights
Nursing Courses for Basic Student

- NUR 200 Stress: A Framework for Professional Nursing
- NUR 215 Strategies for Nursing Practice
- NUR 216 Strategies for Nursing Practice Clinical
- NUR 218 Nursing Pharmacology
- NUR 220 Health Assessment
- NUR 221 Health Assessment - Lab
- NUR 222 Tertiary Preventive Strategies for the Elderly Experiencing Stress
- NUR 225 Tertiary Preventive Strategies for Adults Experiencing Stress
- NUR 226 Tertiary Preventive Strategies for Adults Experiencing Stress - Clinical
- NUR 300 Nursing Leadership and Management
- NUR 302 Group Process
- NUR 305 Secondary Preventive Strategies for Adults Experiencing Stress
- NUR 306 Secondary Preventive Strategies for Adults Experiencing Stress - Clinical
- NUR 310 Nursing Research
- NUR 312 Secondary Preventive Strategies for Adults Experiencing Psychosocial Stressors
- NUR 313 Secondary Preventive Strategies for Adults Experiencing Psychosocial Stressors - Clinical
- NUR 325 Secondary Preventive Strategies for Children Experiencing Stress
- NUR 326 Secondary Preventive Strategies for Children Experiencing Stress - Clinical
- NUR 380 Primary Preventive Strategies for Childbearing Families
- NUR 382 Primary Preventive Strategies for Childbearing Families - Clinical
- NUR 410 Primary Preventive Strategies for Communities I
- NUR 411 Primary Preventive Strategies for Communities I - Clinical
- NUR 412 Primary Preventive Strategies for Communities II
- NUR 414 Primary Preventive Strategies for Communities II - Clinical
- NUR 415 Preventive Strategies in Complex and Critical Situations
- NUR 416 Preventive Strategies in Complex and Critical
- NUR 420 Role Practicum
- NUR 430 Professional Seminar

Nursing Courses for Registered Nurse Students

- NUR 340 Stress: A Framework for Professional Nursing
- *** NUR 343 Health Assessment
  (R.N. students may complete departmental examination for credit in this course.)
- *** NUR 344 Health Assessment Lab
  (R.N. students may complete departmental examination for credit in this course.)
- NUR 345 Computers and Health Care
- NUR 350 Nursing Leadership and Management
- NUR 360 Nursing Research
- NUR 407 Preventive Strategies for Gerontologic Nursing
- NUR 408 Preventive Strategies for Nursing - Home Care
- NUR 409 Preventive Strategies for Nursing - Clinical
- NUR 430 Professional Seminar
- NUR 440 Primary Preventive Strategies for Communities
- NUR 441 Primary Preventive Strategies for Communities - Clinical
- NUR 460 Role Practicum

***R.N. students may complete departmental examination for credit in this course.

Clinicals for R.N.s are scheduled only during the senior year of the program. They are designed to enhance the students' professional development and to provide new learning opportunities.

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Occupational Therapy

Occupational therapy professional education is no longer offered at the undergraduate level, but is now a postbaccalaureate entry-level masters program awarding a Master of Occupational Therapy (MOT) degree. Undergraduates wishing to prepare for entry into this graduate program should obtain a bachelor’s degree from an accredited college or university in any subject area and complete the following prerequisite course work:

- Pathology (CSU HSC 381 or equivalent)
- Physiology with lab (CSU BIO 422/423 or equivalent)
- Human Anatomy with lab (CSU HSC 475 or equivalent)
- Neuroscience Systems with lab (CSU HSC 476 or equivalent)
- Lifespan (CSU PSY 223 or equivalent)
- Abnormal Psychology (CSU PSY 345 or equivalent)
- Social Science Statistics (CSU PSY 311 or equivalent)
- Medical Terminology: 1 course

For additional information concerning the Master of Occupational Therapy, consult the Graduate Catalog, or contact the Health Sciences Department at (216) 687-3567, by email at healthsci@csuohio.edu, or on the web at www.csuohio.edu/healthsci.

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Philosophy (B.A.)

At-a-Glance

Minimum hours required for major:
32, including 16 hours of core courses in logic and the history of philosophy and 16 hours of electives, as described below

Minimum hours required for minor: 16 credit hours selected from courses eligible to count for the major

Advising: Designated faculty advisor; phone 687-3900.

Philosophy addresses fundamental questions about human knowledge and existence from constructive and critical perspectives. Students examine important historical and contemporary theories concerning ethics, social justice, reality and the nature and extent of knowledge. Logic is also central to philosophy, since the critical evaluation of the reasons given for ideas is as important as the study of the ideas themselves. For this reason, philosophy classes are well known for the presentation of philosophical problems and issues in a manner that stimulates questions, discussion, and a general appreciation for the pursuit of truth.

A philosophy major or minor is excellent preparation for fields such as law and business, which rely on skills of critical thinking, as well as for fields such as medicine and social work, where practitioners face ethical dilemmas in their work. Though useful in many careers, the study of philosophy can be expected to enrich a person's life beyond the rewards of the marketplace, through a deeper understanding of important beliefs and their foundations.

Major Field Requirements

1. Core Courses: 16 credits;
   - PHL 131 Deductive Logic I or
   - PHL 332 Deductive Logic II
   - PHL 261 Ancient Philosophy
   - PHL 262 Medieval Philosophy
   - PHL 263 Early Modern Philosophy

2. Electives: 16 credits, no more than 4 credits below the 300 level.

Majoring in Philosophy with a concentration in Ethics

Philosophy majors with an interest in ethics may declare a major in Philosophy with a concentration in Ethics. Students pursuing this program take core courses in the fundamentals of philosophy and ethics. Additional electives include courses in key areas of the study of values and conduct, such as the philosophy of art, religion, law, or politics, as well as courses in bioethics. A major in philosophy with a concentration in ethics is excellent preparation for advanced study in ethics, law, public administration, social work, and other fields in which ethical dilemmas arise amidst unresolved conflicts.
Requirements for a B.A. in Philosophy with a concentration in Ethics:

Core courses, 16 credits:
- PHL 131 Deductive Logic
- PHL 211 Morals and Rights or PHL 215 Engineering Ethics
- PHL 263 Early Modern Philosophy
- PHL 283 Introduction to Ethics

Ethical Theory, 4 credits:
- PHL 311 Ethics

Value Theory Electives, at least 4 credits selected from the following fields:
- PHL 321 Philosophy of Art
- PHL 331 Philosophy of Religion
- PHL 341 Philosophy of Law
- PHL 351 Social and Political Philosophy

Other Upper Level Electives, 8 credits:

As part of the Bioethics Certificate program, the Philosophy Department offers a wide variety of upper-level courses in bioethics. Students may elect courses from those counting toward the Certificate in Bioethics, or any other advanced Philosophy courses.
Physical Therapy

Physical therapy professional education is no longer offered at the undergraduate level, but is now a postbaccalaureate entry-level masters program awarding a Master of Physical Therapy (MPT) degree. Undergraduates wishing to prepare for entry into this graduate program should obtain a bachelor's degree from an accredited college or university in any subject area and complete the following prerequisite course work:

- **Chemistry:** 2-course sequence with laboratory
- **Physics:** 2-course sequence with laboratory
- **Biology:** General Biology with laboratory
  Vertebrate, Human, or Mammalian Physiology with laboratory (300-level or above)
- **Psychology:** 2 courses
- **Sociology:** 1 course
- **Statistics:** 1 course
- **Medical Terminology:** 1 course
- **Human Gross Anatomy:** 1 course with cadaver laboratory
- **Neuroscience:** 1 course with laboratory
- **General Pathology:** 1 course

For additional information regarding the Master of Physical Therapy, consult the [graduate catalog](http://www.csuohio.edu/healthsci/hs.htm), or contact the Health Sciences Department at (216) 687-3567, by email at healthsci@csuohio.edu, or on the web at [www.csuohio.edu/healthsci/hs.htm](http://www.csuohio.edu/healthsci/hs.htm).
Physics (B.S., B.A)
At-a-Glance

Minimum hours required for B.A. major: 76
Minimum hours required for B.S. major: 68
Minimum hours required for minor: 18

A major or minor in physics will help you prepare for a wide range of exciting careers in product development, research, teaching, and many other fields where you combine your knowledge of physics with other disciplines. The Physics Department offers you a choice of three undergraduate programs to suit your particular goals, interests and strengths:

Bachelor of Science: preparation for technical careers in industry and research centers and for graduate studies

Bachelor of Arts: preparation for careers in applied (engineering) physics, computer science, education, medicine, law, technical sales, scientific journalism or other fields where analytic skills and broad understanding of physics are important. Students majoring in Engineering or in Computer and Information Science (CIM and CIS calculus based; physics option) can earn the B.A. in Physics as an additional degree with a modest increase in course requirements.

Physics Minor: provides students majoring in other technical fields with additional skills thus broadening their career options.

Major Field Requirements for B.S. in Physics

- the following required physics courses: PHY 243, PHY 244, PHY 330, PHY 340, PHY 350, PHY 440, PHY 450, PHY 455, PHY 474, PHY 475
- at least 10 credits of technical electives to be selected from 300- and 400-level courses in physics, chemistry, mathematics, or engineering approved by the physics advisor
- the following required mathematics and computer science courses: MTH 181, MTH 182, MTH 281, CIS 260

Major Field Requirements for B.A. in Physics are:

- the following required physics courses: PHY 243, PHY 244, PHY 330, PHY 474;
- 16 credits of physics electives to be selected from the following list: PHY 201, PHY 202, and all the 300 and 400 level physics courses;
- the following required mathematics and computer science courses: MTH 181, MTH 182, MTH 281 or (MTH 220 and MTH 284), CIS 260;
- introductory sequence of chemistry with associated laboratory courses (CHM 261, CHM 262, CHM 266, CHM 267) or introductory sequence of biology with associated laboratory courses (BIO 200, BIO 201, BIO 202, BIO 203) or the following computer and information science courses: CIS 265, CIS 270;
- at least 16 credits in a coherent program from a different discipline such as biology, chemistry, computer science,
mathematics, environmental science, education or engineering. Program must be approved by the Physics Department advisor.

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Physics Minor Requirements

- the following required physics courses: PHY 243, PHY 244
- at least 8 credits of 300- and 400-level physics courses

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Teacher Licensure

Any student who has completed the requirements for the B.S or B.A. degree in Physics would have largely completed the subject requirements for a provisional high-school teaching licensure in the physical sciences. For information concerning the other requirements for teaching licensure see the College of Education section of this catalog.

Advising: Call (216) 687-2425
Political Science (B.A.) At-a-Glance

Minimum Hours Required for Major: 32

Minimum Hours Required for Minor: 16

Special Tracks and Joint Programs: public service specialization, political communication

Foreign Study Abroad: China (Suzhou), Germany, France (Clermont) and others which can be arranged through the Center for International Services and Programs

Awards: Distinguished Student Award, Distinguished Senior Seminar Paper Award, Outstanding Student Intern Award, Membership in Pi Sigma Alpha National Political Science Honor Society

Admission to the Major: Majors in the regular political science program must complete PSC 111 (Introduction to American Government) prior to declaring their major. Prospective majors are encouraged to take PSC 111 in their freshman year as part of their university culture curricular requirement. Then, early in the sophomore year, students should arrange a meeting with the department chair to discuss declaring a major. Transfer students from community colleges and other four-year institutions should declare their political science major as soon as possible after arriving on campus. NOTE: The prerequisite of PSC 111 does not apply to International Relations majors (see Interdisciplinary Programs).

Advising: The department has an intensive student advising system. All prospective majors should schedule an appointment with the chair to discuss their education and career interests. On the basis of this meeting, students decide which political science program they will follow and are assigned to a specific advisor. They can see their advisor each semester to discuss the next semester’s registration and any career or post-B.A. training issues. There are also separate advisors available to assist students with internships in public service or international relations.

Service Courses: In addition to the major, the Department of Political Science offers a number of courses which fulfill university curricular requirements.

- PSC 111 American Government (4 hours) (Western Culture and Civilization, Social Science)
- PSC 227 Power, Authority and Culture in Nonwestern Communities (Nonwestern Culture and Civilization, Social Science) (3 hours)
- PSC 241 Freedom and Authority (Western Culture and Civilization, Social Science) (3 hours)
- PSC 305 Cultural Diversity in U.S. Politics (African-American Experience, Diversity, Social Science) (4 hours)

In addition, a number of the department’s 300-level courses have been designated as Western Culture and Civilization, Non-Western Culture and Civilization, and Writing courses. Please check the course bulletin.

Department Office and Contacts: Rhodes Tower 1744; Telephone: 687-4541; email address: v.varaljay@csuohio.edu; home page: http://www.csuohio.edu/polisci. All political science faculty members can be reached through the home page, or by sending an email to them at [first initial].[last name]@csuohio.edu. Several faculty members have their own home pages which can be accessed through the World Wide Web.

Additional Information:

The program in political science is designed to help students understand contemporary public policy, the importance of
politics and democracy in their lives, and the means of influencing government to respond to collective needs. The Department of Political Science offers a major and a minor for both day and evening students. Details of the minor program are available in the department office.

The department also offers a public-service specialization as an alternative track to the regular departmental major. This specialization is designed specifically for those majors planning a career in the public sector, although it could prove equally useful to those seeking careers in the private sector. Details of this specialization are available in the department office. The department also offers a separate interdisciplinary major in international relations (see separate listing).

Students majoring in either communication and/or political science may select political communication as a specialization. Two departments jointly administer the program, providing students with a systematic and comprehensive orientation to political communication.

The political science curriculum stresses a broad understanding of the workings of political processes in the United States and abroad; the cultural and ideological bases of modern governments; and the acquisition of skills for evaluating public policies and participating in the political process. Political science bridges liberal arts and sciences, and the CSU Department of Political Science stresses the importance of both scientific and humanistic approaches to the field.

A major in political science helps to prepare students for careers in government, the legal profession, politics, community organizations, national and international nonprofit organizations, journalism and the mass media, and education. Many political science graduates take positions in business and industry as well.

Students must maintain at least a 2.0 GPA in political science courses in order to graduate with a major or minor.

Evening Program

The department offers a major and a minor in the evening. Required core courses are offered at night at least once during the regular academic year, and intermediate- and advanced-level courses are offered with sufficient regularity so that a student could complete the degree over a four-year period.

Political Science Major

(32 semester hours)

A minimum of 32 hours in political science beyond PSC 111 is required for the major. The program is divided into three parts: The Common Core, Field Distribution Requirements, and Seminar (or Internship)

1. **Common Core**: 7 hours

   - **PSC 251 Introduction to Data Analysis** (3 hours)
   - PLUS EITHER
     - **PSC 221 Comparative Politics** (4 hours)
     - OR
     - **PSC 231 International Politics** (4 hours)

2. **Field Distribution Requirements** (20 hours at the 300- to 400-level)

   A. One course in political theory (**PSC 340, 341, 342**) (4 hours)
   B. Two courses in American politics (8 hours)
   C. Two courses in the comparative/international politics field (8 hours)

3. **Seminar**
Public Service Specialization

(36 Semester Hours)

Students who seek a political science program which is more oriented toward practical politics and government service can take the regular political science degree with a specialization in public service. Requirements of this program are identical to those of the political science major with two exceptions: public service track majors take an internship (PSC 401, 402, 403 or 405, for 6 hours of credit) instead of the senior seminar, as their capstone course. They also take one course specifically related to their internship, as well as the usual field-distribution requirements for the major. This brings the major to a minimum of 36 semester credit hours.

Admission to the Public Service Track:
Students wishing to specialize in the public-service track must meet the same requirements as regular political science majors. They must complete PSC 111 (Introduction to American Government) prior to declaring their major. When they declare their major they should inform the chair of their intention to specialize in public service. They will then be assigned to the internship advisor for all further advising on their program and on their internship.

1. Common Core: 7 hours
   - PSC 251 Introduction to Data Analysis (3 hours)
   - PLUS EITHER
     - PSC 221 Comparative Politics (4 hours)
     - OR
     - PSC 231 International Politics (4 hours)

2. Field Distribution Requirements (24 hours)
   A. One course in political theory (PSC 340, 341, 342) (4 hours)
   B. One course in American politics linked to the internship (4 hours) Students should select this course as a function of the Internship which they intend to pursue
   C. Two additional courses in American politics and institutions (other than PSC 301 or PSC 314) in the series 312-318 (8 hours)
   D. Two courses in the comparative/international politics field (8 hours)

Tracks in Public Service

A. Urban Politics: PSC 301 Urban Politics and Policy, any two 300-level courses in the American sub-field, and the City Council Internship (PSC 401)
B. State Politics: PSC 314 State Government and Politics, any two 300-level courses in the American subfield, and the State Government Internship (PSC 405)
C. National Politics: Any three courses in the American field, excluding PSC 301 or PSC 314, plus the Administrative Internship (PSC 403)
D. Electoral Politics: PSC 317 Parties and Elections, any two courses in the American subfield, and Campaign Politics Internship (PSC 402)

3. Internship (6 hours)

Prerequisite: completion of Common Core, relevant 300-level course in preparation for the internship (PSC 301, PSC 305, PSC 314, PSC 317), or permission of the instructor. PSC 401
The Minor

The department allows students to take a minor in any one of four areas of Political Science: American Politics, Law and Theory (of particular interest to prelaw students not wishing to major in Political Science), Comparative Politics, and International Politics.

Requirements for the Minor: 16 to 17 semester hours depending on choice of courses

Minor in American Politics

- **PSC 111** (4 hours)
- 2 courses in American Politics at 300-level (8 hours)
- Any additional 300- or 400-level course, including PSC 423 Seminar in American Politics (5 hours)

Minor in Law and Theory

- **PSC 111** (4 hours)
- Two 300 Law or Theory Courses (PSC 310, PSC 311, PSC 340, PSC 341, PSC 342)
- Any additional 300- or 400-level course, including PSC 423 Seminar in Legal Theory (5 hours)

Minor in Comparative Politics:

- **PSC 221** (4 hours)
- 2 comparative politics courses at 300-level from among PSC 323, PSC 324, PSC 325, PSC 326, PSC 332, PSC 333, PSC 335, PSC 337, PSC 338
- Any additional 300- or 400-level course, including PSC 421 Seminar in Comparative Politics (5 hours)

Minor in International Politics:

- **PSC 231** (4 hours)
- Two international politics courses at 300-level from among PSC 321, PSC 327, PSC 328, PSC 330, PSC 331, PSC 334
- Any additional 300- or 400-level course, including PSC 422 Seminar in International Politics (5 hours)

Certificates

- Central and Eastern European Studies
- Latin American Studies
Psychology (B.A.)

At-a-Glance

Minimum hours required for major: 36

Minimum hours required for minor:
19 to 20. Students may design a minor which best fits with their major. Guidelines are available in the Psychology Department, Chester Building 158.

Advising: Please make an appointment with the Psychology Department secretary in CB 158

Student Organizations:
Psi Chi (a national psychology scholastic honorary), and the Psychology Club (an organization of undergraduate psychology majors)

Additional information:
It is possible to major in Psychology by taking courses only in the evening, but course offerings will be limited.

Undergraduate credit is available for approved internships and fieldwork experience (PSY 390)

Independent Study opportunities may be arranged by the student (PSY 396)

An Outstanding Senior award is presented annually by the department.

The study of psychology is concerned with explaining, predicting, and describing the thoughts, emotions, and actions of humans and animals. A major or minor in Psychology provides an excellent background for occupations in such diverse fields as business, education, and the social services. A major provides the basis for graduate training leading to the pursuit of psychology as a profession in either the academic or applied areas.

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Major Field Requirements

All majors are required to take a minimum of 36 credits of psychology. Students must earn grades of C or above in order for courses to count toward satisfying the requirements for the psychology major.

1. Required courses:
   - PSY 101 Introduction to Psychology
   - PSY 311 Behavioral Science Statistics (ANT 305 or OMS 201 and OMS 202 may be substituted)
   - PSY 412 Psychology Laboratory

2. One course from each of the following areas:
   
   Core A
   - PSY 339 Social Psychology
   - PSY 342 Psychology of Personality
   - PSY 344 Intellectual and Personality Testing
   - PSY 345 Abnormal Psychology

   Core B
PSY 368 Perceptual Processes
PSY 370 Psychology of Learning
PSY 372 Memory and Cognition
PSY 451 Human Performance
PSY 479 History of Psychology

**Core C**

- PSY 385 Psychology of Motivation
- PSY 481 Psychopharmacology
- PSY 482 Biological Basis of Behavior
- PSY 487 Brain and Cognition

3. 12 hours of electives: any course offered by the Psychology Department

No more than 8 credit hours (combined) of PSY 390 and PSY 396 may be applied toward the major.

Students majoring in Psychology also are encouraged to do general course work in the areas of sociology, the philosophy of science, biology, and anthropology. Those planning to go to graduate school should obtain a solid background in mathematics, research methods, and experimental psychology.

Students anticipating application for admission to graduate programs in psychology should consult the advisor in the department about the appropriate structuring of their undergraduate curriculum. This is advisable for both Psychology and nonpsychology majors.

**Evening Major in Psychology**

A major in Psychology is available to evening students.

**Psychology Minor**

The minimum requirements for the Psychology minor are: PSY 101 (Introduction to Psychology); 2 courses, one each from any two of the three Core areas (A, B, or C); 7 to 8 credit hours of psychology electives, with at least one course at the 300- to 400-level.

Students must earn grades of C or above in order for courses to count toward satisfying the requirements for the Psychology minor.
Religious Studies (B.A.)

At-a-Glance

Minimum hours required for major: 32
(28 if a second major)

Minimum hours required for minor: 18

Advising: department chairperson, phone: (216) 687-2170.

Student Organizations: Religious Studies Student Association

Religion is an important aspect of every civilization. In order to fully understand a civilization, it is necessary to understand the religious phenomena in it. Therefore, it is the purpose of this program to supply the student with data, methods, and tools to facilitate an understanding of religion and to provide a preparation for a wide range of professional and graduate training.

Major Field Requirements

The Department of Religious Studies requires 32 credit hours for a major. Of the 32 required credit hours, at least 20 credits must be in 300- or 400-level courses. The specific courses required for the major will be determined on an individual basis in consultation with a departmental advisor.

A Religious Studies major who wishes to complete a second major in another field may have the number of credits required for the Religious Studies major reduced from 32 to 28.

Religious Studies Minor

The Department of Religious Studies requires 18 credit hours for a minor. Of the 18 required credit hours, at least 12 credits must be in 300- or 400-level courses.

Courses in Cognate Fields

The Department of Religious Studies will allow students to take courses offered by cognate departments to satisfy some requirements for the major and minor. These courses must be approved by the Department of Religious Studies. A student may take up to 8 hours for the major or up to 4 hours for the minor.

A major or a minor in Religious Studies is not available to evening students.
Social Science (B.A.)

At-a-Glance

Admission to major: No requirement other than good academic standing in the College of Arts and Sciences

Hours for major: 48 (including 11 hours in three of the following fields and 15 hours in the other: sociology, political science, economics and psychology)

Advising: Individual faculty advisors and Student Handbook

Student Organization: Sociology Club

For Information: Contact the Sociology Department. Phone 687-4500

The major in Social Science is designed for students seeking a broad, diverse background as preparation for various occupations or for more specialized training in such fields as law, journalism, the ministry, social work, or education.

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Major Field Requirements

Students electing a major in Social Science must complete a total of 48 semester hours distributed among economics, political science, psychology, and sociology. Fifteen hours must be earned in one of these fields and 11 hours in each of the remaining three. This composite major is administered by the Department of Sociology.

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Social Studies (B.A.)

At-a-Glance

Mission:
The primary mission of the Social Studies major is to provide students with the content competency to teach Social Studies in secondary schools. It forms the content knowledge basis for students to initiate teaching professions and provides the necessary critical thinking, analytical reasoning, and academic judgement skills upon which to embark on a lifetime of intellectual growth.

Hours Required in the Major:
73 - 82 hours of specific courses or thematic areas chosen from history, anthropology, economics, political science, and sociology. Some of these courses also can be used to partially fulfill General Education requirements.

Major Field Requirements:
The curriculum for the Social Studies major consists of a common core and one area of concentration chosen from three areas. The following courses are required of all Social Studies majors:

The Core:

- HIS 101 Western Civilization I
  OR
  HIS 102 Western Civilization II
- HIS 111 U.S. History to 1877
- HIS 112 U.S. History since 1877
- HIS 165 Introduction to Latin American History
  OR
  HIS 175 Introduction to African History
- HIS 200 Introduction to Geography
- HIS 215 History of African-Americans to 1877
  OR
  HIS 216 History of African-Americans since 1877
- HIS 301 American Cultural History
  OR
  HIS 304 U.S. Urban History
- HIS 370 World History
- HIS 390 Introduction to Social Studies
- HIS 400 Local History Seminar
- ECN 201 Principles of Macroeconomics
- ECN 202 Principles of Microeconomics
- PSC 111 American Government
- PSC 221 Comparative Politics
  OR
  PSC 231 International Politics
- PSC/HIS/ANT/SOC 227 Power, Authority and Society in Non-Western Communities
- ANT 202 The Study of Culture
  OR
  HIS 323 Recent American History
OR
SOC 101 Introduction to Sociology

Complementary Core:
(Select 1 of the 3 areas below)

Anthropology Core
Two of the following:
- ANT 270 AfricanAmerican Culture
- ANT 324 Anthropology of Gender
- ANT 351 Native North Americans

Two of the following:
- ANT 352 Native South Americans
- ANT 353 Cultures of Africa
- ANT 354 Cultures of Oceania
- ANT 355 Cultures of Southeast Asia
- ANT 494 Advanced Area Studies in Anthropology

Political Science Core
- PSC 217 Urban Politics & the AfricanAmerican Experience
  OR
  PSC 305 Cultural Diversity in U.S. Politics
- PSC 318 The Presidency and Congress
  OR
  PSC 342 American Political Thought

Two of the following:
- PSC 310 Constitutional Law
- PSC 311 Civil Rights and Civil Liberties
- PSC 314 State Government and Politics
- PSC 315 Public Policy Administration
- PSC 327 Peaceful World Change

Sociology Core
- SOC 101 Introduction to Sociology

One of the following:
- SOC 342 Sociology of Law
- SOC 383 Political Sociology

Two of the following:
- SOC 201 Race, Class, and Gender
- SOC 203 Sociology of Poverty
- SOC 215 Black/White Interaction
- SOC 267 Studies in the Black Family
• SOC 317 Sociology of Gender
• SOC 380 Minorities

**Distribution:** Additional courses needed to ensure that at least one course is included from Anthropology and Sociology.

**Teaching Licensure:**
A comprehensive program for students seeking teaching licensure in Social Studies is administered through the College of Education. Interested students are urged to contact the college for further information.

**Advising:** Students register their intentions to pursue an academic major in Social Studies with the Department of History; those interested in teaching must be admitted to the teaching licensure program in the College of Education.

The Social Studies major will have an academic advisor in the College of Arts and Sciences as assigned by the Department of History. Those seeking a teaching license should have an advisor for education course work in the College of Education.

This interdisciplinary major is administered by the Department of History and is primarily intended for students seeking secondary licensure. It provides comprehensive training to history and related social-studies fields taught in Ohio secondary schools. Interested students should also consider pursuing academic major(s) and/or academic minor(s) in history, political science, or economics.

**For information:** Call Lee A. Makela, (216) 687-3927, or the History Department secretary, (216) 687-3920. Those interested in certification should contact the College of Education.
Social Work (B.A.)

At-a-Glance

Mission: Accreditation

The mission of the Social Work major is to prepare students as beginning-level generalist social-work practitioners who are committed to the basic value of human dignity and the individual's right to determine his or her destiny guided by freedom, justice, and fairness. The program offers students the values and ethics, knowledge, and skills necessary to meet human needs and improve the social conditions under which persons grow and develop, focusing on diversity and vulnerable populations.

Social Work offers a basic understanding of the human service system as it addresses current social concerns. The core Social-Work curriculum prepares students for practice in diverse settings, such as child welfare, health, mental health, criminal justice, aging, community organization, and other areas of human service practice, in varied roles.

Graduates are eligible for membership in the National Association of Social Workers and/or the National Association of Black Social Workers, and are eligible to take the social-work licensure exam in Ohio. The program is fully accredited by the Council on Social Work Education.

Admission to the Major

Application to the major may be submitted at the point of matriculation at the university in the College of Arts and Sciences, or any time thereafter, at which time the student is assigned an advisor in Social Work. The major in Social Work is designed to prepare the student to seek careers in a vast number of public and private organizations that provide human services utilizing generalist social-work practitioners. Social Work is a professional degree which requires licensure to practice in most private agencies.

To acquaint potential students with the profession of social work and the Social Work major at Cleveland State University, the department conducts orientation sessions which are designed to provide information about the profession; its history; fields of practice; current trends and social issues, and career opportunities; as well as the mission of the department and the admission and curriculum requirements for majors. The prerequisites for entering the Social Work core curriculum for the major requires the student to:

- Have a cumulative 2.20 grade point average and complete Introduction to Social Work, American Government and one Human Biology course
- Submit one letter of reference from either a teacher/professor, employer, religious leader, or a health or human services professional
- Submit a completed college checklist from Arts and Sciences
Majors are assigned a faculty advisor to individually guide and direct the student to ensure that the maximum benefit is gained in the pursuit of the social-work degree. Pre-major advising is available for those students who are interested in exploring the social-work profession as a major field of study.

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Major Field Requirements

A Social Work major must maintain a 2.5 cumulative grade point average in the social-work core curriculum and a 2.2 cumulative grade point average overall in the university. All majors are assigned a faculty advisor to assist in establishing objectives, planning a program, and course sequencing. Students must maintain regular contact with their advisor.

The Social Work major is founded upon a liberal-arts perspective which requires 20 credits in liberal-arts courses and 45 credits in the core social-work curriculum. The Practice Sequence courses are restricted to social-work majors. Social Work majors are required to complete the prescribed curriculum.

Liberal Arts Perspective:

Biology: 4 credits. The department requires Biology and Man: Basic Concepts or Biology and Man: Reproduction and Development or Biology and Man: Heredity.

Social and Behavioral Sciences: 3 credits each in prerequisite courses such as American government and additional 18 credits taken in department-approved courses. Twelve credits in at least three of the following fields must be completed prior to entry to the interventions sequence: anthropology, communications, economics, political science (excluding PSC 111), psychology, and sociology. An additional 6 credits in these and/or related fields are required. These courses shall be selected through advising.

Core Requirements (45 credit hours)

- SWK 200 Introduction to Social Work (prerequisite)
- SWK 201 Contemporary Social Welfare
- SWK 300 Social Welfare Policy
- SWK 302 Human Behavior and Social Environment - Micro
- SWK 303 Human Behavior and Social Environment - Macro
- SWK 304 Perspectives on Social Work Research I
- SWK 305 Perspectives on Social Work Research II
- SWK 385 Interventions I
- SWK 390 Field Practicum I
- SWK 395 Field Seminar I
- SWK 485 Interventions II
- SWK 490 Field Practicum II
- SWK 495 Field Seminar II

Completion of a major in Social Work depends upon successful completion of two semesters of student practice in a field placement. Pre-majors with little or no previous exposure to the human service field are advised, therefore, to explore their potential effectiveness and satisfaction in working directly in human service.

Students are required to obtain a grade of B or better in Interventions I & II, Field Practicum I & II, and Field Seminar I & II. Students receiving less than a B in Interventions I and/or Field Practicum I and/or Field Seminar I may not proceed in the major without review and assessment by the department Admissions and Continuance Committee.

Elective courses include:

- SWK 150 The Black Experience and Contemporary Society
Certificate Program: Criminal Justice

Criminal justice electives help prepare students for work in law enforcement (i.e., as police officers, park rangers, or customs agents) or corrections (i.e., as probation or parole officers, or prison social workers).

Students must take the following Criminal Justice core electives:
- PSC 310 Constitutional Law
- SWK 240 Administration of Justice
- SWK 470 Problems and Issues in Criminal Justice

Students who wish to emphasize law enforcement must take the following electives:
- SOC 340 Criminology
- PSC 301 Urban Politics and Policy
- SWK 259 The Child, the Family and the Law
- SWK 371 Constitutional Criminal Procedure
- SWK 374 Law Enforcement and Society
- SWK 375 Criminal Law

Students who wish to emphasize corrections must take the following electives:
- SWK 259 The Child, the Family and the Law
- SWK 340 Legal Aspects of Human Services
- SWK 341 Corrections: Institutional and Community Based
- SWK 342 Prisoner's Rights
- Any two courses from the Law Enforcement course listed above, excluding SWK 259.
Sociology (B.A.)
At-a-Glance

Admission to major: No requirement other than good academic standing in the College of Arts and Sciences.

Minimum hours required for major: 33 (including SOC 101, 201, 352, 353, 354 and four other courses, with at least 3 at the 300- to 400-level)

Minimum hours required for minor: 18 (including SOC 101, 352, and 353, with at least 12 hours at the 300- to 400-level)

Advising: Individual faculty advisors and Student Handbook.

Student Honorary Society: Alpha Kappa Delta

Awards: Annual Distinguished Sociology Student Award

Student Organizations: Sociology Club

For Information: Contact the Sociology Department. Phone: (216) 687-4500

Sociology is the study of social life and the social causes and consequences of human behavior. Sometimes this behavior involves personal relationships, perhaps among teen-agers or the elderly, sometimes the difficulties facing the urban poor or drug addicts, sometimes the development of modern nation-states and political conflict. Sociology opens new windows — challenging conventional wisdom, dissolving myths about social reality, illuminating how the world is socially constructed, and clarifying our options and choices.

Sociology students at Cleveland State University are taught to analyze modern social problems scientifically. In addition, they are taught how to do research about these issues using statistics, interviews, and participant observation. Good research requires a grasp of the sociological imagination — the connections between historical, large-scale social forces and biography, and the ways in which people live and understand their lives.

 Majors in Sociology develop the critical thinking and writing skills basic to a sound liberal-arts education. They learn research skills and an understanding of the sociological perspective. This prepares them for a wide range of careers. Some students use the degree as preparation for graduate work in one of the social sciences or law, others work in human resource management, social service, corporations, or schools.

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Major Field Requirements

In establishing the requirements of the major in Sociology, the Department of Sociology maintains these objectives: to introduce students to the sociological perspective and its uses, to teach the principles of sociological research and the fundamental skills needed to use them, and to prepare students for advanced training at the professional and graduate-school levels.

A minimum of 33 hours in sociology is required for a major. The hours must include these core courses:

• SOC 101 Introduction to Sociology
In addition, students must complete four elective courses, at least three of which must be at the 300- to 400-level.

Although a student is free to complete the major requirements with any combination of sociology electives, the department believes that the major program is greatly strengthened and better organized when there is judicious selection of electives. The department makes available a faculty advisor to every student who declares a major in Sociology. The student is expected to plan a total academic program with the assistance of a departmental advisor.

When appropriately selected, the sociology offerings permit a student to concentrate in one of the following subfields: criminology, aging and the life course, race, class, and gender; social organization and change.

### Majoring in Sociology with a Concentration in Criminology

Sociology majors with an interest in criminology and criminal justice may declare a major in Sociology with a concentration in Criminology. Students pursuing this program take core courses in the fundamentals of sociology and additional courses focusing on key areas and issues in the study of crime. This program familiarizes students with the principal theories and research findings of criminology and is designed to develop critical-thinking abilities and the knowledge, research and writing skills central to a liberal-arts education. It prepares students for a wide variety of careers in applied criminal justice fields such as corrections, parole or policing; the field of justice research and in social-service settings. In addition, students who complete this concentration are well prepared for graduate work in criminology, one of the social sciences or law.

For more information, call the Sociology Department, (216) 687-4500.

### Requirements for a BA in Sociology with a concentration in Criminology:

- SOC 101 Introduction to Sociology
- SOC 201 Race, Class and Gender
- SOC 340 Criminology
- SOC 352 Sociological Theory
- SOC 353 Methods of Social Research
- SOC 354 Quantitative Social Research

Four electives from the two groups listed below, at least two of which must be from Group A:

**Group A Electives:** SOC 260, SOC 311, SOC 341, SOC 342, SOC 344, SOC 345, SOC 346, SOC 494

**Group B Electives:** ECN 350, PHL 341, PSC 310, PSC 311, PSY 345, SWK 240, SWK 259, SWK 341, SWK 342, SWK 371, SWK 374, SWK 375, SWK 470

### Internships in Sociology-Criminology:

Students may qualify for an internship in Sociology-Criminology (SOC 490) by achieving an overall GPA of 3.0 in the required courses for the major. Students who qualify must arrange an internship with the departmental coordinator (call 216-687-4500). Internships may be for up to 8 credit hours. However, only 4 of these hours may be applied toward the requirements for the major (in lieu of 4 hours of Group B electives).

### Sociology Minor

A minimum of 18 hours in sociology is required for a minor. The 18 hours must include:

- SOC 101 Introduction to Sociology
- SOC 352 Sociological Theory
- SOC 353 Methods of Social Research

In addition, students must complete two electives, at least one of which must be at the 300- to 400-level.

### Minor Program: Criminal Justice
The Criminal Justice minor, which is administered through the Department of Sociology, introduces students to the institutions involved in society's handling of crime. It is also designed to heighten awareness of the theoretical and philosophical issues involved in defining, explaining, and deterring crime and to introduce students to some of the social-science research on the nature and extent of crime. In addition, the minor provides students with the appropriate entry-level qualifications for many professional positions in criminal justice fields.

**Requirements for an Interdisciplinary Minor in Criminal Justice**

Students wishing to minor in Criminal Justice must complete three core, one law elective, and three general elective courses from the list below for a minimum of 23 semester credit hours:

1. **Criminal Justice Core Courses**
   - SOC 260 Deviance in the United States
   - SOC 340 Criminology
   - SWK 240 Administration of Justice

2. **Law electives:**
   - PSC 310 Constitutional Law
   - PSC 311 Civil Rights and Civil Liberties
   - SOC 342 Sociology of Law
   - SWK 259 The Child, the Family, and the Law
   - SWK 375 Criminal Law

3. **Elective Courses:** (A course taken as a law elective cannot also be counted as a general elective)
   - SOC 311 Individual and Society
   - SOC 341 Juvenile Delinquency
   - SOC 342 Sociology of Law
   - SOC 344 U.S. Criminal Justice System
   - SOC 345 Social Control
   - SOC 346 Corporate and Governmental Deviance
   - SOC 494 ST: Sociology of Prisons
   - SWK 259 The Child, the Family, and the Law
   - SWK 341 Corrections: Institutional and Community-Based
   - SWK 371 Constitutional Criminal Procedure
   - SWK 374 Law Enforcement and Society
   - SWK 375 Criminal Law
   - SWK 470 Problems and Issues in Criminal Justice
   - PSC 310 Constitutional Law
   - PSC 311 Civil Rights and Civil Liberties
   - PSY 345 Abnormal Psychology
   - PHL 341 Philosophy of Law
   - ECN 350 Economics of Crime and Punishment

No more than 4 hours of internship credit may be applied toward this program.

For additional information, contact the chairperson of the Department of Sociology at (216) 687-4500.

**Note:** A criminal justice certificate is also available. See Arts & Sciences Certificate information.
Spanish (B.A)

At-a-Glance

Admission to major: Completion of SPN 102 or equivalent

Minimum hours required for major: 36

Minimum hours required for minor: 18

Special tracks: Peninsular and Latin-American literature and culture

Advising: Faculty advisors for majors, minors and prospective students. Phone (216) 687-4645

Student organizations: Los Latinos Unidos, Sigma Delta Pi Honorary Society, Phi Sigma Iota Honorary Society

Additional information: Study-Abroad programs in Mexico and Spain

The sequence of courses in Spanish leads from competence in Spanish language skills to thorough understanding of Hispanic language, civilization, and literature. Programs concentrate equally on Spanish and Hispanic-American content through a cyclical offering of courses. Programs in the Spanish minor, major, and graduate studies are available, including the B.A. with Honors in Spanish. Spanish is also a valuable adjunct skill to any other major program or career. Over the next few decades virtually every area of professional activity in this country will become more and more involved with Spanish-speaking Americans and with corporations in Spanish-speaking countries. A student majoring in Spanish will find career opportunities in teaching, foreign service, industry, or communications. Language study involves mastery both of performance skills (speaking, reading, writing, understanding) and of a subject matter. The subject matter may be the language itself, its literature, culture, or pedagogy.

Language Skill Courses:

A student who has completed Spanish course work in high school or at another institution who wishes to continue the study of Spanish must begin course work for credit at the level consistent with academic background. A placement test is required for all students with less than three years of high-school Spanish or the equivalent. Students who have had three or more years of previous study must consult with an advisor in the foreign language department to determine the appropriate level. Native speakers: as a general guideline, students who read and write Spanish fluently must begin course work for credit at the 300-level or higher. Students considering a major in Spanish should consult an advisor in the Department of Modern Languages as early as possible to plan an effective course of study.

Retroactive Credit.

Students are eligible to earn up to 14 "retroactive" credits for previous knowledge of Spanish. This policy is for students who have completed a foreign language skills course and who earned a B or better in that course. For example, if your first Spanish skills course is SPN 102 and you receive an A or B, you can receive credit for SPN 101. Consult the Department of Modern Languages (216) 687-4645 for further information.

Credit by Examination.

Students who successfully pass the College Level Placement Examination (CLEP test) in Spanish may earn 14 credit-hours for previous knowledge of Spanish. For information about the examination, eligibility, and dates when it is given, contact the CSU Testing Center.
(216) 687-2277. Students who receive a score of 3, 4 or 5 on the Advanced Placement Spanish language examination may earn 18 credit hours for SPN (101, 102, 201, and 202).

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Major Field Requirements

Students seeking a major in Spanish must complete 36 credit hours in Spanish above the 100 level, distributed as follows:

Core A: Composition and Conversation Requirements:
- Sixteen credit hours of courses in composition and conversation: SPN 202, 203, 301, 302, 303, 393 (Business Spanish); 405; or equivalent as determined by the Spanish faculty, of which no more than 8 credit hours can be at the 200 level. Students beginning at the 300 level will take 8 credit hours at the 300- and 400-level.

Core B: Distribution Requirements:
- One course each in phonetics (SPN 315), in literature (SPN 371 or SPN 372), and in culture and civilization (SPN 345 or SPN 346) are required (three courses total).

Notes: No more than 8 credit hours at the 200 level will be counted. At least 9 credit-hours must be at the 400 level. At least 28 credit hours must be in upper-division courses at the 300- or 400-level. Up to 6 credit hours of practicum in Spanish or independent study may count toward the major. These credits must be approved by the Spanish faculty. No grade below C may count toward the major.

Transfer Students.
Transfer students are required to complete at least 18 credit hours while in residence at Cleveland State University in order to earn a degree.

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Minors

A minor in Spanish consists of 18 credit hours beyond the 100 level, of which 9 credit hours must be at the 300- and 400-level. Transfer students must complete 9 hours of the 18 required for the minor in residence at Cleveland State University. Students seeking a minor in Spanish must have an advisor in Spanish to assist in the selection of courses. No grade below a C in a minor course may count toward the minor.

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Study Abroad

 Majors are encouraged to arrange for study in a Spanish-speaking country. The department administers summer programs in Mexico and Spain. Credit earned on these programs is considered part of the CSU Spanish sequence.

Students may also undertake independent study abroad at other institutions. Normally, up to 16 hours of independent study abroad may count toward their major requirements (additional credit may count toward the total hours needed for graduation). Majors should seek departmental approval of foreign-study plans before departure, and must complete at least two 300-level or 400-level courses in Spanish after return from independent study abroad. (See also the Study Abroad section listed under "Arts and Sciences").

For further information regarding the possibility of foreign study and summer programs available through the Department of Modern Languages, contact the department office, (216) 687-4645.

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Teacher Licensure
Students preparing to teach will fulfill the requirements for the B.A. in Spanish and the licensure sequence in the College of Education for the Specialization in Multi-Age Foreign Language Education (PreK-12). They must also pass national examinations and fulfill state requirements.

The PreK-12 licensure sequence includes courses in elementary and secondary foreign-language methods. Students will need to follow the sequence as described in the College of Education. Before admission to student teaching, the student must demonstrate oral fluency by completing at least one conversation and composition course at the 300 level with a C or better. Modern Language methods courses should be taken the semester preceding student teaching.
Speech and Hearing (B.A.)

At-a-Glance

Minimum hours required for major: 40

Minimum hours required for minor: 18

Advising: Faculty advisor assigned upon declaration of major. Phone (216) 687-3807.

Student organization: Speech and Hearing Club

The Speech and Hearing Department offers course work for students who wish to enter the profession of speech-language pathology which is concerned with the identification and treatment of communication disorders in human beings across the life span. Speech and hearing are interrelated fields concerned with human communication, and require knowledge of biology, psychology, sociology, and linguistics. The program at Cleveland State University provides an excellent pre-professional foundation that prepares students for professional training at the master's level. Students may also earn an undergraduate minor in Speech and Hearing, which is especially valuable for students majoring in education, special education, or the health-care professions.

Major Field Requirements

At the undergraduate level, students majoring in Speech and Hearing are required to take the following 40 credit hours:

Core Courses

- SPH 228 Phonetics
- SPH 229 Speech and Language Development
- SPH 231 Introduction to Communication Disorders
- SPH 232 Introduction to Audiology
- SPH 251 American Sign Language I
- SPH 335 Clinical Methods in Communication Disorders
- SPH 351 Anatomy and Physiology of the Speech and Hearing Mechanism
- SPH 431 Basic Speech-Language Disorders
- SPH 434 Clinical Practicum in Speech-Language Disorders
- SPH 438 Seminar in Urban Language Patterns
- SPH 481 Aural Rehabilitation
- SPH 482 Audiometry
- SPH 485 Speech and Hearing Science
- SPH 486 Clinical Practicum in Audiology

Evening Program
It is not possible to complete the undergraduate Speech and Hearing major solely in the evening. The department attempts to offer a variety of required courses in the evening but cannot staff a complete evening major. Evening students should make an appointment with the department chairperson to discuss the program and its offerings.

Speech and Hearing Minor

The speech and hearing minor provides the student with a foundation regarding the developmental and normative aspects of speech, language, and hearing. Required courses amounting to 18 hours include: SPH 228, SPH 229, SPH 231, and SPH 232. Two additional courses are to be selected from the following: SPH 331, SPH 351, SPH 431, SPH 435, SPH 438, SPH 481, SPH 482, and SPH 485.

Teacher Licensure

The master's is the minimum degree requirement for those students seeking the provisional special education teacher's license for Speech and Hearing Therapy. In addition to required graduate course work, the following must be completed:

- ESE 402 Introduction to Individuals with Mild and Moderate Disabilities
- SPH 435 Organization and Administration of a Public School Speech and Hearing Program
- SPH 562 Advanced Language Disorders (See Graduate Bulletin)
- EST 580 Practicum in Speech and Hearing Therapy (See Graduate Bulletin)
Women's Studies (B.A.)

At-a-Glance

Admission to the major: No requirement other than good academic standing in the College of Arts and Sciences.

Minimum hours required for the major: 38 distributed in three fields

Minimum hours required for the minor: 16 distributed in three fields

Awards: Senior Scholarship award

Advising: Individual faculty advisor, Internet Web page, Women's Studies handbook and career information package

Student organization: Student Women's Association

For Information: Contact the Women's Comprehensive Program. Telephone: (216) 687-4674

Women's Studies, an interdisciplinary approach to the study of women's status, contributions and experiences, is a thriving academic field that offers new scholarship. Women's Studies enables students to:

- discover and communicate new knowledge and encourage new research in neglected areas
- transcend traditional disciplinary boundaries, to analyze the role of gender in shaping human societies of the past and the present
- develop a more balanced and accurate interpretation of existing knowledge
- comprehend crucial intersection of race, class, and gender in the global society and in their own lives

As an interdisciplinary field of inquiry Women's Studies encourages students to consider ways to restructure social institutions and interactions for a more democratic society. By addressing past and present social disparities Women's Studies promotes intellectual and practical problem-solving, on both the individual and societal levels. Women's Studies helps students develop written and oral communication skills and the analytical and critical thinking skills needed to prepare them for leadership and a variety of careers in an increasingly diverse economic and political environment. Women's Studies students will develop these skills while receiving a well-rounded liberal-arts education. These skills will prepare graduates for graduate work or for career development in the changing economic and social realities of the 21st century.

Major Field Requirements

To earn a Women's Studies major, students must take a minimum of 38 semester hours in Women's Studies courses. Courses are to be distributed over three departments with at least 6 hours in the humanities, and 6 hours in the social sciences. Up to 4 hours of independent study (WST 496) may be included as part of the major. A grade of C or better must be earned in courses used to fulfill requirements for the major. Students are encouraged to use this framework to develop a more specialized Women's Studies curriculum based upon their particular career interests.

Required Courses
• WST 151 Intro to Women's Studies
• WST 351 Practicum in Women's Studies
• WST 495 Advanced Seminar in Women's Studies

Other courses which apply to the major.

In addition to this list, certain special-topics courses may apply if approved by the Women's Studies Advisory Committee. See individual departmental listing for course descriptions and prerequisites.

• ANT 324 Anthropology of Gender
• ANT 343 Language and Gender
• EDB 455 Women and Education
• ENF 214 Women Writers in English Translation
• ENF 215 Women Writers in English Translation
• ENG 207 Black Masterpieces (when taught by Women's Studies faculty)
• ENG 208 Womanism/Feminism
• ENG 333 Studies in 18th Century British Literature Feminist Approaches to 18th Century Fiction
• ENG 334 Studies in 19th Century British Literature Feminist Approaches to 19th Century Fiction
• ENG 335 Studies in 20th Century British Literature Feminist Approaches to 20th Century Fiction
• ENG 363 Gender Issues in Literature
• ENG 375 Major Authors (Jane Austen, the Bronte sisters, Emily Dickinson, Toni Morrison, Virginia Woolf)
• FRN 365 Readings in French Literature French Decadence: Literature & Sexuality
• FRN 493 Special Topics in French French Women Writers: From the Middle Ages to the Present
• FST 221/321 English Workshop
• FST 243/343 Modern Language Workshop Guenevere’s Sisters: Women in the Tales of King Arthur, Myths of the Goddess/Heroine
• FST 251/351 American History Workshop American Women in History
• FST 252/352 American History Workshop African-American Women in History
• FST 257/357 Social Work Workshop: The Women's Movement
• FST 366 Religious Studies Workshop Women in Religion
• HIS 284 History of Women
• HIS 318 History of the Family
• HIS 354 European Women’s History
• HIS 393 Special Topics in History: History of Women in America, History of African-American Women
• HSC 346 Women's Health
• PHL 253 Philosophy of Feminism
• PSY 255 Psychology of Women
• REL 260 Women and Religion
• REL 370 Sexual Ethics
• REL 376 Women in Early Christianity
• SOC 201 Race, Class, Gender
• SOC 302 Women in Corporate America
• SOC 310 Sociology of Marriage and Family
• SOC 317 Sociology of Gender
• SOC 388 Sociology of Work and Organization
• SPN 484 Studies in Spanish American Literature Latin American Women Writers in the 20th Century
• UST 455 Gender and Leadership

Women's Studies Minor

A minor in Women's Studies complements majors in other disciplines, (i.e. education, history, marketing). To earn a Women's Studies minor, students must take a minimum of 16 semester hours in designated Women's Studies courses, 8 hours of which must be at the 300/400 level. Courses must be selected from at least three different academic areas, and include at least one humanities course, and one social science course.

The Advanced Seminar in Women's Studies (WST 495) is required for the minor in Women’s Studies.
First College was established in 1972. Its primary mission is to create and maintain the learning environment of a small liberal-arts college which fully utilizes the resources of the larger university and the Cleveland community. It offers a selection of small, often innovative, classes which satisfy basic and elective University Curricular Requirements, it provides extensive and intensive student-teacher and student-student interaction in and out of the classroom; and it encourages student independence and initiative within the context of a collaborative learning environment.

The unique character, excellence, and success of the college was recognized by the state of Ohio when First College was declared a prize-winning program in the 1986 Program Excellence Award competition.

First College emphasizes a questioning approach to knowledge and learning. It offers innovative multi- and inter-disciplinary courses and teaching approaches. Its advising, mentoring and other support services enhance opportunities for academic success.

Many First College courses reach out to, and make use of, the resources of the Greater Cleveland community. These tie students' educational experiences to the real world in which they live. The First College program provides students with the opportunity to better understand the international context in which they work. Students are challenged to demonstrate critical and analytical thinking, well-developed writing skills, media literacy and familiarity with current computer technology and applications, thereby improving their performance in the university and in the working world.

First College has an open admissions policy, unlike similar programs at other universities which have restrictive admission policies. While its student body is typical of the university as a whole, First College especially welcomes those who are minority, female, and older.

First College awards both the bachelor of arts and the bachelor of science degrees in conjunction with the College of Arts and Sciences and the College of Urban Affairs, allowing students to select major programs from either of these colleges in nearly 30 different fields.

Students interested in pursuing degrees in education or the health sciences may also utilize the First College curriculum to satisfy their liberal-arts requirements. In addition, First College is authorized to award a degree for a Personally Designed Major (PDM), a program of study proposed and designed by students themselves which utilizes courses from any of the undergraduate colleges in the university and courses within Ohio public college or university articulation agreements. For more information, phone (216) 687-3915.

Admission Policy

Any student satisfying the admission requirements for the College of Arts and Sciences is eligible for admission to First College. The First College program serves both full-time and part-time students. Currently, First College offers a minimal number of courses in the evening.

Transfer Students
Transfer students are eligible to enroll in First College. Credits earned at other colleges may be used to reduce the degree requirement of 60 credits taken from First College in proportion to the number of credits transferred. However, in no case may the number of credits earned in First College be reduced to less than 18.

Curriculum

The First College curriculum is designed to allow students to satisfy all college, all university, and some requirements of the major with First College courses, usually in 6-credit workshops or 4-credit courses which emphasize interactive classroom environments. Both lower- and upper-division courses emphasize multi- and inter-disciplinary approaches, are limited to small enrollments, and cultivate research and writing skills. Workshops are normally limited to no more than 30 students, and typically will enroll about 25.

Students usually combine courses from First College with courses from the other undergraduate colleges of the university. In this way, they may complete most of the course work in their majors outside of First College while still retaining the opportunity to elect courses in First College.

Students interested in the First College curriculum are encouraged to examine the extended course descriptions available for all First College courses at the college office, Chester Building, Room 256.

Personally Designed Majors

While many First College students choose to major in one of the traditional areas of Arts and Sciences or Urban Affairs, they may decide to construct their own academic major program to better serve their goals. Working in close consultation with a faculty advisor(s), they can design their program using the entire course offerings of the university and courses within Ohio public college or university articulation agreements.

Recent personally designed majors have included African-American Studies, Art Therapy, Family History, Film, International Area Studies, Law and Society, and Women's Studies in their course work.

In addition, students have constructed personally designed majors in pre-professional areas including law, medicine, and the health sciences. The areas of interest continue to expand and reflect the changing environment of the real world in which students live, as well as the variety of student interests and career objectives.

More information about this option, with suggested course groupings, is available from the First College office and at http://www.csuohio.edu/first_college/.

First College Requirements

The faculty of First College and the College of Arts and Sciences or the College of Urban Affairs award degrees to students who meet the following requirements:

- Complete a minimum of 128 credit hours of academic work (60 of the 128 must be selected from First College offerings and 48 of the 128 must be earned in 300- or 400-level courses. For those who enter as transfer students, the total number of First College credits required will be adjusted proportionally to the number of credits previously earned).
- Achieve a grade point average of 2.00 or better
- Complete university graduation requirements as set forth in the University Regulations chapter of this catalog.
- Complete the requirements for a major field of study in the colleges of Arts and Sciences or Urban Affairs as set forth in this catalog, or complete requirements for a personally designed major

Each student is expected to declare a major before registering for the junior year (60 credits). A major consists of not fewer than 28 credits in one department in the single-discipline majors. Composite majors are offered in the fields of social science and social studies, or with a personally designed major.
University GenEd Requirements

The general degree requirements for First College students include the University GenEd Requirements:

1. **Writing:**
   - FST 101 (ENG - English I) 4 credits
   - FST 102 (ENG - English II)
   - OR
   - FST 102 equivalent 3 credits
   - Writing Across the Curriculum (WAC) three courses
   (*Courses satisfying the WAC requirement may also satisfy other requirements)

2. **Arts/Humanities** - 9 credits in at least two fields
   - Social Science - 9 credits in at least two fields

3. **Non-Western Culture and Civilization**
   - one course (which may also be used to satisfy the arts/humanities or social science requirement)
   - Western Culture and Civilization
   - one course (which may also be used to satisfy the arts/humanities or social science requirement)

4. **African-American Experience and Human Diversity** - 6 credits (3 credits of which may used to satisfy the arts/humanities or social science requirement)

5. **Mathematics and Logic** - 6 credits of which at least three credits must be in mathematics

6. **Natural Science** - 8 to 9 credits with at least one course with a lab component

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Early and Middle Childhood Education, Special Education, and Physical Education Majors

Candidates for the bachelor of science degree in the College of Education may participate in the First College program. The two colleges have cooperated in planning appropriate course sequences for early- and middle-childhood education, special education, and physical education majors. A student can fulfill a majority of the general education and elective requirements from First College offerings. Detailed program options are available from advisors.

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Secondary Education

First College students seeking licensure for secondary-school teaching may remain enrolled in First College and receive their degrees upon completion of the requirements for the B.A. or B.S. degree, but must take the required education courses in their junior and senior years under the supervision of the College of Education.

Students intending to earn teacher licensure in their major field should consult the appropriate description for information regarding major-field requirements. For information on general and professional education requirements, see the College of Education section of this Bulletin.

Students seeking teacher licensure in a field other than their major field also should consult the College of Education section of this Bulletin.

Each student is responsible for following appropriate application procedures and for consulting with an advisor from the College of Education on matters relating to admission and licensure. See the College of Education section of this Bulletin for more information.
James J. Nance College of Business Administration

The James J. Nance College of Business Administration prepares its graduates for careers in both business and governmental organizations.

The student is first educated to assume responsibility through an understanding of national and world environments. This is accomplished through the study of a lower-division core of courses founded upon cultural, behavioral, quantitative, philosophic, historic, scientific, and economic bases. After achieving this basic understanding of the environment and the nature of responsibility to society, the student is ready to pursue professional training in business and general administration. The upper-division student pursues professional programs to develop specialized knowledge and skills in a chosen major field. Emphasis is placed upon individual initiative and decision-making skills. Students are trained in problem definition and solution. They are provided fundamental tools and knowledge that will assist them in meeting the leadership responsibilities of business, civic, and personal life.

Degrees

The faculty of the James J. Nance College of Business Administration confers the following degrees:

- Bachelor of Business Administration
- Bachelor of Science in Computer and Information Science

The college also offers programs in conjunction with the College of Graduate Studies leading to the following degrees:

- Doctor of Business Administration
- Master of Accountancy
- Master of Business Administration
- Master of Computer and Information Science
- Master of Labor Relations and Human Resources

For information on these programs, refer to the Cleveland State University Graduate Catalog, available through the College of Graduate Studies.

Minor Programs

Students outside and within the College of Business Administration may have a business minor. For details, contact the departmental offices.
Introduction

1. A minimum of 128 credit hours of academic work is required for all students. One hour of BUS 101, Introduction to College Life, is required of all freshmen.

2. The accumulation of quality points must total a minimum of 2.00 times the number of credit hours taken both for business courses and overall.

3. Distribution of course work will vary within the requirements for each of the college degrees.

The general course requirements of Cleveland State University and the College of Business Administration are listed in this chapter for the lower- and upper-division years. In addition, students complete the requirements of the major field and electives of their choice during the final two years. Students are responsible for satisfying course prerequisites and taking courses in the correct sequence. The College of Business Administration may remove students from classes and/or revoke credit for courses taken out of sequence or without the required prerequisite(s). Students may be required to take additional courses to substitute for courses taken out of sequence. Students with questions about prerequisites or sequencing should see an academic advisor.

NOTE:
Students outside of the College of Business Administration may be allowed to enroll in business courses. However, College of Business Administration accreditation rules require that no more than 25 percent (32 semester hours) of the course work counted toward a non-business bachelor's degree be business courses unless the student also completes all of the Common Body of Knowledge (CBK) courses listed by the College of Business Administration. The 17 CBA courses are: ACT 221, ACT 222, IST 203, IST 305, ECN 201, ECN 202, ECN 302, FIN 351, GAD 250, OMS 201, OMS 202, OMS 311, MKT 301, MKT 351, MLR 321, BLW 411, and MLR 465.

Transfer Policy

Students who wish to transfer into the College of Business Administration should complete the university's requirements, complete English 101 and 102 with 2.00 GPA or better, complete either the calculus sequence with a 2.00 GPA or better or the math concepts sequence with a 2.00 GPA or better, and be in good academic standing.

Declaring A Major

To officially declare a major, a student must finish lower-division requirements and file a declaration of major form at the college office.

Add/Withdrawal Policy

After the drop deadline, a business student must petition to withdraw from a business course. Petition forms may be obtained at the college office. Late registrations or adds are not permitted after the first week of class.

Work Experience

The College of Business Administration recognizes that in today's competitive job market, students who graduate with work experience closely related to their career preparation will have an advantage over other job-seekers. Consequently, the college encourages students to participate in programs that provide this experience, (internships, Cooperative Education, the
Distribution Requirements

Out of the 128 semester hours required for the B.B.A. degree, AACSB accreditation restricts students from taking more than 64 semester hours (50 percent of total credits) in business courses. However, the following courses are excluded from this restriction: OMS 201, OMS 202, ECN 201, ECN 202, and ECN 302. Therefore (64 + 15) 79 semester hours are required, leaving 49 semester hours for general education courses. Each student usually chooses a major field at the beginning of the junior year. However, this choice may be changed with the permission of the program advisors. Consultation with members of the faculty is available to help in making a selection.
Major Field

After completing the lower-division requirements, the student will continue with upper-division core courses (described above) and begin study of the chosen major field. Students should complete courses in the approximate order indicated in the lower- and upper-division schedules. The major fields include accounting, business administration, business economics, finance, information systems, marketing, management and labor relations, and operations management and business statistics. Each specifies minimum credit requirements. Students should refer to the suggested major program schedules for specific details.

Policy on Second Majors

Students seeking a second major who have completed the B.B.A. degree within the past five years will be required to complete only the courses in the second major field. Those who completed the B.B.A. degree more than five years ago will need to complete all College of Business Administration requirements now in effect, including both the courses in the second major field and the courses in business and economics required of all business majors.

Lower-Division Recommended Program

First Semester

- ENG 101 English I
- MTH 151 Math Concepts *
- MTH 152 Math Concepts *
- MTH 153 Math Concepts *
- IST 203 Software Tools for Personal Productivity
- Natural Science with Lab **
- BUS 101 Intro College Life

Total

17

Second Semester

- ENG 102 English II or approved course
- MTH 154 Math Concepts *
- MTH 155 Math Concepts *
- MTH 156 Math Concepts *
- Natural Science **
- ECN 201 Prin of Macro
- African-American Experience **

Total

16

Third Semester

- ECN 202 Prin of Micro ***
- OMS 201 Bus Stat I
- GAD 250 Bus Com (W)
- ACT 221 Intro Act I
- Western Culture

Total

16
Fourth Semester

- Nonwestern Culture **
- OMS 202 Bus Stat II
- ACT 222 Intro Act II
- Social Science **
- Diversity Course **

Total

*The Analytical Geometry & Calculus sequence (MTH 181-182) may be substituted for MTH 151-156

**Before choosing electives, students should consult an advisor or see the Graduation Requirements section of this bulletin.

***Once ECN 201 or 202 or their equivalents have been successfully completed, no additional credit for principles-levels economics courses will be counted toward graduation in the College of Business.

(W) Counts as a writing course for University Requirements. Three writing courses are required.
Weekend Undergraduate Business Administration Major

At-a-Glance

Cleveland State University offers a flexible educational opportunity for the nontraditional student in its fully accredited Weekend Program for the Undergraduate Business Administration Major. Courses for this program are offered on Friday evenings and Saturdays for the convenience of students who work during the week. The program is composed of lower-division and upper-division core courses and business administration major courses.

This program is for you if:

- You have completed two years at a community college and fulfilled CSU's transfer module requirements OR
- You are a part-time student who would like to accelerate degree completion by picking up weekend classes OR
- You want to earn a certificate in a particular field of interest OR
- You are a person wanting to take courses for self-improvement or career advancement

Program Highlights

The weekend program:

- Allows you to create your own field of study
- Increases your transfer opportunities if you have previous college credits
- Provides you with a flexible program for completing a degree on the weekend
- Permits you to earn certificates in areas of special interest
- Enables you to develop breadth of knowledge in the field of business administration
- Gives you the flexibility of taking additional courses and earning other majors in the college

Course Requirements

Business Administration Major Courses

- ACT 361 Tax I
Weekend Undergraduate Business Administration Major

The following sequence of courses was developed by the College of Business faculty. If you enroll for courses each semester as indicated, you will have the proper prerequisites and background to obtain the maximum benefit from these requirements. Any deviation from this pattern should be discussed with your advisor. Students taking courses without proper prerequisites may lose credit and may be required to take additional courses.

Due to the fast pace of this accelerated program, it is extremely important that you attend all classes and keep up with the homework. All Saturday classes will follow the standard university calendar.

For lower-division courses being offered, please refer to the printed schedule. Consult the Undergraduate Bulletin for course descriptions.

Recommended Program for Weekend Undergraduate Business Administration Major

Fifth Semester
- MKT 301 Introduction to Marketing *
- ACT 361 Tax I
- MKT 351 Business, Society, & Government * (W)
- IST 305 Information Technology
- Humanities and Arts

Total: 15 Credits

Sixth Semester
- FIN 351 Introduction to Financial Management *
- OMS 311 Introduction to Production Management *
- MLR 340 Human Resource Management *
- BLW 411 Ethics and Business Law * (W)
- Humanities & Arts

Total: 16 Credits

Seventh Semester
- ECN 302 Intermediate Microeconomics
- MKT 305 Marketing Management
- MLR 321 Organizational Behavior
- MKT 450 Professional Selling & Sales Management
- FIN 353 Introduction to Investments

Total: 17 Credits
Eighth Semester

- MLR 465 Management Strategy & Policy (W) 3
- CIS 466 Decision Support and Expert Systems 3
- FIN 491 Special Problems in Finance 3
- OMS 445 Quality Control Management 3
- Humanities and Arts 3

Total 15

*These courses are offered in the corresponding semester the second year

(W) Denotes Writing Across the Curriculum course
Accounting At-a-Glance

Admission to major: 2.50 grade point average in ACT 221 and ACT 222 and completion of all College of Business Administration lower-division requirements

Special tracks:
Four areas of concentration are available within the accounting major: public accounting, management accounting, governmental or institutional accounting, and internal auditing.

Advising:
Majors are assigned an accounting faculty advisor by the department of accounting and business law. Phone (216) 687-4720

Student organizations: The Accounting Association and Beta Alpha Psi (accounting honorary)

Additional information: Cooperative education opportunities and internships are available

Accounting is one of the most firmly established professions. It offers students career opportunities in business, government, and public accounting. One primary function of accounting is to accumulate and communicate information essential to an understanding of the activities of an enterprise. The accounting program, in addition to its major concern of preparing students for careers in accounting, offers a background in business law, information systems, and tax to qualify the student for leadership in business.

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Major Field Requirements

All accounting majors must complete a minimum of 39 credits in accounting and business law.

Major field requirements are:

- ACT 221 Introductory Accounting I
- ACT 222 Introductory Accounting II
- ACT 321 Cost Accounting I
- ACT 331 Intermediate Accounting I
- ACT 332 Intermediate Accounting II
- ACT 361 Tax I
- ACT 388 Accounting Systems
- ACT 441 Advanced Accounting
- ACT 451 Auditing or ACT 455 Internal Auditing
- ACT - Accounting Elective
- BLW 411 Ethics and Business Law

Accounting Majors take ACT 388 in place of CIS 305
Accounting Majors take BLW 411 in place of MKT 351

Public Accounting.
An Accounting major whose interest is in the direction of public accounting should consider one or more electives from the following:

- ACT 453 Information Systems Auditing
- ACT 455 Internal Auditing
- ACT 456 Advanced Auditing Topics
- ACT 460 International Accounting
- ACT 462 Tax II
- ACT 484 Governmental and Institutional Accounting
- ACT 490 Accounting Internship

Management Accounting.
Majors interested in management accounting should consider one or more electives from the following:

- ACT 422 Cost Accounting II
- ACT 455 Internal Auditing
- ACT 460 International Accounting
- ACT 490 Accounting Internship

Governmental or Institutional Accounting.
Majors interested in governmental or institutional accounting should consider one or more electives from the following:

- ACT 455 Internal Auditing
- ACT 456 Advanced Auditing Topics
- ACT 460 International Accounting
- ACT 462 Tax II
- ACT 484 Governmental and Institutional Accounting
- ACT 490 Accounting Internship

Internal Auditing.
Accounting and non-accounting majors interested in internal auditing should consider one or more electives from the following:

- ACT 453 Information Systems Auditing
- ACT 455 Internal Auditing
- ACT 456 Advanced Auditing Topics
- ACT 490 Accounting Internship

Recommended Program for Accounting

Fifth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACT 321 Cost Accounting I</td>
<td>3</td>
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<tr>
<td>ACT 331 Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ECN 302 Intermediate Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MLR 321 Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301 Introduction to Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>
### Sixth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 332 Intermediate Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>ACT 388 Accounting Systems</td>
<td>3</td>
</tr>
<tr>
<td>OMS 311 Introduction to Production Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 351 Business, Society and Government</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Arts</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</table>

### Seventh Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 441 Advanced Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACT 361 Tax I</td>
<td>3</td>
</tr>
<tr>
<td>BLW 411 Ethics and Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>FIN 351 Introduction to Financial Management</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and Arts</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
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</table>

### Eighth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT 451 Auditing or ACT 455 Internal Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACT Accounting Elective</td>
<td>3</td>
</tr>
<tr>
<td>MLR 465 Management Strategy and Policy *</td>
<td>3</td>
</tr>
<tr>
<td>Accounting Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and Arts</td>
<td>3</td>
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<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

*Counts as a writing course for university graduation requirements. Three writing courses are required. Thus, two electives must also be writing courses.

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**Minor Requirements**

An accounting minor is available to students enrolled in the College of Business and other colleges of the university. For information, contact the department offices at (216)687-4720.

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Business Economics At-a-Glance

Admission to major: Completion of all College of Business Administration lower-division requirements.

Advising: Business economics majors are advised by the College of Business Administration Advising Office.

This program is designed for students interested in the application of advanced economic analysis, principles, and thinking to the management and operation of business organizations and governmental or quasi-public institutions. The curriculum affords an opportunity to couple knowledge of the structure and operation of our economy with the decision theory and problem-solving approach used in modern business administration.

Major Field Requirements

In addition to the degree program's required core courses, students must complete:

- ECN 301 (Intermediate Macroeconomics), and a minimum of four additional courses from the following, for a minimum of 15 credit hours.
- ECN 322 Statistics and Econometrics
- ECN 330 Managerial Economics
- ECN 333 Economics of Health
- ECN 355 Money and Banking
- ECN 360 Public Sector Economics
- ECN 433 Industrial Organization
- ECN 441 Business Fluctuation and Forecasting
- ECN 450 Economics of Law
- ECN 474 Envir. & Natural Resource Economics
- ECN 482 International Economics

Recommended Program for Business Economics

Fifth Semester
- ECN 301 Intermediate Macroeconomics
- MKT 351 Business, Society, and Government *
- MLR 321 Organizational Behavior
- Elective
- Elective

Total

Sixth Semester
- OMS 311 Introduction to Production Management

Total

Credits

3
3
3
4
3

16

3
3
ECN 302 Intermediate Micro Economics  
FIN 351 Introduction to Financial Management  
MKT 301 Introduction to Marketing  
Humanities & Arts  

Total  

16

Seventh Semester

<table>
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<tr>
<td>IST 305 Information Technology</td>
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</tr>
<tr>
<td>ECN Elective</td>
<td>3</td>
</tr>
<tr>
<td>ECN Elective</td>
<td>3</td>
</tr>
<tr>
<td>BLW 411 Ethics and Business Law I</td>
<td>4</td>
</tr>
<tr>
<td>Humanities &amp; Arts</td>
<td>3</td>
</tr>
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Total  
16

Eighth Semester

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MLR 465 Management Strategy and Policy *</td>
<td>3</td>
</tr>
<tr>
<td>ECN Elective</td>
<td>3</td>
</tr>
<tr>
<td>ECN Elective</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities &amp; Arts</td>
<td>3</td>
</tr>
</tbody>
</table>

Total  
16

*Counts as a writing course for university graduation requirements. Three writing courses are required.
Finance

At-a-Glance

Admission to major: Completion of all College of Business Administration lower-division requirements

Advising: Declared finance majors are assigned a faculty advisor; phone: (216) 687-4716.

Student organizations: Student Chapter, Financial Management Association (FMA)

This program provides basic professional competence and skills for students intending to seek employment in the financial departments of industrial and commercial enterprises, banks, savings and loan associations, real estate firms, insurance companies, other financial institutions, and government and public agencies. Courses in the major provide training in methods and techniques and in the underlying theory and concepts which will allow students to meet new demands on their skills when employed in financial positions. Topics covered include assessment of and accounting for risk, the efficient management of funds, the selection of alternative sources of financing, the financial adaptation of the firm and the individual to a dynamic environment, the fundamental and technical valuation of various types of securities, and the determination of appropriate investment policies for the firm and the individual. Most courses include international aspects.

Recommended Program for Finance

Fifth Semester
- IST 305 Information Technology
- FIN 351 Introduction to Financial Management
- ECN 302 Intermediate Microeconomics
- MKT 301 Introduction to Marketing
- MLR 321 Organizational Behavior

Total 16

Sixth Semester
- FIN 353 Introduction to Investments
- FIN 360 Financial Markets and Institutions
- OMS 311 Introduction to Production Management
- MKT 351 Business, Society, and Government
- Humanities and Arts

Total 17
Seventh Semester

- Finance Elective
- Finance Elective
- Finance Elective
- Humanities and Arts

**Total** 15

Eighth Semester

- MLR 465 Management Strategy and Policy *
- Finance Elective
- Accounting Elective
- BLW 411 Ethics and Business Law I
- Humanities and Arts

**Total** 16

*Counts as a writing course for university graduation requirements. Three writing courses are required.

Financial Minors

A finance minor is available to students enrolled in the College of Business and other colleges of the university. For information, contact the department office at (216) 687-4716.
Health Care Administration
At-a-Glance

Courses in Health Care Administration provide students with information about how the health-care system is organized and financed, how care is delivered, career opportunities in health-care administration, and the management of health-care facilities and programs. These courses count as nonbusiness electives for business students. They have been approved as Writing-Across-the-Curriculum courses and they are also approved as social-science sequence courses if both HCA 301 and HCA 420 are successfully completed.

Health Care Administration Courses

- HCA 301 The American Health Care System -- 3 Credits
- HCA 420 Management of Health Care Organizations -- 3 Credits
Information Systems At-a-Glance

The Information Systems (IS) major is designed to prepare a student for a career in information systems. IS, as a field of study, began in the 1960s and has grown in scope and depth. As an academic discipline it encompasses two broad areas: (1) acquisition, deployment and management of Information Technology (IT) resources and services and (2) development of IS infrastructure to support the organization process. The IS function in an organization has a broad responsibility: acquisition, development and management of IT such as computers and communications; development and management of corporate data warehouse; tracking new information technology; assisting users in use of new technology; and assisting in organization-wide IT strategy planning and implementation.

Graduates of IS programs will have a combined preparation in business core courses and applied computing. They will not only have the necessary managerial talent to solve business problems in functional areas such as accounting, finance, marketing and management, but also technical talent to develop and support information systems with a varying degree of scope.

Admission to major: 2.0 grade point average or better and completion of all College of Business Administration lower-division requirements.

Advising: Each student is assigned an adviser by the department after declaring the major; phone: (216) 687-4760.

Student organizations: Association for Computing Machinery (ACM), Computer Science Association.

Major Field Requirements

Effective August 26, 2002

Required Courses:

- IST 203 Software Tools for Personal Productivity
- IST 211 Fundamentals of Systems Development
- IST 221 Information Systems in the Organization
- IST 311 Advanced Programming of Business Systems
- IST 321 Systems Analysis Methods
- IST 331 Modern Database Design and Implementation
- IST 341 Management of Business Networks

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Electives:

Effective December 15, 2002

Choose at least nine hours from the following courses. Courses numbered with a CIS prefix require the approval of a
CIS faculty advisor.

- IST 410 Object-Oriented Programming for Business Applications
- IST 420 Project Management for Information Systems
- IST 430 Knowledge Management
- IST 450 Web-Based Programming

Effective Fall semester, 2003

Beginning with the Fall, 2003 semester, BBA-IS (Information Systems) majors who have not completed more than six hours of IS electives are only required to take six hours of IS electives instead of the current nine hours. Instead, they are required to take IST 465. This requirement does not affect BBA-IS majors who have already completed more than six hours of IS electives.

Math Courses

Although MTH 151-156 may be used to satisfy the math requirement, students are encouraged to take MTH 181-182 as an alternative.

All IST and CIS courses must be passed with a grade of C or better.

The CIS department also offers another degree, the bachelor of science in Computer and Information Science.

Recommended Program for Information Systems

Effective August 26, 2002

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101 English I</td>
<td>4</td>
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<tr>
<td>MTH 151 Math Concepts</td>
<td>1</td>
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<tr>
<td>MTH 152 Math Concepts</td>
<td>2</td>
</tr>
<tr>
<td>MTH 153 Math Concepts</td>
<td>1</td>
</tr>
<tr>
<td>African-American Exper</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science with Lab</td>
<td>5</td>
</tr>
<tr>
<td>BUS 101 Intro College Life</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 102 English II or approved course</td>
<td>3</td>
</tr>
<tr>
<td>MTH 154 Math Concepts</td>
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<tr>
<td>MTH 155 Math Concepts</td>
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</tr>
<tr>
<td>MTH 156 Math Concepts</td>
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</tr>
<tr>
<td>Natural Science</td>
<td>3</td>
</tr>
<tr>
<td>ECN 201 Prin of Macro</td>
<td>3</td>
</tr>
<tr>
<td>IST 203 Software Tools for Personal Productivity</td>
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### Third Semester Credits

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ECN 202 Prin of Micro</td>
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<tr>
<td>OMS 201 Bus Stat I</td>
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<tr>
<td>GAD 250 Bus Com. (W)</td>
<td>7</td>
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<tr>
<td>ACT 221 Intro Act I</td>
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<td>IST 221 Info Sys in org</td>
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<td><strong>Total</strong></td>
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### Fourth Semester Credits

<table>
<thead>
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<tbody>
<tr>
<td>Western Culture</td>
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</tr>
<tr>
<td>OMS 202 Bus Stat II</td>
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</tr>
<tr>
<td>Diversity Course</td>
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<td>ACT 222 Intro Act II</td>
<td>3</td>
</tr>
<tr>
<td>IST 211 Fund. of Sys Dev</td>
<td>3</td>
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<td><strong>Total</strong></td>
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### Fifth Semester Credits

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<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>Social Science</td>
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</tr>
<tr>
<td>Nonwestern Culture</td>
<td>4</td>
</tr>
<tr>
<td>IST 311 Adv Prog of Business Systems</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301 Introduction to Marketing</td>
<td>3</td>
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<tr>
<td>ECN 302 Intermediate Microeconomics</td>
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<td><strong>Total</strong></td>
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### Sixth Semester Credits

<table>
<thead>
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<tbody>
<tr>
<td>MLR 321 Organizational Behavior</td>
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<tr>
<td>OMS 311 Intro to Production Management</td>
<td>3</td>
</tr>
<tr>
<td>IST 321 Systems Analysis Methods</td>
<td>4</td>
</tr>
<tr>
<td>IST 331 Modern Database Design and Imp</td>
<td>4</td>
</tr>
<tr>
<td>MKT 351 Bus, Soc &amp; Gov (W)</td>
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<tr>
<td><strong>Total</strong></td>
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### Seventh Semester Credits

<table>
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<tr>
<th>Course</th>
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<tr>
<td>FIN 351 Introduction to Financial Management</td>
<td>4</td>
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<tr>
<td>BLW 411 Ethics and Business Law I (W)</td>
<td>3</td>
</tr>
<tr>
<td>Management of Business Networks</td>
<td>4</td>
</tr>
<tr>
<td>IST Elective</td>
<td>3</td>
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<tr>
<td>Arts and Humanities</td>
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<td><strong>Total</strong></td>
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### Eighth Semester Credits

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MLR 465 Mgt. Strategy and Policy (W)</td>
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<td><strong>Total</strong></td>
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**Recommended Program for Information Systems**

*Effective Fall, 2003*

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
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<tr>
<td><strong>First Semester</strong></td>
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<td>MTH 153 Math Concepts</td>
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<td></td>
<td>African-American Exper</td>
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<td></td>
<td>Natural Science with Lab</td>
<td>5</td>
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<tr>
<td></td>
<td>BUS 101 Intro College Life</td>
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<tr>
<td><strong>Second Semester</strong></td>
<td><strong>ENG 102 English II</strong></td>
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<tr>
<td></td>
<td>or approved course</td>
<td></td>
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<tr>
<td></td>
<td>MTH 154 Math Concepts</td>
<td>1</td>
</tr>
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<td></td>
<td>MTH 155 Math Concepts</td>
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<td></td>
<td>MTH 156 Math Concepts</td>
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<tr>
<td></td>
<td>Natural Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ECN 201 Prin of Macro</td>
<td>3</td>
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<td></td>
<td>IST 203 Software Tools for Personal Productivity</td>
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</tr>
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<td></td>
<td><strong>Total</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td><strong>ECN 202 Prin of Micro</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>OMS 201 Bus Stat I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GAD 250 Bus Com, (W)</td>
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</tr>
<tr>
<td></td>
<td>ACT 221 Intro Act I</td>
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<td>3</td>
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<td></td>
<td><strong>Total</strong></td>
<td>15</td>
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<tr>
<td><strong>Fourth Semester</strong></td>
<td>Western Culture</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>OMS 202 Bus Stat II</td>
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</tr>
</tbody>
</table>
### Diversity Course
- ACT 222 Intro Act II
- IST 211 Fund. of Sys Dev

**Total**: 16

### Fifth Semester
- Social Science
- Nonwestern Culture
- IST 311 Adv Prog of Business Systems
- MKT 301 Introduction to Marketing
- ECN 302 Intermediate Microeconomics

**Total**: 16

### Sixth Semester
- MLR 321 Organizational Behavior
- OMS 311 Intro to Production Management
- IST 321 Systems Analysis Methods
- IST 331 Modern Database Design and Imp
- MKT 351 Bus, Soc & Gov (W)

**Total**: 17

### Seventh Semester
- FIN 351 Introduction to Financial Management
- BLW 411 Ethics and Business Law I (W)
- Management of Business Networks
- IST Elective
- Arts and Humanities

**Total**: 17

### Eighth Semester
- MLR 465 Mgt. Strategy and Policy (W)
- IST 465 Enterprise Integration Systems
- IST Elective
- Arts and Humanities
- Arts and Humanities

**Total**: 15

---

1. Required as part of the BBA core; does not count toward hours in the major.

2. Students should see a faculty advisor before choosing electives.

3. The first four semesters for Information Systems majors are slightly different from the recommended schedule for other BBA majors.

4. The Analytical Geometry & Calculus sequence (*MTH 181-182*) may be substituted for MTH 151-156.
Information Systems majors take IST 221 instead of IST 305.

Once ECN 201 or 202 or their equivalents have been successfully completed, no additional credit for principles-levels economics courses will be counted toward graduation in the College of Business.

(W)Counts as a writing course for University requirements. Three writing courses are required.
Management and Labor Relations
At-a-Glance

Faced with changing markets, dynamic technologies, globalization, and increasingly diverse work forces, today's managers must be prepared to meet a multitude of challenges and opportunities. The Department of Management and Labor Relations offers courses, degrees, and certificate programs that can prepare students to become effective managers for the 21st century.

The department offers both a major and minor. Students who choose to major in Management and Labor Relations select either the human resource or general management track for concentration. Students completing minors complete core courses, plus a focus area of their choosing.

Courses in the Management and Labor Relations major qualify students for entry-level positions in management, and should enable them ultimately to assume managerial positions in a variety of profit or nonprofit organizations.

Admission to Major: Completion of all College of Business Administration lower-division requirements

Advising: Majors should contact the department at (216) 687-4754 for information on faculty advisor assignment

Student organizations: Student Chapter, Society for Human Resource Management

Evening Program:
Students can complete a major in Management and Labor Relations in the evening. All major courses are offered at least once a year in the evening.

Requirements for Major Field

AACSB accreditation requirements restrict students in the B.B.A. degree program, regardless of major, from taking more than 64 semester credit hours (50 percent of total degree credits) of business courses. The following courses in the B.B.A. curriculum, however, are excluded from this restriction: OMS 201, OMS 202, ECN 201, ECN 202 and ECN 302.

Students majoring in Management and Labor Relations are required to complete these core requirements:

- MLR 301 Principles of Management
- MLR 302 Principles of Labor Relations
- MLR 340 Human Resource Management

In addition to the department's core courses, students are required to select a track and complete course requirements for the track that they have chosen to follow.

Major tracks:
Management and Labor Relations majors choose to follow either the general management track or the human resource management track (see descriptions below).

**General Management Major Track:**
This program focuses on developing a student's technical knowledge of the key management functions of planning, controlling, organizing, leading, and problem-solving. In addition, students are given opportunities to develop basic interpersonal skills vital to successful management of people in organizations.

Students choosing the general-management track must complete 9 credits from the following courses:

- MLR 404 Organizational Theory and Design
- MLR 421 Comparative Labor Systems
- MLR 443 Entrepreneurship
- MLR 447 Cross-Functional Management
- MLR 477 Managerial Skill Development
- MLR 487 International Management

Students must also take two additional MLR elective courses. Students should consult with their advisor to determine appropriate elective courses.

**Human Resource Management Major Track:**
This program focuses on developing a student's knowledge and skills in areas related to the development and management of human resources.

Courses in this track explore many of the contemporary issues facing human resource professionals today, and provide students with an introduction to challenges they will face in their future careers.

Students choosing the Human Resource Management Track must complete 9 credits from the following courses:

- MLR 341 Personnel Compensation, Performance Appraisal, and Job Evaluation
- MLR 342 Staffing and Developing the Organization
- MLR 411 Labor History
- MLR 422 Labor Law
- MLR 431 Employment Practices Law
- MLR 455 Employee Relations and the Quality of Working Life
- MLR 457 Human Resource Information Systems

Students must also take two additional MLR elective courses. Students should consult with their advisor to determine appropriate elective courses.

**Recommended Management and Labor Relations Major Program**

**Fifth Semester**

- MLR 301 Principles of Management  
- MLR 302 Principles of Labor  
- ECN 302 Intermediate Microeconomics  
- MKT 351 Business, Society, and Government  
- FIN 351 Financial Management  

\[ \text{Total} \quad 16 \]

**Sixth Semester**

**Credits**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLR 301 Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>MLR 302 Principles of Labor</td>
<td>3</td>
</tr>
<tr>
<td>ECN 302 Intermediate Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MKT 351 Business, Society, and Government</td>
<td>3</td>
</tr>
<tr>
<td>FIN 351 Financial Management</td>
<td>4</td>
</tr>
</tbody>
</table>

\[ \text{Total} \quad 16 \]
MLR 321 Organizational Behavior  3
MLR 340 Human Resource Management  3
MKT 301 Introduction to Marketing  3
MLR Track Requirement  3
Humanities and Arts  3

Total  15

Seventh Semester

OMS 311 Production Management  3
MLR track requirement  3
MLR track requirement  3
BLW 411 Ethics and Business Law I
(Counts as a writing course for university graduation requirements) *  3
Humanities and Arts  3

Total  15

Eighth Semester

MLR 465 Management Strategy and Policy
(Counts as a writing course for university graduation requirements) *  3
IST 305 Information Technology  3
MLR track requirement  3
MLR track requirement  3
MLR/Business Elective  3
Humanities and Arts  3

Total  18

*Counts as a writing course for university graduation requirements. Three writing courses are required.

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Requirements for MLR Minor

The department also offers an 15-credit minor in Management and Labor Relations. The minor has three core courses, MLR 301, MLR 321, and MLR 340. Students choose the remaining courses from focus areas of either general management, human resource management, labor relations, or health care administration.

Minor Focus Areas:

General Management (pick any two courses)

- MLR 404 Organizational Theory and Design
- MLR 443 Entrepreneurship
- MLR 447 Planning and Control
- MLR 477 Managerial Skill Development
- MLR 487 International Management

Human Resource Management (pick any two courses)

- MLR 341 Personnel Compensation, Performance, and Job Evaluation
- MLR 342 Staffing and Developing the Organization
- MLR 431 Employment Practices Law
- MLR 455 Employee Relations and Quality of Working Life
- MLR 457 Human Resource Information Systems
**Labor Relations** (pick any two courses)

- MLR 302 Principles of Labor Relations
- MLR 411 Labor History
- MLR 421 Comparative Labor Systems
- MLR 422 Labor Law
- MLR 423 Labor Relations in Public Sector Employment

**Health Care Administration**

- HCA 301 American Health Care System
- HCA 420 Management of Health Care Organizations

*Counts as a writing course for university graduation requirements. Three writing courses are required.*
Marketing At-a-Glance

Student organizations: Student chapter, American Marketing Association; telephone: (216) 523-7301.

Marketing is a visible cultural phenomenon and an indispensable business activity for profit and nonprofit organizations worldwide. Marketing generates revenue for the firm by identifying customer needs and responding to them creatively and profitably by developing, pricing, promoting, and distributing goods and services. Because of its central role in the success of a business, marketing represents a promising career path to top management positions.

Students graduating with a major in marketing can qualify for entry-level positions in sales, public relations, and advertising; product management; fund-raising; customer service; marketing research; retailing management; wholesale distribution; marketing planning; and related areas in business, government, and nonprofit organizations.

Marketing Major

Admission to major: Completion of lower-division business requirements

Special tracks: Sales management, consumer marketing, business-to-business marketing, international marketing

Marketing credit hours required for major: A minimum of 24 beyond the College of Business core requirements.

Advising:
Students who declare Marketing as a major will be assigned a faculty advisor by the department. The student should meet regularly for advice on course work and other academic or professional issues. For advising information, call (216) 687-4771 or visit the department office.

Course work:
The major must take three core marketing courses and a minimum of three marketing electives beyond the College of Business core requirements. The major should consult with the faculty advisor in selecting marketing electives that can help the student specialize or focus within a specific area of marketing (such as sales management, retailing, advertising and promotions, business-to-business marketing, international marketing).

Additional Information:
Internships, cooperative education arrangements, independent study projects, and international study programs are available. A major in Marketing can be earned by attending either day or evening classes. At least two electives and all of the required courses are offered regularly in the evening during the academic year.

AACSB accreditation requirements restrict students in the B.B.A. degree program, regardless of major, from taking more than 64 semester credit hours (50 percent of total degree credits) of business courses.

The following courses in the B.B.A. curriculum, however, are excluded from this restriction: OMS 201, OMS 202, ECN 201, ECN 202, and ECN 302.
**Major Field Requirements**

The following courses are required:
- MKT 305 Marketing Management
- MKT 431 Marketing Research
- MKT 420 Buyer Behavior

Minimum of three marketing electives.

Students should note the prerequisites for all courses. Students taking courses without having the proper prerequisites may lose credit and may be required to take additional courses.

Listed below are suggested schedules and sequences for completing this major field of study.

**Recommended Program for Marketing**

**Fifth Semester**

- MKT 301 Introduction to Marketing 3
- MKT 351 Business, Society, and Government 3
  *(Counts as a writing course for university graduation requirements)*
- FIN 351 Introduction to Financial Management 4
- MLR 321 Organizational Behavior 3
- ECN 302 Intermediate Microeconomics 3

Total 16

**Sixth Semester**

- MKT 305 Marketing Management 4
- MKT 431 Marketing Research 4
- IST 305 Information Technology 3
- OMS 311 Introduction to Production Management 3
- Elective (Humanities and Arts) 3

Total 17

**Seventh Semester**

- MKT 420 Buyer Behavior 4
- Marketing Elective 4
- Marketing Elective 4
- BLW 411 Ethics and Business Law I 3
  *(Counts as a writing course for university graduation requirements)*

Total 15

**Eighth Semester**

- MLR 465 Management Strategy and Policy 3
  *(Counts as a writing course for university graduation requirements)*
- Marketing Elective 4
- Marketing/Business Elective 4
- Elective (Arts and Humanities) 3
- Elective (Arts and Humanities) 3

Total 17

*Counts as a writing course for university graduation requirements. Three writing courses are required.*
Marketing Minor

The Marketing minor is recommended for business and nonbusiness students who want to consider sales and marketing careers or want to complement their area of study. Credit hour requirements for the Marketing minor will range from 16 hours for a business student up to a maximum of 19 hours for a nonbusiness student.

Core Courses

- MKT 301 Introduction to Marketing
- MKT 305 Marketing Management

Elective Courses (choose any three courses)

- MKT 321 International Business
- MKT 411 Retail Management
- MKT 420 Buyer Behavior
- MKT 431 Marketing Research
- MKT 441 Advertising and Promotion Management
- MKT 450 Professional Selling and Sales Management
- MKT 452 Business-to Business Marketing
- MKT 454 Internet Marketing
- MKT 461 Global Marketing
Operations Management and Business Statistics At-a-Glance

Admission to major: Completion of all College of Business Administration lower-division requirements

Major:
20 credit hours beyond the college core requirements, with a minimum of 15 credit hours taken in the OMS Department

Minor: 16 credit hours

Special tracks:
There are two areas of concentration within the major: production management program and business statistics program

Advising:
Operations Management and Business Statistics majors are assigned a faculty advisor by the department office.

Student organization: Student Chapter, APICS (American Production and Inventory Control Society)

Additional information: Cooperative education, internship, and travel opportunities are available

Manufacturing and service companies must improve their operation, productivity, and quality in order to compete in today's world economy. The objective of the two major programs in the OMS Department is to prepare students to assume various line and/or staff positions in the production/service operation of business organizations. Students interested in pursuing graduate studies in the future will also find that OMS major programs provide a strong background in quantitative analysis.

Production Management Program

This program is designed for students who wish to begin their professional careers in the production or service operation of an organization.

Manufacturing companies need line managers who are knowledgeable in production processes and operations management techniques. Students interested in manufacturing careers should take the six courses corresponding to the six test modules of CPIM certification of the American Production and Inventory Control Society (APICS), namely OMS 313, 413, 414, 417, 418, and 419. CPIM certification is essential for promotion to managerial positions in the manufacturing area.
Students interested in working in service organizations should take quantitative analysis- and operations research-related courses.

Job opportunities exist in banks, transportation companies, engineering firms, distribution and retail operations, professional and consulting companies, and government organizations.

**Business Statistics Program**

Statistics are widely used in today's business and government organizations. The Business Statistics Program is designed for students who want to begin their careers in operations planning, marketing research, investment and financial analysis, insurance, general management, econometrics, and the administration of government or nonprofit organizations.

**Major Field Requirements**

Students majoring in Operations Management and Business Statistics must take 20 credit hours in the College of Business Administration beyond the college core requirements. These 20 credit-hour courses will be designated as OMS major electives. Among these 20 credit hours of OMS major electives, a minimum of 15 credit hours must be 300- or 400-level courses in the Department of Operations Management and Business Statistics. Up to a maximum of 5 credit hours may be taken outside the department. Students are encouraged to check with their faculty advisor or the department chair when choosing courses outside the OMS Department as OMS major electives.

Students choosing the Production Management Program who are interested in a career in a manufacturing position are strongly encouraged to take at least 15 credit hours from the following list of courses:

- OMS 313 Material and Inventory Management
- OMS 413 Production Planning and Control
- OMS 414 Material and Capacity Requirements Planning
- OMS 417 Just-In-Time Manufacturing
- OMS 418 Production Activity Scheduling and Control
- OMS 419 Manufacturing Systems and Technologies
- OMS 445 Quality Control and Management
- OMS 490 Seminar (International Production/Operations Management)

Students choosing the Production Management Program who are interested in working in a service sector business or government organization are recommended to take at least 15 credit hours from the following list of courses:

- OMS 312 Operations Research
- OMS 313 Material and Inventory Management
- OMS 335 Forecasting
- OMS 412 Supply Chain Management
- OMS 433 Data Analysis
- OMS 445 Quality Control and Management
- OMS 448 Queuing and Simulation
- OMS 490 Seminar (International Production/Operations Management)

Students choosing the Business Statistics Program are recommended to take at least 15 hours from the following list of courses:

- OMS 335 Forecasting
OMS majors may substitute other OMS upper-division courses from the above lists. Depending on the needs of students, the department will also offer OMS 490, Seminar in International Production/Operations Management. As part of this course, students will travel abroad to study manufacturing and operations of international corporations. (There will be travel costs in addition to tuition and fees. The amount of the expense depends on countries visited.)

Additional OMS major electives consist of all OMS 300- and 400-level courses, or courses in other departments of the College of Business Administration.

Students should note the prerequisites for all courses. Students taking courses without having fulfilled the proper prerequisites may lose credit and may be required to take additional courses.

Listed below is a suggested schedule for completing the OMS major.

**Recommended Program for Operations Management and Business Statistics**

- OMS 431 Sampling and Experimental Designs
- OMS 433 Data Analysis
- OMS 445 Quality Control and Management
- OMS 448 Queuing and Simulation
Fifth Semester

- ECN 302 Intermediate Micro-economics 3
- FIN 351 Introduction to Financial Management 4
- OMS 311 Introduction to Production Management 3
- MKT 301 Introduction to Marketing 3
- MLR 321 Organizational Behavior 3

Total 16

Sixth Semester

MKT 351 Business, Society, and Government 3
*Counts as a writing course for university graduation requirements. Three writing courses are required

IST 305 Information Technology 3
OMS Major Elective 4
BLW 411 Ethics and Business Law I 3
*Counts as a writing course for university graduation requirements. Three writing courses are required
Humanities and Arts 3

Total 16

Seventh Semester

Elective (OMS or other) 3
OMS Major Elective 4
OMS Major Elective 4
MLR 465 Management Strategy and Policy 3
*Counts as a writing course for university graduation requirements. Three writing courses are required
Humanities and Arts 3

Total 17

Eighth Semester

- OMS Major Elective 4
- Elective (OMS major) 4
- Elective (Business) 4
- Humanities and Arts 3

Total 15

Return to top

Minor Requirements

The total number of credit hours required to minor in Operations Management and Business Statistics is 16, which are divided into two levels.

Level 1: Students minoring in OMS should take two of the following three courses:

- OMS 201 Business Statistics I
- OMS 202 Business Statistics II
- OMS 311 Production Management

These three courses can be waived based upon proof of prior equivalent course work. Normally, these prior courses
should not be taken more than five years before the declaration of the OMS minor.

**Level 2:** Any 10 credit hours from OMS upper-division courses.

**Recommendations**

The department recommends that students interested in production management take the following:

**Level 1:** OMS 201, OMS 311

**Level 2:** Any three or four of the following: OMS 313, OMS 413, OMS 414, OMS 417, OMS 418, OMS 419, OMS 445.

The department recommends that students interested in business statistics take the following:

**Level 1:** OMS 201, OMS 202

**Level 2:** Any three of the following: OMS 335, OMS 433, OMS 431, OMS 445, OMS 448.

*Counts as a writing course for university graduation requirements. Three writing courses are required*
Certificate Programs

The James J. Nance College of Business Administration, in collaboration with other colleges in the university, offers three certificate programs: Arts Management, Multimedia Advertising, and Business Biotechnology. Certificate programs allow students and employees in area businesses to gain knowledge and proficiency in a specialized field by taking specified courses in selected disciplines.

Students interested in international business careers are encouraged to check the Certificate Programs section of the Arts and Science College in this catalog for International Studies Certificates. These certificate programs can enhance knowledge for those studying international business.

The three certificate programs sponsored or co-sponsored by the College of Business Administration are described below.

Certificate in Arts Management

The Certificate in Arts Management bridges the gap between fine arts leadership and business leadership. Basic business skills are provided to supplement fine arts knowledge. This program benefits the segment of the fine and performing arts majors interested primarily in the business aspects of their field. Admission and advising are provided jointly by the College of Business and the creative or performing arts department of the College of Arts and Sciences.

Requirements for an Interdisciplinary Certificate in Arts Management

Sixteen semester hours of courses in business and fine arts are required to obtain a certificate. The program of study is as follows:

Prerequisites:

- ACT 221 Introductory Accounting I
- IST 203 Software Tools

Arts Experience — 15 semester hours of course work or equivalent practical experience in one of the creative/performing arts.

Required Core Courses:
Certificate in Multimedia Advertising

This interdisciplinary program is offered jointly by the departments of Marketing in the James J. Nance College of Business Administration and Art and Communication in the College of Arts and Sciences. The program provides students with a breadth of information and practical know-how in marketing strategy, advertising, communication, graphics, copywriting, and design. It introduces contemporary advertising theories and practices by integrating traditional media such as print and broadcasting with new media such as computer graphics and the Internet.

Requirements for an Interdisciplinary Certificate in Multimedia Advertising

The certificate program includes 16 semester hours of core courses in visual art, marketing analysis, advertising principles, and advertising applications.

Prerequisites:
• ART 100 Introduction to Studio Art
• MKT 301 Introduction to Marketing
• COM 350 Persuasive Communication and Attitude Change

Required Core Courses:
• ART 244 Computer Graphics I
• COM 360 Principles of Advertising or MKT 441 Advertising and Promotion Management
• COM 450 Media Programming and Research or COM 455 Communication Campaigns or COM 460 Advertising Copywriting and Layout Design
• MKT 420 Buyer Behavior or MKT 431 Marketing Research

Recommended Electives:
• ART 344 Computer Graphics IIA
• ART 345 Computer Graphics IIB
• ART 444 Computer Graphics IIIA
• ART 445 Computer Graphics IIIB
• COM 204 Single-Source Video/Audio Production and Editing
• COM 352 Multi-Source Video Production
• COM 357 Principles of Public Relations
• COM 358 Media Law, Economics, and Ethics
• COM 370 Communication Technology and Social Change
• MKT 305 Marketing Management
• MKT 461 Global Marketing

Certificate in Business Biotechnology

The Biotechnology industry has been identified as one of the fastest growing industries in northeastern Ohio. This industry growth demands a trained workforce with a unique skills set.

The specific skills identified as being required by these employers include basic engineering, quality control, laboratory, biochemistry and computer skills.

The certificate program targets students who are working towards or already have a bachelor's degree and want to add coursework that will enable them to focus on the biotechnology field.

The certificate also targets current employees who are retooling to be more competitive, or want to add credentials to their career portfolio.

Requirements for an Interdisciplinary Certificate in Business Biotechnology

The certificate program requires 19-20 semester hours:
• ESC 120 Introduction to Engineering Design
• OMS 445 Quality Control and Management (prerequisite: OMS 202 Business Statistics II)
- MKT 450 Professional Selling and Sales Management
- OMS 418 Production Activity Scheduling and Control or OMS 412 Supply Chain Management (both have a prerequisite of OMS 311 Production Management, which has a prerequisite of OMS 201 Business Statistics I, which has a prerequisite of MTH 156)
- IME 465 Manufacturing Systems Engineering
- BIO 308/309 Cell Biology and Laboratory (prerequisite: BIO 306 Biochemistry and Molecular Biology)
Bachelor of Science in Computer and Information Science Program

The bachelor of science in Computer and Information Science program is interdisciplinary in structure, offering great flexibility for planning an academic program. It is designed to prepare the student for graduate work in the computer and information science areas or for a professional career which uses the techniques and methodology of computers.

Areas of study in which to concentrate in the program include use of the computer in all branches of engineering, business, sciences, and other areas approved by a student's adviser.

Two majors are offered under the BSCIS degree:

The CIS major is designed for those students who intend to follow applied areas of computer and information science, or who wish to do extra study in a concentration area outside of computer and information science.

The CSC major is designed for those students who want a stronger theoretical and quantitative emphasis or who are planning to pursue graduate study.

The CIS Department also offers the Information Systems major for the Bachelor of Business Administration degree.

The Department of Computer and Information Science has sequences of courses for those who wish to become certified to teach computer science in secondary schools. Currently this sequence will qualify only for a second teaching area. The undergraduate sequence is listed below. There is also a graduate sequence which will lead, with additional study, to a master's degree in computer and information science.

All programs offered by the Department of Computer and Information Science are available in both the day and the evening. The evening sections of beginning courses are offered each semester. Evening sections of electives are typically offered once a year.

Note:
Students in the BSCIS program may be allowed to enroll in business courses. However, College of Business Administration accreditation rules require that no more than 25 percent (i.e., 32 semester hours) of the course work counted toward a non-business bachelor's degree, including the BSCIS degree, may be business or upper-level economics courses unless the student also completes all of the Common Body of Knowledge (CBK) courses listed by the College of Business Administration. The 17 CBK courses are: ACT 221, ACT 222, ECN 201, ECN 202, ECN 302, FIN 351, GAD 250, IST 203, IST 305, MKT 301, MKT 351, MLR 321, MLR 465, OMS 201, OMS 202, OMS 311, and BLW 411.

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CIS Major At-a-Glance

Admission to major: 2.00 grade point average, plus an average of 2.0 or better in MTH 181 and 182 or an average of 2.5 or better in MTH 151-156, plus an average of 2.50 or better in CIS 260 and 265

Special tracks: Many special tracks are possible through the selection of a concentration area (see below).

Advising: Each student is assigned an adviser by the department after declaring the major; phone: (216) 687-4760.

Student organizations: Association for Computing Machinery (ACM), Computer Science Association

Additional information: Each student is required to choose a concentration area outside of computer science and take at least 16 credits in this area. The concentration area may be any field related to computers. Some typical choices are:

- **Business**: accounting, finance, marketing, management and labor relations, or operations management and business statistics
- **Engineering**: most commonly electrical engineering
- **Technology**: most commonly electronic technology
- **Mathematics**
- **Natural Science**: biology, chemistry, or physics

By choosing a concentration area, the student may prepare for a career using computers in that area.

**NOTE:**

This major is distinguished from the CSC major by its greater flexibility and higher elective content. The CIS Department also offers an Information Systems major in the BBA degree.

The following list provides a relatively complete guide to the academic requirements for a program of study in the Computer and Information Science (CIS) major of the Computer and Information Science Department. Each student's specific program requires the approval of the department adviser.

1. **General Education Requirements.** Students should see an adviser in the business college office (BU 219) before choosing electives to satisfy General Education requirements in the following areas: Mathematics or Logic, Arts/Humanities, Non-Western Culture and Civilization, Western Culture and Civilization, Social Science, Natural Science, Human Diversity and the African-American Experience, and Writing Across the Curriculum.

2. **One of two mathematics sequences as follows:**

   (a) (Recommended for all students) MTH 181-182 (Analytical Geometry and Calculus), MTH 220 (Introduction to Discrete Mathematics), MTH 284 (Matrices for Engineers), and **MTH 323** (Statistics with Probability)
(b) (Not available for engineering, science, or quantitative business concentrations) MTH 151-MTH 156 (Mathematical Concepts), MTH 220 (Introduction to Discrete Mathematics), OMS 201 and OMS 202 (Business Statistics)

3. An eight-credit approved sequence in a natural science with laboratory. Recommended sequences are PHY 243 and PHY 244 for students with calculus, and PHY 221 and 222 for others.

4. **Before Fall Semester 2003:** Twenty semester hours of a computer science core program: CIS 260 (Introduction to Programming), CIS 265 (Data Structures and Algorithms), CIS 270 (Files and Large Systems), CIS 335 (Language Processors), and CIS 345 (Operating System Principles)

**Effective Fall Semester 2003:** Twenty-two semester hours of a computer science core program: CIS 260 (Introduction to Programming), CIS 265 (Data Structures and Algorithms), CIS 335 (Language Processors), CIS 340 (C/C++ For Systems Programming), CIS 345 (Operating System Principles), and CIS 368 (Object Oriented Design and Programming).

5. A minimum of 16 semester hours of computer and information science electives

6. Each student must select an area of specialization outside of the Computer and Information Science Department. At least 16 semester hours must be in this area, with at least nine semester hours at the 300 level or higher. The area of specialization must be carefully related to the computer science program and approved by the student's advisor. Sample programs of study showing a concentration in the various areas of business, engineering, science, or mathematics are available from the department. Other programs tailored to the individual student's needs are individually approved

7. At least 46 hours must be earned in courses at the 300 level or above

8. A total of 128 credit hours

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**Suggested Program of Study for the CIS Major**

*Note: courses marked with a W satisfy the Writing Across the Curriculum requirement.*
*Note: before choosing electives, students should consult an advisor*
*Note: Students should consult with a CIS faculty advisor before choosing concentration or CIS electives.*

### First Semester

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
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<tr>
<td>MTH 181 Calculus and Analytical Geometry</td>
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<tr>
<td>CIS 260 Introduction to Programming</td>
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### Second Semester

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<tr>
<td>MTH 182 Calculus and Analytical Geometry</td>
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<tr>
<td>CIS 265 Data Structures and Algorithms</td>
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<td>CIS 270 Files and Large Systems</td>
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<td><strong>Total</strong></td>
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### Third Semester

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<tr>
<td>CIS 335 Language Processors</td>
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<tr>
<td>Arts and Humanities</td>
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<table>
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<tr>
<td>PHY 244 University Physics II (W)</td>
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<td>CIS 345 Operating Systems Principles</td>
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<tr>
<td>Concentration Elective³</td>
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<tr>
<td>Western Culture and Civilization</td>
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<td>MTH 323 Statistics</td>
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<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
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<tbody>
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<td>Open Elective</td>
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<td><strong>Total</strong></td>
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</tbody>
</table>

¹Before choosing electives, students should consult an advisor
²Courses marked with a W satisfy the Writing Across the Curriculum requirement.
Students should consult with a CIS faculty advisor before choosing concentration or CIS electives.

Additional Major Field Requirements

1. In order to declare CIS as the major, the student must have completed two semesters of calculus ([MTH 181-182](#)) with an average of 2.00 or better, or two semesters of math concepts ([MTH 151-156](#)) with an average of 2.50 or better; and CIS 260 (Introduction to Programming) and CIS 265 (Data Structures and Algorithms) with an average of 2.50 or better. The student must also have an overall grade point average of 2.00 or better.

2. All computer and information science courses must be passed with a grade of C or better.

3. Any computer and information science course taken without prior satisfactory completion of all catalog prerequisite courses will not be counted toward fulfillment of graduation requirements.

Students who intend to major in CIS or CSC should see an advisor in the CIS Department as soon as possible (no later than the end of the freshman year), even if they have not yet completed MTH 181 and CIS 260.
Minor in Computer Science

Students minoring in Computer Science are required to take a minimum of 16 credits of Computer and Information Science courses. Eight credits of these are the required courses:

- CIS 260 Introduction to Computer Programming
- CIS 265 Data Structures and Algorithm

The remainder must be drawn from CIS courses at or above the 300 level, with the approval of a CIS faculty adviser.

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Minor in Information Systems

Students minoring in Information Systems are required to take a minimum of 16 credits in the Computer and Information Science Department. Six credits of these are the required courses:

- IST 203 Software Tools for Personal Productivity
- IST 211 Fundamentals of System Development

The remainder can be selected from IST courses. CIS courses may be used as electives with prior written approval of a CIS faculty adviser.

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Secondary Certification (for a second teaching field)

- IST 203 Software Tools for Personal Productivity (3)
- CIS 260 Introduction to Computer Programming (4)
- CIS 265 Data Structures and Algorithms (4)
- CIS 270 Files and Large Systems (4)
- CIS 335 Language Processors (4)
- CIS 345 Operating Systems Principles (4)

In addition, 9 hours of CIS electives would be required. Completion of the above courses is required for those seeking certification in computer science as a second teaching field.

Dual certification in computer science and another area is required for those seeking initial certification with a BSCIS degree. This would require taking the courses required by both computer science and the other area and using the other area as the concentration area for the BSCIS degree. The methods and student teaching course would be taken in the other area. Students are advised to consult the Department of Computer and Information Science and the College of Education at an early stage if they wish to pursue this program, especially if a degree is being sought.

Courses for the certification requirement may also be taken at the graduate level. For a list of relevant CIS courses, see the CSU Graduate Catalog.
Second Major

Students in either the CIS or CSC program who choose a concentration in mathematics can, by suitably choosing electives and with no additional course work, complete all mathematics requirements for the bachelor of science degree with a major in Mathematics. Students can receive this additional degree by satisfying the College of Arts and Sciences foreign language and culture requirement in addition to CIS/CSC requirements. See your CIS Department advisor and an advisor in the Mathematics Department for further information.

Students in either the CIS or CSC program who choose a concentration in physics can, by suitably choosing electives, complete all physics requirements for the bachelor of arts degree with a major in Physics. Students can receive this additional degree by taking MTH 281 and satisfying the College of Arts and Sciences foreign language and culture requirement in addition to CIS/CSC requirements. CIS majors will need to take physics courses beyond the minimum CIS requirements. See your CIS Department advisor and an advisor in the Physics Department for further information.
The College of Education was created to educate men and women who desire to serve as teachers or as other professionals in related areas. The college offers a variety of baccalaureate programs for teacher education and graduate programs for the advancement and enrichment of persons active in the education profession. The College of Education’s conceptual model for teacher education is “The Teacher as a Responsive, Reflective Professional: A Partner in Learning.” Graduates of Cleveland State University’s teacher education programs are known for distinctive abilities that reflect the four knowledge bases that serve as a foundation for this model: professionalism, partnership, inquiry, and contextualism.

Degree and Teaching Licensure

The faculty of the College of Education confers the bachelor of science in Education degree with majors in Early Childhood Education, Middle Childhood Education, Physical Education, Special Education, and Allied Sports Professions (Exercise/Fitness Specialist or Sport Manager). In addition, undergraduate students and college graduates may earn State of Ohio Teaching Licenses in early childhood (grades PreK-3), middle childhood (grades 4-9), physical education (grades PreK-12), special education (grades K-12 in mild/moderate or moderate/intensive educational needs), adolescent/young adult (grades 7-12 in a variety of content areas), visual arts (grades PreK-12), music (grades PreK-12), and foreign language (grades PreK-12 in French or Spanish).

At-a-Glance

Degree granted: bachelor of science in Education

Endorsements: Teacher licensure

Minimum hours for degree: 125 semester hours

Minimum hours for minor:
32 semester hours (applies only to those undergraduate students seeking adolescent licensure)

Admission to professional education course work: 2.50 cumulative grade point average; 75 or higher on COMPASS writing proficiency test; grade of C or better on college level math course; Intake Interview.

Financial assistance:
Incentive grants; Teacher Scholarship program (details are available in the college advising office, Rhodes Tower 1401.)

Awards:
Golden Apple for Academic Excellence, Award for Exceptional Achievement, and Outstanding Performance for Student Teaching. The Department of Health, Physical Education, Recreation and Dance confers Major of the Year, Academic Achievement, and the Jane Pease Service Awards.

Central advising office: Education Student Services Center, Rhodes Tower, Room 1401; (216) 687-4625

General Requirements

- Admission to the College
- Acceptance into Teaching Licensure or Allied Sports Professions
- Title II Report Card

Admission to the College

Undergraduate students planning to major in Early Childhood Education, Middle Childhood Education, Physical Education, Special Education, Exercise/Fitness Specialist, and Sport Manager must be admitted to the College of Education. A student should apply for admission to the college at least one semester in advance of the start of course work in the major. A cumulative grade point average of at least 2.50 is required for admission.

Undergraduate students seeking a teaching license in adolescent/young adult, visual arts, music, French, or Spanish should seek admission to the College of Arts and Sciences. These students, except for those in music, will complete a minor in education.

College graduates seeking a teaching license as a post-baccalaureate student must gain admission to the university through the Undergraduate Admissions Office and then to the College of Education through the College Advising Office, Rhodes Tower Room 1401. These individuals must also have a cumulative grade point average of at least 2.50 and meet requirements listed below for acceptance into a teacher license program.

Acceptance into Teaching Licensure or Allied Sports Professions

- Undergraduate Students
- Professional Standards
- Course Load
- Student Teaching
- PRAXIS II
- Teaching Licensure Application
- Entry-Year Program
- Student Responsibility
- Title II Report Card

Undergraduate or post-baccalaureate students must meet certain requirements to be accepted into a licensure or allied sports professions program and be eligible for professional course work at the 300 level and above. These requirements are as follows:

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Undergraduate Students

Students planning to major in early childhood education, middle childhood education, special education (mild/moderate or moderate/intensive), or physical education must be admitted to the College of Education. A student should apply for admission to the College of Education at least one semester in advance of desired entrance. In addition, students are required to meet certain standards and requirements of the college to be fully
accepted into a licensure program and prior to registering for professional course work in education beyond **EDB 200** (Teaching as a Profession). These standards and requirements are as follows:

1. The student must have an overall grade point average of 2.50 or better at the time of enrollment in professional education courses with the exception of **EDB 200**. All course work taken at other institutions is counted in calculating this grade point average until the student has completed 12 or more credit hours at Cleveland State University, after which only the Cleveland State grade point average is considered.

2. The student must have completed or be in the process of completing 30 semester hours of course work.

3. The student must demonstrate proficiency in writing by scoring 75 or higher on the COMPASS test.

4. The student must demonstrate proficiency in mathematics by earning a grade of C or higher in a college-level mathematics course.

5. The student must satisfactorily complete an intake interview with an advisor in the College of Education Student Services Center, Rhodes Tower Room 1401, or, in the case of Physical Education, or Allied Sports Professions, with the coordinator of Undergraduate Student Services in the Physical Education Building Room 228. (Requirements 1-3 above must be met prior to the intake interview.)

6. The student must sign a Verification of Good Moral Character Form in the presence of the intake interview advisor (not required for Allied Sports Professionals).

**Professional Standards**

All students enrolled in degree and/or licensure programs in the College of Education must meet the following standards:

1. All students must achieve a cumulative Cleveland State University grade point average of at least 2.50.

2. All students must maintain a grade point average of at least 2.75 for professional course work in education. No grades of D will be accepted. No grade lower than B will be accepted in the practicum experience. Professional course work may be repeated with the approval of the college advising office.

3. All students seeking licensure in physical education, music, visual arts, foreign language, middle childhood, or adolescent/young adult areas must achieve a grade point average of at least 2.50 in their major course work.

4. Students are urged to participate extensively in school and community service as part of their professional preparation. Each student will have opportunities for field experience within the context of a number of professional courses required by the college. However, students also are encouraged to participate in voluntary group leadership activities in community agencies. Assistance in locating such opportunities is provided by the college.

**Course Load**

The normal course load is 16 hours. Students may carry a maximum of 19 hours per semester, but they are advised to do so only rarely, when there is clear academic justification. Students who wish to take an overload (20 hours) must obtain an overload form approved by advisor.

**Student Teaching**

Student teaching, required of all students being recommended for licensure by Cleveland State University, is open to those students who meet the requirements specified by the College of Education. In addition to those professional
standards, grade point average requirements listed above, the following must be completed prior to approval to student teach:

1. A student must submit a negative TB (tuberculosis) test report (Mantoux version)
2. A student in early childhood, physical education, mild/moderate, or moderate/intensive must submit verification of having completed a series of three Hepatitis B shots
3. A student must complete a civilian background check (fingerprint check) and submit a copy of a Clearance Report from the Bureau of Criminal Identification and Investigation (BCI)
4. An undergraduate student must be enrolled in the appropriate college and must have declared the appropriate major or minor (students in adolescent/young adult programs, music, visual arts, and foreign-language education should be enrolled in the College of Arts and Sciences and, except for music, should declare minors in education. Students in other licensure programs should be enrolled in the College of Education and declare the appropriate major in Education).
5. Application for student teaching must be filed by September 15 (for spring placement) or February 1 (for fall placement)
6. At least two semesters of academic work must be completed in the College of Education before a student is eligible for student teaching
7. A student must have completed a minimum of 100 credit hours prior to student teaching. All required professional education courses must be completed

Additional information about all standards and requirements is available in the College Advising Office, Rhodes Tower Room 1401

Note:
Students in those programs requiring a practicum experience must complete the first four of the above requirements before the start of the practicum experience in addition to all specified prerequisite course work. Application for practicum must be filed by September 15 (for spring placement) or February 1 (for fall placement).

Note:
A student may not repeat student teaching or practicum without approval of the Petitions Committee of the College. For information about this procedure, visit the College Advising Office, Rhodes Tower, Room 1401.

PRAXIS II

All students are required to pass PRAXIS II examinations in two areas: Principles of Learning and Teaching (K-6, or 5-9, or 7-12) and Specialty Area Tests. Minimum scores are set by the Ohio Department of Education. Endorsement for teaching licensure cannot be given if the student fails to meet the cut-off score in any of these areas. That component of the test not successfully met may be repeated until a passing grade is achieved. Brochures containing sample questions and other pertinent information are available in the Office of Testing Services, UC 253B, or in the College Advising Office.

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Teaching Licensure Application

Students apply for licensure through the College of Education Advising Office. Application forms are distributed and explained during orientation to student teaching. Additional forms are available in Rhodes Tower, Room 1401. Final approval of candidates for licensure is made by the dean of the College of Education.

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**Entry Year Program**

Students completing all requirements for initial teaching license receive a State of Ohio Provisional Teaching License good for two years. These individuals will be granted a full five-year Professional Teaching License upon successful completion of an Entry-Year Program as a professional teacher. The Entry Year includes a formal program of support and mentoring designed to foster professional growth. Success in the Entry Year also requires teachers to pass the Praxis III assessment administered by Praxis III assessors specially trained by the State of Ohio. Complete information on this process is available in the College Advising Office, Rhodes Tower Room 1401.

**Student Responsibility**

Each student is responsible for meeting the curricular requirements and following the academic regulations of the college and university. No university official can relieve the student of that responsibility. Petitions for exceptions to regulations or requirements may be approved only by an appropriate faculty committee. Petition forms may be obtained from the College Advising Office, Rhodes Tower, Room 1401, (216) 687-4625.

**Title II Report Card**

All institutions of higher education which prepare teachers must make a public report each year of important aspects of their programs, including the PRAXIS II examination passage rates for the students who complete teacher preparation programs at their institutions. The following table summarizes these passage rates for the most current reporting year (1999-2000). A copy of the full public report for Cleveland State University can be found on the College of Education web site (www.csuohio.edu/coe/).

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<td># Passing Praxis II at CSU</td>
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<td>English Lang., Lit. and Comm.</td>
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<td><strong>Summary Total and Pass Rate</strong></td>
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Bachelor of Science in Education (B.S. in Ed.) Program

The bachelor of science in education degree is conferred upon students who complete college requirements in the following major fields: early childhood education, middle childhood education, physical education, special education (mild/moderate or moderate/severe educational needs), or Allied Sports Professions (Exercise Fitness Specialist or Sport Manager).

Degree and Licensure Requirements

In addition to meeting the university requirements for the baccalaureate degree (see the section on Common Requirements in the chapter on University Regulations), candidates for the degree of bachelor of science in education and teacher licensure must meet the following requirements of the college:

1. Maintenance of at least a 2.50 cumulative grade point average
2. Maintenance of at least a 2.75 grade point average in professional course work
3. At least a 2.50 grade point average in major coursework. (Applies to those in adolescent/young adult teaching areas, middle childhood, physical education, visual arts, music, and allied sports professions)
4. Successful completion of student teaching and passing of required Praxis II examinations. (Applies to those in teacher licensure)
5. Completion of between 125 and 137 semester hours of course work

General Education Requirements

(60 to 62 hours)
The general education requirements for all B.S. Ed. programs meet those established by the Cleveland State University Curriculum Committee and approved by University Faculty Senate. General Education Requirements for these programs are found with the program descriptions and requirements which follow this section. All students should consult program checklists in the College of Education Advising Office (Rhodes Tower 1401) for up-to-date general education requirements. Students entering the university as first-year students must enroll in the Introduction to University Life course.
Early Childhood Education At-a-Glance

Degree Granted: bachelor of science in Education

Minimum Hours Required for Degree: 133 to 153 semester hours

Teaching Credential:
Ohio two-year provisional teaching license in early childhood (ages 3 to 8 and grades PreK-3, including children with mild/moderate educational needs). Requires successful completion of all program requirements and acceptable scores on applicable PRAXIS II examinations as mandated by the State Board of Education.

Accreditation:
Having met current curriculum guidelines set by the National Association for the Education of Young Children, the Early Childhood Education Program is accredited by the National Council for Accreditation of Teacher Education.

Admission to Major:
Must be admitted to the College of Education (requires 2.50 cumulative grade point average). Must also be accepted into a College of Education program. This requires 2.50 cumulative grade point average; 75 or higher on COMPASS writing proficiency test; grade of C or better on college-level math course; an intake interview; and verification of good moral character.

Advising:
Admission and program guidelines may be secured from the College Advising Office, Rhodes Tower Room 1401, (216) 687-4625. Continuing academic, personal, and professional advising is available from assigned faculty advisors and the College Advising Office.

Evening Program:
Classes that do not require field work are frequently offered in the evenings; some are offered during the day. Students must be available for field placements in area schools during the day.

Department Office: Teacher Education; 1319 Rhodes Tower, (216) 687-4600.

The Early Childhood Education Program has been specifically designed to prepare candidates for teaching children from ages 3 to 8, including typically developing youngsters and those with mild and moderate disabilities. Taken as a whole, the curriculum focuses on the development of practices associated with high-quality early childhood education for young children representing diverse cultures and abilities. These practices respect all children and provide them with equal opportunity to develop and grow emotionally, socially, physically, and intellectually. The development of professional knowledge and skills is aided by reflective practice and inquiry. To that end, the observation of children and early childhood settings accompanies relevant study, is followed by on-site practice, and culminates in supervised student teaching.

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A. General Education Requirements
Course work in this area will total 58 to 78 semester hours.

1. Writing

- ENG 101 English I (4 hours)
- ENG 102 English II (3 hours)

(Note: The three-course Writing Across the Curriculum requirement will be met by EDB 301, EDB 302, ECE 300, EDL 301, and EDL 312)

2. Mathematics and Logic

- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)

3. Arts and Humanities

- ART 252 or ART 253 Introduction to Western Art (4 hours)
- Literature course to be selected from approved list (3 to 4 hours)
- One additional course from approved list (3 to 4 hours)

4. Western Culture and Civilization

- HIS 101 or HIS 102 Western Civilization (4 hours)

5. Non-Western Culture and Civilization (select one course from following list)

- ANT/PSC 227 Power, Authority, and Society in Non-Western Cultures (4 hours)
- ENG/MLA 204 Non-Western Literature (3 hours)
- ENG 210 Native American Literature (3 hours)
- HIS 165 Introduction to Latin American History (4 hours)
- HIS 175 Introduction to African History (4 hours)
- HIS 373 Contemporary Japan in Historical Perspective (4 hours)
- HIS 374 Revolutionary Movements in Modern China (4 hours)
- HIS 377 History of Islamic Civilizations (4 hours)

6. Social Sciences

- PSY 220 Child Development (3 hours)
- SPH 229 Speech and Language Development (3 hours)
- Other course from approved list

7. Natural Sciences

- BIO 106 Human Biology in Health and Disease (3 hours)
- BIO 107 Human Biology Laboratory (2 hours)
- GEO 100 Introduction to Geology (3 hours)
- GEO 101 Introduction to Geology Lab (1 hour)

8. Human Diversity

- EDC 300 Diversity in Educational Settings (3 hours)

Select 1 course from approved list (0 to 4 hours)
(Note: May be course used to fulfill requirements in another area.)

10. Health

- **HED 210 Personal Health** (3 hours)

11. Foreign Language

- 2 semesters of foreign language or 2 semesters of American Sign Language (ASL) and 1 foreign culture course (0-12 hours)

B. Professional Education Requirements

Core course work in education and related professional experiences are included in this area for a total of 13 hours. Where applicable, all prerequisites must be met prior to enrollment in these courses. In addition, EDB 301 and EDB 302 must be taken concurrently.

**Foundations**

- **EDB 200 Teaching as a Profession** (2 hours)
- **EDB 300 Educational Technology** (2 hours)
- **EDB 301 Social Foundations of Education** (3 hours)
- **EDB 302 Psychological Foundations of Education** (3 hours)
- **ECE 300 Introduction to Early Childhood Education** (3 hours)

C. Concentration Requirements

Specialized course work in early childhood education and related professional experiences are included in the following areas for a total of 45 hours. Because certain courses in this sequence must be taken concurrently or in a prescribed order, students are strongly advised to seek assistance from the College's Advising Office (RT 1401) before registering for classes.

**Curriculum and Methods**

- **ECE 401 Developmental Curriculum for Early Childhood Programs** (4 hours)
- **ECE 402 Teaching Methods in Early Childhood Education** (4 hours)
- **ECE 403 Teaching Young Children with Mild and Moderate Disabilities** (3 hours)

**Literacy**

- **EDL 300 Phonics Assessment and Instruction** (3 hours)
- **EDL 301 Beginning and Intermediate Reading Instruction and Assessment** (3 hours)
- **EDL 311 Emergent Literacy** (3 hours)
- **EDL 312 Literature-Based Reading Methods for Children** (3 hours)

**Special Methods**

- **ESE 415 Assessing Young Children** (4 hours)
- **ECE 415 Mathematics Instruction in Preschool and the Primary Grades** (3 hours)
- **ECE 416 Social Studies Instruction in Preschool and the Primary Grades** (3 hours)
- **ECE 417 Science Instruction in Preschool and the Primary Grades** (3 hours)
- **EDC 309 Art Methods for the Classroom Teacher** (2 hours)
- **MUS 301 Music Fundamentals and Methods for the Classroom Teacher** (4 hours)
- **PED 316 Health and Physical Education for the Classroom Teacher** (3 hours)

D. Culminating Experiences
• ECE 412 Collaboration with Families and Professionals in Early Childhood Settings (4 hours)
• EST 370 Practicum in Early Childhood Education (3 hours)
• EST 480 Student Teaching in Early Childhood Education (10 hours)
Middle Childhood Education At-a-Glance

**Degree Granted:** Bachelor of Science in Education

**Specialization Options:** The program provides for discipline-specific preparation in at least two teaching fields to be selected from the following alternatives: reading and language arts, mathematics, science, social studies.

**Minimum Hours Required for Degree:** 138 to 170 semester hours

**Teaching Credential:**
Ohio two-year provisional teaching license in Middle Childhood (ages 8 to 14 and grades 4 to 9). Requires successful completion of all program requirements and acceptable scores on applicable PRAXIS II examinations as mandated by the State Board of Education

**Accreditation:**
Having met current curriculum guidelines set by the National Middle School Association, the Middle Childhood Education Program is accredited by the National Council for Accreditation of Teacher Education.

**Admission to Major:**
Must be admitted to the College of Education (requires 2.50 cumulative grade point average). Must also be accepted into a College of Education program. This requires 2.50 cumulative grade point average; 75 or higher on COMPASS writing proficiency test; grade of C or better on college-level math course; an intake interview; and verification of good moral character.

**Advising:**
Admission and program guidelines may be secured from the College Advising Office, Rhodes Tower Room 1401, (216) 687-4625. Continuing academic, personal, and professional advising is available from assigned faculty advisors and the college advising office.

**Evening Program:**
There is no evening program since students must be available for field placements in area schools during the day. However, those classes that do not require field work are frequently offered in the evenings.

**Department Office:** Teacher Education; 1319 Rhodes Tower, (216) 687-4600.

The Middle Childhood Education Program is intended to prepare candidates for teaching children from ages 8 to 14. Taken as a whole, the curriculum focuses on the nature and needs of early adolescents as they particularly relate to the design, delivery, and evaluation of culturally and developmentally responsive instruction. Throughout the program, the acquisition of professional knowledge and skills is aided by reflective practice and inquiry. To that end, the observation of middle- and junior-high school students and settings accompanies relevant study, is followed by on-site practice, and culminates in supervised student teaching. As previously noted, the program provides for concentrated study in at least two teaching fields.

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A. General Education Requirements

Course work in this area will total 57 to 64 hours.

1. Writing
ENG 101 English I (4 hours)

ENG 102 English II (3 hours)

(Note: The three-course Writing Across the Curriculum requirement will be met by EDB 301, EDB 302, EDL 301, EDM 313, and ESE 400).

2. Mathematics and Logic

MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)

MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)

MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)

3. Arts and Humanities

Two literature courses to be selected from approved list (6 to 8 hours)

One additional course from approved list; may not be an offering of the English Department (3 to 4 hours)

4. Western Culture and Civilization

HIS 101 or HIS 102 Western Civilization (4 hours)

5. Non-Western Culture and Civilization (select one course from following list)

ANT/PSC 227 Power, Authority, and Society in Non-Western Cultures (4 hours)

HIS 165 Introduction to Latin American History (4 hours)

HIS 175 Introduction to African History (4 hours)

HIS 373 Contemporary Japan in Historical Perspective (4 hours)

HIS 374 Revolutionary Movements in Modern China (4 hours)

HIS 370 World History (4 hours)

6. Social Sciences

PSC 111 American Government (4 hours)

PSY 220 Child Development (3 hours)

PSY 221 Adolescent Psychology (3 hours)

7. Natural Sciences

BIO 106 Human Biology in Health and Disease (3 hours)

BIO 107 Human Biology Laboratory (2 hours)

GEO 100 Introduction to Geology (4 hours)

GEO 100 Introduction to Geology Lab (1 hour)

8. Human Diversity
EDC 300 Diversity in Educational Settings (3 hours)


Select 1 course from approved list (0 to 4 hours)

Note: May be course used to fulfill requirements in another area.

10. Wellness

HPR 101 Wellness as a Lifestyle (1 hour)

B. Professional Education Requirements

Core course work in education and related professional experiences are included in this area for a total of 44 hours. Because certain courses in this sequence must be taken concurrently or in a prescribed order, students are strongly advised to seek assistance from the college's advising office (RT 1401) before registering for classes.

1. Group A — Foundations

EDB 200 Teaching as a Profession (2 hours)

EDB 300 Educational Technology (2 hours)

EDB 301 Social Foundations of Education (3 hours)

EDB 302 Psychological Foundations of Education (3 hours)

2. Group B — Literacy

EDL 300 Phonics Assessment and Instruction (3 hours)

EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)

EDL 305 Reading in the Content Areas (3 hours)

EDL 313 Literature-Based Reading Methods for Adolescents (3 hours)

3. Group C — Curriculum & Methods

EDB 303 Teaching and Management in the Middle School (3 hours)

EDB 304 History and Philosophy of the Middle School (1 hour)

ESE 404 Teaching Students of Varying Abilities (3 hours)

4. Group D — Culminating Experiences

EDB 400 Communication and Collaboration (2 hours)

EST 371 Practicum in Middle Childhood Education (3 hours)

EST 481 Student Teaching in Middle Childhood Education (10 hours)

C. Licensure/Concentration Requirements

Concentrated course work in at least two teaching fields is included in this area for a total of 37 to 62 hours. Eligibility for enrollment in these courses demands the prior completion of any prerequisites.
Reading and Language Arts
(17 to 19 hours)

COM 225 Media Writing or ENG 304 Creative Writing for Teachers (4 hours)
COM 242 Public and Professional Speaking or DRA 225 Principles of Acting (3 to 4 hours)
EDM 313 Teaching and Assessing Language Arts in the Middle School (4 hours)

ENG 206 Literature and American Culture (3 hours)
EDL 408 Applied Linguistics for Teachers or ENG 310 Traditional Grammar or ENG 311 Elements of Linguistics (3 to 4 hours)

2. Mathematics (20 hours)

EDM 315 Teaching and Assessing Mathematics in the Middle School (4 hours)
MTH 115 Applied Algebra (4 hours)
MTH 147 Statistical Concepts with Applications (4 hours)
MTH 151/152/153 Mathematical Concepts (4 hours)
MTH 154/155/156 Mathematical Concepts (4 hours)

3. Science (32 hours)

BIO 103 and BIO 109 Environmental Ecology and Lab (5 hours)
CHM 151 and CHM 156 Chemistry Around US and Lab (4 hours)
CHM 251 and CHM 256 College Chemistry I and Lab (4 hours)
EDC 418 Physical Science for the Classroom Teacher (3 hours)
EDC 419 Environmental Science (4 hours)
EDM 317 Teaching and Assessing Science in the Middle School (4 hours)
GEO 101 Introductory Geology (4 hours)
PHY 202 Astronomy (4 hours)

4. Social Studies (30 hours)

ECN 201 Principles of Macroeconomics (3 hours)
ECN 202 Principles of Microeconomics (3 hours)
EDM 316 Teaching and Assessing Social Studies in the Middle School (4 hours)
HIS 200 Introduction to Geography (4 hours)
HIS 111 United States History to 1877 (4 hours)
HIS 112 United States History after 1877 (4 hours)
HIS 306 History of Ohio (4 hours) or HIS 400 Local History Seminar (4 hours)
PSC 221 Comparative Politics (4 hours) or PSC 231 International Politics (4 hours)
Multi-Age Programs in Foreign Language, Music, and Visual Arts

- Multi-Age Licensure in Foreign Language Education, Grades PreK to 12
- Multi-Age Licensure in Music Education, Grades PreK to 12
- Multi-Age Licensure in Visual Arts Education, Grades PreK to 12

Multi-Age Licensure in Foreign Language Education, Grades PreK to 12

(84 hours)

1. Professional Education

   Group A Foundations (10 hours)
   - EDB 200 Teaching as a Profession (2 hours)
   - EDB 300 Educational Technology (2 hours)
   - EDB 301 Social Foundations of Education (3 hours)
   - EDB 302 Psychological Foundations of Education (3 hours)

   Group B — Curriculum and Methods (13 hours)
   - EDB 305 Teaching and Management in the Secondary School (3 hours)
   - EDC 312 Foreign Language Education in the Elementary Schools (2 hours)
   - EDC 313 Foreign Language Education in the Secondary Schools (2 hours)
   - EDL 305 Reading in the Content Areas (3 hours)
   - ESE 400 Teaching Students of Varying Abilities (3 hours)

   Culminating Experiences (15 hours)
   - EDB 400 Communication and Collaboration (2 hours)
   - EST 374 Practicum in Foreign Language Education (3 hours)
   - EST 484 Student Teaching in Foreign Language Education (10 hours)

Concentration in French (46 hours)

Select one or begin at placement level
- FRN 101 French I and/or FRN 102 French II (10 hours)
- FRN 201 Culture and Civilization (4 hours)
- FRN 202 World Affairs (4 hours)
- FRN 301 Composition and Conversation (4 hours)
- FRN 402 Advanced Composition and Conversation (3 hours)
- FRN 315 French Phonetics and Diction (3 hours)
- FRN 345 French Civilization (3 hours)
- FRN 371 Literature Survey I or FRN 372 Literature Survey II (3 hours)

Select from list below to total 46 hours in major; at least 8 hours of the total must be at 400 level; no more than 8 hours of the total can be at 200 level

- FRN 200/300 Practicum in French (1-6 hours)
- FRN 240/340/440 Field Study (1-6 hours)
- FRN 255/355 Translation Workshop (3 hours)
- FRN 296/396/496 Independent Study (1-6 hours)
- FRN 310 Advanced Oral Studies (3 hours)
- FRN 365 Readings in French Literature (3 hours)
- FRN 434 Special Topics in French Linguistics (3 hours)
- FRN 491 Senior Honor Project (3 hours)
- FRN 493 Special Topics in Culture & Civilization (3 hours)
- FRN 494 Special Topics in French Literature (3 hours)

**Concentration in Spanish** (46 hours) Select one or begin at placement level

- SPN 101 Spanish I and/or SPN 102 Spanish II or SPN 111 First Year Review (3-10 hours)

Select at least 8-12 hours from following, with no more than 4 hours at 200 level. Students beginning at 300 level should select 8 hours

- SPN 201 Culture and Civilization (4 hours)
- SPN 202 Literature Survey (4 hours)
- SPN 301 Advanced Spanish: Oral Skills Emphasis (4 hours)
- SPN 302 Advanced Spanish: Writing Skills Emphasis (4 hours)
- SPN 393 Special Topics in Spanish Language Study (3 hours)
- SPN 405 Advanced Grammar and Stylistics (3 hours)
- SPN 315 Spanish Phonetics (3 hours)
- SPN 345 Spanish Civilization or SPN 346 Latin American Civilization (4 hours)
- SPN 371 Introduction to Spanish Literature or SPN 372 Introduction to Spanish American Literature (4 hours)

Select from list below to total 46 hours in major; at least 8 hours of total must be at 400 level

- SPN 201 Culture and Civilization (4 hours)
- SPN 202 Literature Survey (4 hours)
- SPN 205 Intermediate Spanish Studies (4 hours)
- SPN 240/340/440 Field Study (1-6 hours)
- SPN 241/341/441 Spanish Field Study (1-6 hours)
- SPN 245 Hispanic Resources of Cleveland (3 hours)
- SPN 293/393/493 Special Topics in Spanish (3 hours)
- SPN 301 Advanced Spanish: Oral Skills Emphasis (4 hours)
- SPN 302 Advanced Spanish: Writing Skills Emphasis (4 hours)
- SPN 315 Spanish Phonetics (3 hours)
- SPN 345 Spanish Civilization (4 hours)
- SPN 346 Latin American Civilization (4 hours)
- SPN 365 Readings in Hispanic Literature (3 hours)
- SPN 371 Introduction to Spanish Literature (4 hours)
- SPN 372 Introduction to Spanish American Literature (4 hours)
- SPN 405 Advanced Grammar and Stylistics (3 hours)
- SPN 416 Studies in Spanish Linguistics (3 hours)
Multi-Age Licensure in Music Education, Grades PreK to 12

(86 hours)

1. Professional Education (24 hours)
   - MUS 205 Orientation to Music Education (1 hour)
   - MUS 290 Elementary Field Experience (2 hours)
   - MUS 300 Secondary Field Experience (3 hours)
   - EDB 305 Teaching and Management in the Secondary School (3 hours)
   - EDB 400 Communication and Collaboration (2 hours)
   - ESE 400 Teaching Students of Varying Abilities (3 hours)
   - EST 483 Multi-Age Student Teaching (10 hours)

2. Studies in Music: Basic Musicianship/Performance (62 hours)
   - MUS 112 Macro Music (2 hours)
   - MUS 101/102 Keyboard Skills I & II (4 hours)
   - MUS 230-233 Harmony I, II, III, & IV (12 hours)
   - MUS 234-237 Musicianship I-IV (4 hours)
   - MUS 411/412 Music History I and II (6 hours)
   - MUS 414 Ethnomusicology (3 hours)
   - MUA Applied Music Lessons (7 hours)
   - MUS 481 Senior Recital (1 hour)
   - MUS Ensembles (7 hours)
   - MUS 351 Teaching String Instruments (2 hours)
   - MUS 352 Teaching Woodwind Instruments (2 hours)
   - MUS 353 Teaching Brass Instruments (2 hours)
   - MUS 354 Teaching Percussion Instruments (2 hours)
   - MUS 355 Teaching Vocal/Choral Instruments (2 hours)
   - MUS 444 Elementary Music Curriculum (2 hours)
   - MUS 445 Secondary Music Curriculum (2 hours)
   - MUS 461 Conducting School Ensemble (2 hours)

Multi-Age Licensure in Visual Arts Education, Grades PreK to 12

(83 hours)

1. Professional Education (39 hours)
   - EDB 200 Teaching as a Profession (2 hours)
   - EDB 300 Educational Technology (2 hours)
   - EDB 301 Social Foundations of Education (3 hours)
   - EDB 302 Psychological Foundations of Education (3 hours)
   - EDB 305 Teaching and Management in the Secondary School (3 hours)
   - EDB 400 Communication and Collaboration (2 hours)
   - EDC 310 Elementary Methods for the Art Specialist (4 hours)
- EDC 311 Secondary Methods for the Art Specialist (4 hours)
- EDL 305 Reading in the Content Areas (3 hours)
- ESE 400 Teaching Students of Varying Abilities (3 hours)
- EST 483 Multi-Age Student Teaching (10 hours)

2. Art Education (44 hours)

- ART 341 Valuing Processes In Visual Art (4 hours)
- ART 441 Art in Social and Vocational Contexts (4 hours)
- ART 100 Introduction to Studio Art (4 hours)
- ART 211 Drawing (4 hours)
- ART 221 Painting (4 hours)
- ART 231 Printmaking (4 hours)
- ART 226 or 246 Sculpture or Ceramics (4 hours)
- ART 442 or 244 Lettering and Type or Computer Graphics (4 hours)
- ART 252 Introduction to Early Western Art (4 hours)
- ART 253 Introduction to Western Art since 1400 (4 hours)
- ART 281 or 286 Far Eastern Art or African Art (4 hours)
Multi-Age Programs in Physical Education and Health

Multi-Age Teaching Licensure in Physical Education

(120 hours, minimum)

A. General Education Requirements

Requirements in this area will total a minimum of 42 hours (more if certain courses are not used to fulfill requirements in more than one area)

1. Writing
   - ENG 101 English I (4 hours)
   - ENG 102 English II (3 hours)
   *Note:* Three additional Writing-Across-the-Curriculum courses must be taken in meeting other requirements

2. Mathematics and Logic
   - Select two approved courses (6 to 8 hours)

3. Arts and Humanities
   - Select three approved courses from at least 2 different departments (9 to 12 hours)

4. Nonwestern Culture and Civilization
   - Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

5. Western Culture and Civilization
   - Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

6. Social Sciences
   - PSY 220 Child Psychology (3 hours)
   - PSY 221 Adolescent Psychology (3 hours)
   - Third course from department other than psychology (3 to 4 hours)

7. Natural Sciences
   - BIO 266/267 Human Anatomy and Physiology I (4 hours)
   - BIO 268/269 Human Anatomy and Physiology II (4 hours)

8. Diversity and African-American Experience
   - One course in Diversity (3 to 4 hours)
   - One course in African-American Experience (0 to 4 hours). May be course used to fulfill requirements in arts and humanities or social sciences

9. Wellness
HPR 101 Wellness as a Lifestyle (0 to 1 hour)  
(HED 210 in major may be used to meet this requirement)

B. Professional Education Requirements

Education course work and related professional experiences are included in this area (20 hours)

- **EDB 200 Teaching as a Profession** (2 hours)
- **EDB 300 Educational Media and Technology** (2 hours)
- **EDB 301 Sociological Concepts in Education** (3 hours)
- **EDB 302 Psychological Concepts in Education** (3 hours)
- **EST 483 Student Teaching** (10 hours)

C. Major Field Requirements

Required course work in physical education is included in this area (58 hours).

Forms of Movement (11 hours)

1. **Group I** (select 2 courses)
   - PED 210 Archery, Golf (1 hour)
   - PED 211 Badminton, Tennis (1 hour)
   - PED 212 Bowling, Table Tennis, Orienteering, Boccie Ball, Croquet (1 hour)
   - PED 213 Track and Field, Self Defense (1 hour)

2. **Group II** (select 2 courses)
   - PED 215 Lacrosse, Field Hockey, Touch Football (1 hour)
   - PED 216 Pickleball, Racquetball, Team Handball, Broomball, Floor Hockey (1 hour)
   - PED 217 Softball, Basketball (1 hour)
   - PED 218 Volleyball, Soccer (1 hour)

3. **Alternative/Lifetime Sports** (select 1 course)
   - PED 220 Cross-Country Sking and Snowshoeing (1 hour)
   - PED 221 In-Line Skating and Cycling (1 hour)
   - PED 222 Rock Climbing and Backpacking (1 hour)
   - PED 227 Aerobic Instructor Training (1 hour)

4. **Gymnastics/Swimming/Dance** (4 courses required)
   - PED 225 Gymnastics (2 hours)
   - PED 226 Swimming (1 hour)
   - DAN 210 Dance for the Physical Educator (1 hour)
   - DAN 410 Teaching Dance (2 hours)

Theory/Methods (47 Hours)

- **HED 200 First Aid and Emergency Care** (2 hours)
- **HED 210 Personal Health** (3 hours)
- **PED 200 Foundations of Sport, Exercise, and Movement** (2 hours)
- **PED 301 Early/Middle Childhood Physical Education** (3 hours)
- **PED 302 Middle/Adolescent-Young Adult Physical Education** (3 hours)
- **PED 322 Kinesiology** (3 hours)
- **PED 324 Physical Fitness** (2 hours)
- **PED 325 Physiology of Exercise** (3 hours)
- **PED 326 Legal and Administrative Aspects of Physical Education** (4 hours) (Prerequisite: HED 200 First Aid and Emergency Care)
- **PED 330 Motor Learning and Development** (4 hours)
- **PED 415 Evaluation in Physical Education** (3 hours)
- **PED 430 Psychosocial Aspects of Physical Activity** (4 hours)
- **PED 435 Physical Education for Students with Disabilities** (4 hours)
- **PED 440 Modes and Models in Physical Education** (4 hours)
- **PED 445 Gateway to the Profession: Communication and Collaboration** (3 hours) (must be taken concurrently with Student Teaching)
Multi-Age Licensure in Health

This program prepares teachers in the area of school health education. This is not a stand-alone credential. Health Education licensure candidates must either have or be in the process of acquiring a license in another teaching area. The curriculum for the health-education program was selected by using the guidelines developed by the American Association for Health Education and the National Council for the Accreditation of Teacher Education (AAHE/NCATE). The National Health Education Standards developed by the Joint Committee on National Health Education Standards also were utilized to develop the curriculum.

1. Foundations to School Health (19-24 hours)
   - HED 200 First Aid and Emergency Care (2 hours)
   - HED 210 Personal Health (3 hours)
   - HED 259 Principles of Health Education (4 hours)
   - HED 460 Foundations of a Coordinated School Health Program (4 hours)
   - HED 461 Methods and Materials of Health Education (3 hours)
   - HED 480 Practicum in Health (3-8 hours)

2. Content Area (6 hours)
   - HED 471 Substance Abuse Education (3 hours)
   - HED 473 Teaching Human Sexuality (3 hours)

3. Guided Electives (10-15 hours)
   - HED 450 Theories in Health Education and Health Behavior (4 hours)
   - HED 470 Pathophysiology of Disease (4 hours)
   - HED 472 Consumer Health (3 hours)
   - HED 474 Stress Management (3 hours)
   - HED 475 Nutrition and Physical Activity (3 hours)
   - HED 476 Teaching Nutrition (3 hours)
   - PED 472 Physiology of Aging (3 hours)
   - HPR 450 Microcomputer Application in Health and Physical Education (3 hours)
Multi-Age Teaching Licensure in Physical Education

(120 hours, minimum)

A. General Education Requirements

Requirements in this area will total a minimum of 42 hours (more if certain courses are not used to fulfill requirements in more than one area)

1. Writing

   - ENG 101 English I (4 hours)
   - ENG 102 English II (3 hours)

   Note: Three additional Writing-Across-the-Curriculum courses must be taken in meeting other requirements

2. Mathematics and Logic

   - Select two approved courses (6 to 8 hours)

3. Arts and Humanities

   - Select three approved courses from at least 2 different departments (9 to 12 hours)

4. Nonwestern Culture and Civilization

   - Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

5. Western Culture and Civilization

   - Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

6. Social Sciences

   - PSY 220 Child Psychology (3 hours)
   - PSY 221 Adolescent Psychology (3 hours)
   - Third course from department other than psychology (3 to 4 hours)

7. Natural Sciences

   - BIO 266/267 Human Anatomy and Physiology I (4 hours)
   - BIO 268/269 Human Anatomy and Physiology II (4 hours)

8. Diversity and African-American Experience

   - One course in Diversity (3 to 4 hours)
   - One course in African-American Experience (0 to 4 hours). May be course used to fulfill requirements in arts and humanities or social sciences

9. Wellness
B. Professional Education Requirements

Education course work and related professional experiences are included in this area (20 hours)

- **EDB 200 Teaching as a Profession** (2 hours)
- **EDB 300 Educational Media and Technology** (2 hours)
- **EDB 301 Sociological Concepts in Education** (3 hours)
- **EDB 302 Psychological Concepts in Education** (3 hours)
- **EST 483 Student Teaching** (10 hours)

C. Major Field Requirements

Required course work in physical education is included in this area (58 hours).

**Forms of Movement (11 hours)**

1. **Group I** (select 2 courses)
   - **PED 210 Archery, Golf** (1 hour)
   - **PED 211 Badminton, Tennis** (1 hour)
   - **PED 212 Bowling, Table Tennis, Orienteering, Boccie Ball, Croquet** (1 hour)
   - **PED 213 Track and Field, Self Defense** (1 hour)
2. **Group II** (select 2 courses)
   - **PED 215 Lacrosse, Field Hockey, Touch Football** (1 hour)
   - **PED 216 Pickleball, Racquetball, Team Handball, Broomball, Floor Hockey** (1 hour)
   - **PED 217 Softball, Basketball** (1 hour)
   - **PED 218 Volleyball, Soccer** (1 hour)
3. **Alternative/Lifetime Sports** (select 1 course)
   - **PED 220 Cross-Country Skiing and Snowshoeing** (1 hour)
   - **PED 221 In-Line Skating and Cycling** (1 hour)
   - **PED 222 Rock Climbing and Backpacking** (1 hour)
   - **PED 227 Aerobic Instructor Training** (1 hour)
4. **Gymnastics/Swimming/Dance** (4 courses required)
   - **PED 225 Gymnastics** (2 hours)
   - **PED 226 Swimming** (1 hour)
   - **DAN 210 Dance for the Physical Educator** (1 hour)
   - **DAN 410 Teaching Dance** (2 hours)

**Theory/Methods (47 Hours)**

- **HED 200 First Aid and Emergency Care** (2 hours)
- **HED 210 Personal Health** (3 hours)
- **PED 200 Foundations of Sport, Exercise, and Movement** (2 hours)
- **PED 301 Early/Middle Childhood Physical Education** (3 hours)
- **PED 302 Middle/Adolescent-Young Adult Physical Education** (3 hours)
- **PED 322 Kinesiology** (3 hours)
- **PED 324 Physical Fitness** (2 hours)
- **PED 325 Physiology of Exercise** (3 hours)
- **PED 328 Legal and Administrative Aspects of Physical Education** (4 hours) (Prerequisite: **HED 200 First Aid and Emergency Care**)
- **PED 330 Motor Learning and Development** (4 hours)
- **PED 415 Evaluation in Physical Education** (3 hours)
- **PED 430 Psychosocial Aspects of Physical Activity** (4 hours)
- **PED 435 Physical Education for Students with Disabilities** (4 hours)
- **PED 440 Modes and Models in Physical Education** (4 hours)
- **PED 445 Gateway to the Profession: Communication and Collaboration** (3 hours) (must be taken concurrently with **Student Teaching**)

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Multi-Age Licensure in Health

This program prepares teachers in the area of school health education. This is not a stand-alone credential. Health Education licensure candidates must either have or be in the process of acquiring a license in another teaching area. The curriculum for the health-education program was selected by using the guidelines developed by the American Association for Health Education and the National Council for the Accreditation of Teacher Education (AAHE/NCATE). The National Health Education Standards developed by the Joint Committee on National Health Education Standards also were utilized to develop the curriculum.

1. Foundations to School Health (19-24 hours)
   - HED 200 First Aid and Emergency Care (2 hours)
   - HED 210 Personal Health (3 hours)
   - HED 259 Principles of Health Education (4 hours)
   - HED 460 Foundations of a Coordinated School Health Program (4 hours)
   - HED 461 Methods and Materials of Health Education (3 hours)
   - HED 480 Practicum in Health (3-8 hours)

2. Content Area (6 hours)
   - HED 471 Substance Abuse Education (3 hours)
   - HED 473 Teaching Human Sexuality (3 hours)

3. Guided Electives (10-15 hours)
   - HED 450 Theories in Health Education and Health Behavior (4 hours)
   - HED 470 Pathophysiology of Disease (4 hours)
   - HED 472 Consumer Health (3 hours)
   - HED 474 Stress Management (3 hours)
   - HED 475 Nutrition and Physical Activity (3 hours)
   - HED 476 Teaching Nutrition (3 hours)
   - PED 472 Physiology of Aging (3 hours)
   - HPR 450 Microcomputer Application in Health and Physical Education (3 hours)
Physical Education

-Multi-Age Programs

-Allied Sport Professions

At-a-Glance

Degree granted: bachelor of science in education

Specialization Options: Multi-Age Physical Education Teaching License; Allied Sport Professions (Exercise/Fitness Specialist or Sports Manager)

Minimum hours required for degree:
Multi-Age Licensure: 120 to 140 semester hours; Allied Sport Professions: 120 to 139 semester hours

Admission to Major:
Must be admitted to the College of Education (requires 2.50 cumulative grade point average). Must also be accepted into a College of Education program. This requires 2.50 cumulative grade point average; 75 or higher on COMPASS writing proficiency test; grade of C or better on college-level math course; an intake interview with the HPERD Department coordinator of Student Services; and verification of good moral character.

Advising: Admission and program guidelines may be secured from the HPERD Department Office, PE 228, (216) 687-4870, or the College Advising Office, Rhodes Tower Room 1401, (216) 687-4625. Continuing academic, personal, and professional advising is available from assigned faculty advisors.

Student organization: PESO (Physical Education Student Organization)

Additional information:
Departmental awards available to students include Jane Pease Service Award, Academic Achievement Award, and Major of the Year Award. Intern/practicum experiences are part of the Allied Sport Professions program.

Introduction

The Department of Health, Physical Education, Recreation, and Dance offers a major in Physical Education and Sport, with two main options. The first option, Multi-Age Teaching Licensure (between 120 and 140 hours) leads to an Ohio Teaching License in Physical Education (Grades Pre-K through 12). The second option, Allied Sport Professions (between 120 and 139 hours), is to prepare for a career as exercise/fitness specialist or sports manager.

The department also offers a post-graduate licensure program in physical education and a multi-age licensure program in health education as a second teaching area. Program minors are available in Dance, Health Education, and Sports Management. Completion of an approved program minor is noted on the student's official transcript.
Visit the HPERD Department office, Physical Education Building Room 228, for specific information or telephone (216) 687-4870.

Web site: http://www.csuohio.edu/coe/Overview/academic_Departments/HPERD/.

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1. Go to Multi-Age Teaching Licensure in Physical Education
2. Go to Allied Sport Professions

Allied Sport Professions

Exercise/Fitness Specialist (120 to 139 hours)

Sports Manager (120 to 138 hours)

A. General Education Requirements

Requirements in this area will total a minimum of 43 hours (or more if certain courses are not used to fulfill requirements in more than one area). Students in all four specialty areas must meet General Education requirements as outlined. This is not a teaching licensure program.

1. Writing
   - ENG 101 English I (4 hours)
   - ENG 102 English II (3 hours)

   Note: Three additional Writing-Across-the-Curriculum courses must be taken in meeting other requirements

2. Mathematics and Logic
   Select two approved courses (6 to 8 hours)

3. Arts and Humanities
   Select three approved courses from at least two different departments (9 to 12 hours)

4. Non-Western Culture and Civilization
   Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

5. Western Culture and Civilization
   Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

6. Social Sciences
   PSY 101 Introduction to Psychology (4 hours)
Two additional courses (only one may be from Psychology Department) (6 to 8 hours)

Students specializing in sports management must take ECN 201 (Introduction to Macroeconomics; 3 hours), and ECN 202 (Introduction to Microeconomics; 3 hours)

7. Natural Sciences

- BIO 266/267 Human Anatomy and Physiology I (4 hours)
- BIO 268/269 Human Anatomy and Physiology II (4 hours)

8. Diversity and African-American Experience

One course in Diversity (4 hours)

One course in African-American Experience (may be course used to fulfill requirements in arts and humanities or social sciences) (0 to 4 hours)

9. Wellness

HPR 101 Wellness as a Lifestyle

HED 210 in professional core may be used to meet this requirement (0 to 1 hour)

B. Professional Core Requirements

The professional core of 30 hours is required for students in all four of the specialty areas.

- PED 200 Foundations of Sport, Exercise, and Movement (2 hours)
- PED 322 Kinesiology (3 hours)
- PED 324 Physical Fitness (2 hours)
- PED 325 Physiology of Exercise (3 hours)
- PED 430 Psychosocial Aspects of Physical Activity (4 hours)
- PED 435 Physical Education for Students with Disabilities (4 hours)
- PED 465 Law and Policy Studies in Sport and Physical Activity (4 hours)
- HED 200 First Aid and Emergency Care (2 hours)
- HED 210 Personal Health (3 hours)
- HED 475 Nutrition and Physical Activity (3 hours)

C. Specialty Requirements

1. Exercise/Fitness Specialist (37 to 41 hours)

Theory and Practice (32 to 36 hours)

- PED 205 Introduction to Sports Management (3 hours)
- PED 415 Evaluation in Physical Education (3 hours)
- PED 466 Sport Facility Management (3 hours)
- PED 467 Sports Marketing (3 hours)
- PED 470 Seminar in Training and Conditioning (3 hours)
- PED 472 Physiology of Aging (3 hours)
- MLR 301 Principles of Management (3 hours)
- HED 259 Principles of Health Education (3 hours)
- PED 480/481 Internship and Senior Seminar (8 or 12 hours)
Personal Skill (5 hours)

- PES 101 Physical Fitness (1 hour)
- PES 104 Jogging (1 hour)
- PES 105 Weight Training (1 hour)
- PES 107 Cross Training (1 hour)
- PES 128 Aquatics Fitness (1 hour)
- PES 160 Water Aerobics (1 hour)
- PED 227 Aerobics Instructor Training (1 hour)
- PED 210-213 Group I Forms of Movement Course (1 hour)
- PED 215-218 Group II Forms of Movement Course (1 hour)
- PED 220-222 Alternative/Lifetime Sports Forms of Movement Course (1 hour)

2. Sports Manager (46 hours)

Theory and Practice (32 to 36 hours)

- PED 205 Introduction to Sports Management (3 hours)
- PED 461 Sports Governance (3 hours)
- PED 466 Sport Facility Management (3 hours)
- PED 467 Sports Marketing (3 hours)
- MLR 301 Principles of Management (3 hours)
- ACT 221 Introduction to Accounting (3 hours)
- IST 203 Business Support Software (3 hours)
- GAD 205 Business Communication (3 hours)
- PED 480 Internship and Senior Seminar (8 to 12 hours)

Personal Skill (5 hours)

Select 5 hours of PES, PED, or DAN Forms of Movement or activity courses (5 hours)

Planned Electives (5 to 9 hours)

With advisor guidance, select 5 to 9 hours depending on number of hours in PED 480/481 Internship and Senior Seminar (8 or 12 hours)
Multi-Age Teaching Licensure in Physical Education

(120 hours, minimum)

A. General Education Requirements

Requirements in this area will total a minimum of 42 hours (more if certain courses are not used to fulfill requirements in more than one area)

1. Writing
   - ENG 101 English I (4 hours)
   - ENG 102 English II (3 hours)
   
   Note: Three additional Writing-Across-the-Curriculum courses must be taken in meeting other requirements

2. Mathematics and Logic
   - Select two approved courses (6 to 8 hours)

3. Arts and Humanities
   - Select three approved courses from at least 2 different departments (9 to 12 hours)

4. Nonwestern Culture and Civilization
   - Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

5. Western Culture and Civilization
   - Select one course: may be course used to fulfill requirements in arts and humanities or social sciences (0 to 4 hours)

6. Social Sciences
   - PSY 220 Child Psychology (3 hours)
   - PSY 221 Adolescent Psychology (3 hours)
   - Third course from department other than psychology (3 to 4 hours)

7. Natural Sciences
   - BIO 266/267 Human Anatomy and Physiology I (4 hours)
   - BIO 268/269 Human Anatomy and Physiology II (4 hours)

8. Diversity and African-American Experience
   - One course in Diversity (3 to 4 hours)
   - One course in African-American Experience (0 to 4 hours). May be course used to fulfill requirements in arts and humanities or social sciences

9. Wellness
B. Professional Education Requirements

Education course work and related professional experiences are included in this area (20 hours)

- EDB 200 Teaching as a Profession (2 hours)
- EDB 300 Educational Media and Technology (2 hours)
- EDB 301 Sociological Concepts in Education (3 hours)
- EDB 302 Psychological Concepts in Education (3 hours)
- EST 483 Student Teaching (10 hours)

C. Major Field Requirements

Required course work in physical education is included in this area (58 hours).

Forms of Movement (11 hours)

1. Group I (select 2 courses)
   - PED 210 Archery, Golf (1 hour)
   - PED 211 Badminton, Tennis (1 hour)
   - PED 212 Bowling, Table Tennis, Orienteering, Boccie Ball, Croquet (1 hour)
   - PED 213 Track and Field, Self Defense (1 hour)

2. Group II (select 2 courses)
   - PED 215 Lacrosse, Field Hockey, Touch Football (1 hour)
   - PED 216 Pickleball, Racquetball, Team Handball, Broomball, Floor Hockey (1 hour)
   - PED 217 Softball, Basketball (1 hour)
   - PED 218 Volleyball, Soccer (1 hour)

3. Alternative/Lifetime Sports (select 1 course)
   - PED 220 Cross-Country Skiing and Snowshoeing (1 hour)
   - PED 221 In-Line Skating and Cycling (1 hour)
   - PED 222 Rock Climbing and Backpacking (1 hour)
   - PED 227 Aerobic Instructor Training (1 hour)

4. Gymnastics/Swimming/Dance (4 courses required)
   - PED 225 Gymnastics (2 hours)
   - PED 226 Swimming (1 hour)
   - DAN 210 Dance for the Physical Educator (1 hour)
   - DAN 410 Teaching Dance (2 hours)

Theory/Methods (47 Hours)

- HED 200 First Aid and Emergency Care (2 hours)
- HED 210 Personal Health (3 hours)
- PED 200 Foundations of Sport, Exercise, and Movement (2 hours)
- PED 301 Early/Middle Childhood Physical Education (3 hours)
- PED 302 Middle/Adolescent-Young Adult Physical Education (3 hours)
- PED 322 Kinesiology (3 hours)
- PED 324 Physical Fitness (2 hours)
- PED 325 Physiology of Exercise (3 hours)
- PED 328 Legal and Administrative Aspects of Physical Education (4 hours) (Prerequisite: HED 200 First Aid and Emergency Care)
- PED 330 Motor Learning and Development (4 hours)
- PED 415 Evaluation in Physical Education (3 hours)
- PED 430 Psychosocial Aspects of Physical Activity (4 hours)
- PED 435 Physical Education for Students with Disabilities (4 hours)
- PED 440 Modes and Models in Physical Education (4 hours)
- PED 445 Gateway to the Profession: Communication and Collaboration (3 hours) (must be taken concurrently with Student Teaching)
Multi-Age Licensure in Health

This program prepares teachers in the area of school health education. This is not a stand-alone credential. Health Education licensure candidates must either have or be in the process of acquiring a license in another teaching area. The curriculum for the health-education program was selected by using the guidelines developed by the American Association for Health Education and the National Council for the Accreditation of Teacher Education (AAHE/NCATE). The National Health Education Standards developed by the Joint Committee on National Health Education Standards also were utilized to develop the curriculum.

1. Foundations to School Health (19-24 hours)
   - HED 200 First Aid and Emergency Care (2 hours)
   - HED 210 Personal Health (3 hours)
   - HED 259 Principles of Health Education (4 hours)
   - HED 460 Foundations of a Coordinated School Health Program (4 hours)
   - HED 461 Methods and Materials of Health Education (3 hours)
   - HED 480 Practicum in Health (3-8 hours)

2. Content Area (6 hours)
   - HED 471 Substance Abuse Education (3 hours)
   - HED 473 Teaching Human Sexuality (3 hours)

3. Guided Electives (10-15 hours)
   - HED 450 Theories in Health Education and Health Behavior (4 hours)
   - HED 470 Pathophysiology of Disease (4 hours)
   - HED 472 Consumer Health (3 hours)
   - HED 474 Stress Management (3 hours)
   - HED 475 Nutrition and Physical Activity (3 hours)
   - HED 476 Teaching Nutrition (3 hours)
   - PED 472 Physiology of Aging (3 hours)
   - HPR 450 Microcomputer Application in Health and Physical Education (3 hours)

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Special Education Intervention Specialist
At-a-Glance

Degree Granted: bachelor of science in Education

Specialization Options: Mild/Moderate Educational Needs; Moderate/Intensive Educational Needs

Minimum Hours Required for Degree:
Licensure as a Mild/Moderate Intervention Specialist: 130 to 137 hours; Licensure as a Moderate/Intensive Intervention Specialist: 132 to 139 hours.

Teaching Credential:
Ohio two-year provisional teaching license as a Mild/Moderate or Moderate/Intensive Intervention Specialist (ages 5 through 21 and grades K through 12). Requires successful completion of all program requirements and acceptable scores on applicable PRAXIS II examinations as mandated by State Board of Education.

Accreditation:
Having met current curriculum guidelines set by the Council for Exceptional Children, the Special Education Program is accredited by the National Council for Accreditation of Teacher Education.

Admission to Major:
Must be admitted to the College of Education (requires 2.50 cumulative grade point average). Must also be accepted into a College of Education program. This requires 2.50 cumulative grade point average; 75 or higher on COMPASS writing proficiency test; grade of C or better on college level math course; an intake interview; and verification of good moral character.

Advising:
Admission and program guidelines may be secured from the College Advising Office, Rhodes Tower Room 1401, (216) 687-4625. Continuing academic, personal, and professional advising is available from assigned faculty advisors and the College Advising Office.

Evening Program:
No evening program as students must be available for field placements in area schools during the day; however, those classes that do not require fieldwork are offered in the evenings.

Department Office: Teacher Education; 1319 Rhodes Tower, (216) 687-4600. Primarily designed to provide course work in the education of learners with exceptional needs. Available program options in the field of special education permit concentrated study in one of two areas: Learners with Mild or Moderate Educational Needs or Learners with Moderate or Intensive Educational Needs.

The specialization in Mild/Moderate Educational Needs is designed to prepare candidates to develop, implement, and evaluate individualized programs for children and adolescents ages 5 through 21 who have special academic and social adjustment needs. These individuals are typically categorized as having a specific learning disability,
mild/moderate mental retardation, or mild/moderate behavioral disorders. Students who complete this program are eligible for provisional licensure as a mild/moderate intervention specialist and will demonstrate diagnostic skills and competencies in the assessment of academic and social needs as they particularly apply to the development and delivery of instruction in both regular and special-education classrooms.

The specialization in Mild/Moderate Educational Needs is designed to prepare candidates to develop, implement, and evaluate individualized programs for children and adolescents ages 5 through 21 who have special academic and social adjustment needs. These individuals are typically identified as having a specific learning disability, mild/moderate mental retardation, or mild/moderate behavioral disorders. Students who complete this program are eligible for provisional licensure as a mild/moderate intervention specialist and will demonstrate diagnostic skills and competencies in the assessment of academic and social needs as they particularly apply to the development and delivery of instruction in both regular and special-education classrooms.

Alternatively, the Moderate/Intensive Educational Needs specialization is intended to prepare candidates to work with children and youths ages 5 through 21 who have moderate, severe, or profound mental retardation; emotional disorders; or multiple disabilities. Students who complete this program are eligible for provisional licensure as a Moderate/Intensive Intervention Specialist and will demonstrate skills in curriculum design and implementation, interdisciplinary teaming, and working with parents of individuals with exceptional needs.

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A. General Education Requirements

Course work in this area will total 58 to 65 hours.

1. Writing
   - ENG 101 English I (4 hours)
   - ENG 102 English II (3 hours)

Note: The 3-course Writing-Across-the-Curriculum requirement will be met by EDB 301, EDB 302, EDL 301 and EDL 312.

2. Mathematics and Logic
   - MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
   - MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
   - MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)

3. Arts and Humanities
   - ART 252 or ART 253 Introduction to Western Art (4 hours)
   - Literature course to be selected from approved list (3 to 4 hours)
   - One additional course from approved list (3 to 4 hours)

4. Western Culture and Civilization
   - HIS 101 or HIS 102 Western Civilization (4 hours)

5. Nonwestern Culture and Civilization (select 1 course from following list)
   - ANT/PSC 227 Power, Authority, and Society in Nonwestern Cultures (4 hours)
6. Social Sciences
   - PSY 220 Child Development (3 hours)
   - PSY 221 Adolescent Psychology (3 hours)
   - SPH 229 Speech and Language Development (3 hours)

7. Natural Sciences
   - BIO 106 Human Biology in Health and Disease (3 hours)
   - BIO 107 Human Biology Laboratory (2 hours)
   - GEO 100 Introduction to Geology (3 hours)
   - GEO 100 Introduction to Geology Lab (1 hour)

8. Human Diversity
   - EDC 300 Diversity in Educational Settings (3 hours)

   - Select 1 course from approved list (0 to 4 hours)

Note: May be course used to fulfill requirements in another area.

10. Wellness
    - HED 210 Personal Health (3 hours)

B. Professional Education Requirements

Core course work in education and related professional experiences are included in this area for a total of 10 hours. Where applicable, all prerequisites must be met prior to enrollment in these courses. In addition, EDB 301 and EDB 302 must be taken concurrently.

   - EDB 200 Teaching as a Profession (2 hours)
   - EDB 300 Educational Technology (2 hours)
   - EDB 301 Social Foundations of Education (3 hours)
   - EDB 302 Psychological Foundations of Education (3 hours)

C. Major Field Requirements

Course work in special education and related professional experiences are included in this area for a total of 60 to 62 hours depending on choice of specialty in mild/moderate or moderate/severe educational needs. Because certain courses in these sequences must be taken concurrently or in a prescribed order, students are strongly advised to seek assistance from the College's Advising Office (RT 1401) before registering for classes.
1. Mild/Moderate Intervention Specialist (63 hours)

- ECE 415 Mathematics Instruction in Preschool and the Primary Grades (3 hours)
- ECE 417 Science Instruction in Preschool and the Primary Grades (3 hours)
- EDL 300 Phonics Assessment and Instruction (3 hours)
- EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)
- EDL 305 Reading in the Content Areas (3 hours)
- EDL 313 Literature-Based Reading Methods for Adolescents (3 hours)
- ESE 400 Introduction to Special Education (4 hours)
- ESE 402 Introduction to Individuals With Mild/Moderate Educational Needs (4 hours)
- ESE 411 Classroom Management and Intervention for Severe Behavior Problems (4 hours)
- ESE 412 Collaboration and Partnerships Among Parents and Professionals in Special Education (4 hours)
- ESE 416 Life Skills and Career Planning in Special Education (2 hours)
- ESE 417 Assessment, Curriculum, and Instruction for Students With Mild/Moderate Educational Needs (4 hours)
  or
- ESE 421 Assessment for Instructional Needs (4 hours)
- ESE 422 Assessment-Based Curriculum and Instruction for Students with Mild/Moderate Disabilities (4 hours)
- EST 377 Practicum in Special Education: Mild/Moderate Educational Needs (4 hours)
- EST 487 Student Teaching for Mild/Moderate Educational Needs (12 hours)
- PED 456 Individualized Physical Education for Children with Special Needs (3 hours)

2. Moderate/Intensive Intervention Specialist (64 hours)

- ECE 415 Mathematics Instruction in Preschool and the Primary Grades (3 hours)
- EDC 309 Art Methods for the Classroom Teacher (2 hours)
- EDL 300 Phonics Assessment and Instruction (3 hours)
- EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)
- EDL 311 Emergent Literacy (3 hours)
- EDL 312 Literature-Based Reading Methods for Children (3 hours)
- ESE 400 Introduction to Special Education (4 hours)
- ESE 403 Introduction to Individuals With Moderate/Severe Educational Needs (4 hours)
- ESE 410 Diagnostic Assessment and Multi-Factored Evaluation for Students with Moderate and Severe Disabilities (2 hours)
- ESE 411 Classroom Management and Intervention for Severe Behavior Problems (4 hours)
- ESE 412 Collaboration and Partnerships Among Parents and Professionals in Special Education (4 hours)
- ESE 413 Supporting Medical and Intensive Educational Needs (4 hours)
- ESE 419 Life Skills Assessment, Curriculum, and Instruction (4 hours)
- ESE 420 Assessment, Curriculum, and Instruction to Meet the Academic and Behavioral Needs of Students with Moderate/Severe Educational Needs (4 hours)
- EST 378 Practicum in Special Education: Moderate/Severe Educational Needs (4 hours)
- EST 488 Student Teaching for Moderate/Severe Educational Needs (12 hours)
- MUS 301 Music Fundamentals and Methods for the Classroom Teacher (4 hours)
- PED 456 Individualized Physical Education for Children with Special Needs (3 hours)
College Graduates Seeking Special Education Licensure as Mild/Moderate Intervention Specialists

Introduction

As outlined below, the post-baccalaureate program for obtaining licensure as a mild/moderate intervention specialist consists of three components: general education requirements, prerequisites to the professional education sequence, and professional education requirements. The program is designed to prepare college graduates with little or no formal course work in education for working with individuals — ages 5 through 21 — that have specific learning disabilities, mild/moderate mental retardation, or mild/moderate behavioral disorders. Graduates of highly specialized undergraduate degree programs (such as music, fine arts, and business administration) may need to complete additional general education requirements in order to qualify for licensure. Without exception, recommendation for provisional licensure further requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office, RT 1401:

- ART 252 or ART 253 Introduction to Western Art (4 hours)
- EDC 300 Diversity in Educational Settings (3 hours)
- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)
- PSY 220 Child Development (3 hours)
- PSY 221 Adolescent Psychology (3 hours)

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C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 65 hours. Because certain courses in this sequence must be taken concurrently and in a prescribed order, students are strongly advised to seek assistance from the college's advising office before registering for classes.

- EDB 200 Teaching as a Profession (2 hours)
- EDB 300 Educational Technology (2 hours)
- EDB 301 Social Foundations of Education (3 hours)
- EDB 302 Psychological Foundations of Education (3 hours)
- ECE 415 Mathematics Instruction in Preschool and the Primary Grades (3 hours)
- EDC 470 Science Instruction in Preschool and Primary Grades (3 hours)
- EDL 300 Phonics Assessment and Instruction (3 hours)
- EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)
- EDL 305 Reading in the Content Areas (3 hours)
- EDL 313 Literature-Based Reading Methods for Adolescents (3 hours)
- ESE 400 Introduction to Special Education (4 hours)
- ESE 402 Introduction to Individuals With Mild/Moderate Educational Needs (4 hours)
- ESE 411 Classroom Management and Intervention for Severe Behavior Problems (4 hours)
- ESE 412 Collaboration and Partnerships Among Parents and Professionals in Special Education (4 hours)
- ESE 416 Life Skills and Career Planning in Special Education (2 hours)
- ESE 417 Assessment, Curriculum, and Instruction for Students with Mild/Moderate Educational Needs (4 hours) or
  - EST 421 Assessment for Instructional Needs (4 hours)
- EST 422 Assessment-Based Curriculum and Instruction for Students with Mild/Moderate Disabilities (4 hours)
- EST 377 Practicum in Special Education: Mild/Moderate Educational Needs (4 hours)
- EST 487 Student Teaching for Mild/Moderate Educational Needs (12 hours)
College Graduates Seeking Special Education Licensure as Moderate/Intensive Intervention Specialists

Introduction

As outlined below, the post-baccalaureate program for obtaining licensure as a moderate/intensive intervention specialist consists of three components: general education requirements, prerequisites to the professional education sequence, and professional education requirements. The program is designed to prepare college graduates with little or no formal course work in education for working with individuals — ages 5 through 21 — who have moderate, severe, or profound mental retardation; severe emotional disorders; or multiple disabilities. Graduates of highly specialized undergraduate degree programs (such as music, fine arts, and business administration) may need to complete additional general education requirements in order to qualify for licensure. Without exception, recommendation for provisional licensure further requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office, RT 1401.

- ART 252 or ART 253 Introduction to Western Art (4 hours)
- EDC 300 Diversity in Educational Settings (3 hours)
- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)
- PSY 220 Child Development (3 hours)
- PSY 221 Adolescent Psychology (3 hours)
- SPH 229 Speech and Language Development (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 67 hours. Because certain courses in this sequence must be taken concurrently and in a prescribed order, students are strongly
advised to seek assistance from the college's advising office before registering for classes.

- EDB 200 Teaching as a Profession (2 hours)
- EDB 300 Educational Technology (2 hours)
- EDB 301 Social Foundations of Education (3 hours)
- EDB 302 Psychological Foundations of Education (3 hours)
- ECE 415 Mathematics Instruction in Preschool and the Primary Grades (3 hours)
- EDC 309 Art Methods for the Classroom Teacher (2 hours)
- EDL 300 Phonics Assessment and Instruction (3 hours)
- EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)
- EDL 311 Emergent Literacy (3 hours)
- EDL 312 Literature-Based Reading Methods for Children (3 hours)
- ESE 400 Introduction to Special Education (4 hours)
- ESE 403 Introduction to Individuals With Moderate/Severe Educational Needs (4 hours)
- ESE 410 Diagnostic Assessment and Multifactoried Evaluation for Students with Moderate and Severe Disabilities (2 hours)
- ESE 411 Classroom Management and Intervention for Severe Behavior Problems (4 hours)
- ESE 412 Collaboration and Partnerships Among Parents and Professionals in Special Education (4 hours)
- ESE 413 Supporting Medical and Intensive Educational Needs (4 hours)
- ESE 419 Life Skills Assessment, Curriculum, and Instruction (4 hours)
- ESE 420 Assessment, Curriculum, and Instruction to Meet the Academic and Behavioral Needs of Students with Moderate/Severe Educational Needs (4 hours)
- EST 378 Practicum in Special Education: Moderate/Severe Educational Needs (4 hours)
- EST 488 Student Teaching for Moderate/Severe Educational Needs (12 hours)
Adolescent and Young Adult Licensure

At-a-Glance

Degree Granted:
Upper-division undergraduates at Cleveland State University who wish to obtain an adolescent/young adult license are expected to enroll in the college of their academic major and minor in Education. This dual enrollment is necessary to ensure fulfillment of the requirements of the academic major and the requirements of the teacher preparation program. Students follow the degree requirements of their college (Arts and Sciences or First College) and receive their baccalaureate degree from that college. Upon completion of all degree and licensure requirements, a minor in education is posted on student transcripts. The College of Education may also recommend the granting of adolescent/young adult teaching license in a field other than the student's major to a person who has met the college and state requirements for such a credential.

Specialization Options:
Adolescent/Young Adult Education: earth science, life science, chemistry, physics, dual field chemistry and physics, integrated science, integrated mathematics, integrated language arts, and integrated social studies.

Minimum Hours Required for the Education Minor:
Integrated language arts, Grades 7-12: 41 hours; integrated mathematics education, Grades 7-12: 38 hours; integrated social studies education, Grades 7-12: 38 hours; science education, Grades 7-12 (all fields): 38 hours.

Teaching Credential:
An Ohio two-year provisional adolescent/young adult (ages 12 through 21 and grades 7-12) teaching license will be awarded upon successful completion of an appropriate degree program in the College of Arts and Sciences or First College and the total professional education sequence or minor in education. (Note: In some instances, course work beyond the degree requirements of the student's college may be needed to obtain licensure.) In meeting these requirements course work taken at Cleveland State University may be combined with transfer hour from other accredited institutions. In all cases, however, students must complete their student-teaching experience and take at least two courses in their major teaching field and two education courses at CSU. Eligibility for licensure further requires minimal attainment of 2.75 grade point average in the professional education sequence and a grade point average of 2.50 or better in all completed course work in the major teaching field. Finally, as mandated by the State Board of Education, candidates for licensure must take and pass all applicable PRAXIS II examinations.

Accreditation:
Having met current curriculum guidelines set by appropriate learned societies (including the National Council for the Social Studies, the National Council of Teachers of English, the National Council of Teachers of Mathematics, and the National Science Teachers Association), the College of Education and its adolescent/young adult licensure programs are accredited by the National Council for Accreditation of Teacher Education.

Admission to Minor:
To be accepted into an adolescent/young adult license program, undergraduates in other colleges of Cleveland State University must apply to the College of Education Advising Office at least two full terms prior to the start of taking professional education course work at the 300 level and above. Declaration of a minor in education is required, as well as: a 2.50 cumulative grade point average; 75 or higher on COMPASS writing proficiency test; grade of C or better on college-level math course; an intake interview; and verification of good moral character.

Advising:
Admission and program guidelines may be secured from the College Advising Office, Rhodes Tower Room 1401,
Continuing academic, personal, and professional advising is available from assigned faculty advisors and the college advising office. Most students will also have an advisor in their major field.

**Evening Program:**
No evening program is offered as students must be available for field placements in area schools during the day; however, those classes that do not require fieldwork are frequently offered in the evenings.

**Department Office:** Teacher Education; 1319 Rhodes Tower, (216) 687-4600. Available programs in secondary education are intended to prepare candidates for teaching adolescents from ages 12 through 21. Taken as a whole, these programs focus on the nature and needs of young adults as they particularly relate to the design, delivery, and evaluation of culturally and developmentally responsive instruction. Throughout each program, the acquisition of professional knowledge and skills is aided by reflective practice and inquiry. To that end, the observation of secondary school students and settings accompanies relevant study, is followed by on-site practice, and culminates in supervised student teaching. In addition, these programs provide for discipline-specific preparation in one of four integrated teaching fields (language arts, mathematics, science, and social studies) or one of three primary fields (earth sciences, life sciences, physical sciences).

**A. General Education Requirements**

Course work in this area will total 42 to 63 hours. Because in some instances the successful completion of an academic major in the preferred teaching field may be insufficient to satisfy all content area or disciplinary requirements for teacher licensure, students are strongly urged to consult with an advisor in the College's Advising Office, 1401 Rhodes Tower, (216) 687-4625, when selecting courses to fulfill general education requirements.

1. **Writing**
   - ENG 101 English I (4 hours)
   - ENG 102 English II or its equivalent (2 to 3 hours)
   *Note: The 3-course Writing-Across-the-Curriculum requirement will be met by EDB 301, EDB 302, EDS 313, and/or ESE 400.*
2. **Mathematics and Logic**
   - Select 2 approved courses (6 to 8 hours)
3. **Arts and Humanities**
   - Select 3 approved courses from at least two different departments (9 to 12 hours)
4. **Western Culture and Civilization**
   - One course from approved list; selected offering may also be used to satisfy the arts and humanities or social sciences requirement (0 to 4 hours)
5. **Nonwestern Culture and Civilization**
   - One course from approved list; selected offering may also be used to satisfy the arts and humanities or social sciences requirement (0 to 4 hours)
6. **Social Sciences**
   - PSY 221 Adolescent Psychology (3 hours)
   - Select two additional courses from approved list; may not be an offering of the Psychology Department (3 to 4 hours)
7. **Natural Sciences**
   - Select two or three courses from approved list to include at least one offering with a laboratory component (8 to 9 hours)
8. **Human Diversity**
   - EDC 300 Diversity in Educational Settings (3 hours)
9. **African-American Experience**
   - One course from approved list; selected offering may also be used to satisfy the arts and humanities or social sciences requirement (0 to 4 hours)
10. **Wellness**
    - HPR 101 Wellness as a Lifestyle (1 hour)

**B. Professional Education Requirements**

Course work in education and related professional experiences are included in this area for a total of 38 to 41 hours depending on teaching field. Because certain courses in these sequences must be taken concurrently or in a prescribed order, students are strongly advised to seek assistance from the college's advising office, RT 1401, before registering for classes.
1. **Group A - Foundations**
   - EDB 200 Teaching as a Profession (2 hours)
   - EDB 300 Educational Technology (2 hours)
   - EDB 301 Social Foundations of Education (3 hours)
   - EDB 302 Psychological Foundations of Education (3 hours)

2. **Group B - Curriculum & Methods**
   - EDB 305 Teaching and Management in the Secondary School (3 hours)
   - EDL 305 Reading in the Content Areas (3 hours)
   - EDL 313 Literature-Based Reading Methods for Adolescents (Required for Language Arts Majors only) (3 hours)
   - EDS 313 Secondary Language Arts Instruction and Assessment or EDS 315 Secondary Mathematics Instruction and Assessment or EDS 316 Secondary Social Studies Instruction and Assessment or EDS 317 Secondary Science Instruction and Assessment (4 hours)
   - EST 372 Practicum in Secondary Education (3 hours)
   - ESE 404 Teaching Students of Varying Abilities (3 hours)

3. **Culminating Experiences**
   - EDB 400 Communication and Collaboration (2 hours)
   - EST 482 Student Teaching in Secondary Education (10 hours)

**C. Major Field Requirements**

In many instances, successful completion of an academic major in the preferred teaching field at Cleveland State University will satisfy content area or disciplinary requirements for adolescent/young adult licensure. However, as outlined below, this is not always the case. Consequently, students are strongly encouraged to consult with an advisor in the College of Education’s Advising Office, RT 1401, to ensure that all such requirements are met.

- Integrated Language Arts Education
- Integrated Mathematics Education
- Integrated Social Studies Education
- Integrated Science Education
  - Geology Major
  - Biology Major
  - Chemistry Major
  - Physics Major
- Dual Field Chemistry and Physics
- Life Science
- Earth Science

1. **Integrated Language Arts Education, Grades 7 to 12 (37 to 61 hours)**

   - ENG 300 Writing about Literature (4 hours) or ENG 301 Advanced Expository Writing (4 hours) or ENG 303 Creative Writing (4 hours) or ENG 304 Creating Writing for Teachers (4 hours) or ENG 307 Style (4 hours) or ENG 308 Composition Theory (4 hours) or ENG 309 Writing Center Practicum (2 hours)
   - EDL 408 Applied Linguistics for Teachers (3 hours) or ENG/LIN 311 Elements of Linguistics (4 hours) or ENG/LIN 313 Studies in Linguistics (2 to 4 hours) or ENG/LIN 314 Applied Linguistics (2 to 4 hours)
   - ENG/LIN 310 Traditional Grammar (4 hours) or ENG/LIN 312 Modern English Grammar (4 hours)
   - COM 101 Principles of Communication (3 to 4 hours)
   - COM 226 Mass Media (4 hours) or COM 231 History and Processes of Mass Communication (4 hours)
   - ENG 240 Poetry (4 hours)
   - ENG 241 Fiction and Drama (4 hours)
   - ENG 342 Survey of American Literature (4 hours)
   - ENG 321 British Literature I (4 hours) or ENG 322 British Literature II (4 hours)
   - ENF 210/211 Non-Western Lit. in English Translation (3 hours) or ENG/MLA 204 Non-Western Literature (4 hours) or ENG 210 Native American Literature (3 hours) or ENG 331 Epics Around the World (4 hours) or ENG 355 Native American Literature (2-4 hours) or ENG 355 Chinese Literature (4 hours)
   - ENG 207 Black Masterpieces (3 hours) or ENG 210 Native American Literature (4 hours) or ENG 347 Studies in African-American Literature (4 hours) or ENG 348 Studies in Multicultural Literature (4 hours)
   - ENF 214/215 Women Writers in English Translation (3 hours) or ENG 208 Womanism/Feminism (3 hours) or ENG 360 Studies in Literary Criticism (if focused on feminist critics)(4 hours) or ENG 363 Gender Issues in
Literature (4 hours) or ENG 375 Major Author (if focused on female writer) (4 hours)
- ENG 300 Writing about Literature (4 hours) or ENG 360 Studies in Literary Criticism (4 hours) or ENG 495 Senior Seminar (4 hours)
- Additional Electives to total 30 hours of course work at 300 level or above (0-12 hours)

2. Integrated Mathematics Education, Grades 7 to 12 (46 hours)

- MTH 181 Calculus I (4 hours)
- MTH 182 Calculus II (4 hours)
- MTH 220 Introduction to Discrete Mathematics (4 hours)
- MTH 281 Multivariable Calculus (4 hours)
- MTH 286 Intro to Differential Equations (4 hours)
- MTH 288 Linear Algebra (4 hours)
- MTH 301 Intro to Applied Mathematics (4 hours)
- MTH 323 Statistics with Probability (4 hours)
- MTH 333 Geometry (4 hours)
- MTH 358 Abstract Algebra (4 hours)
- MTH 401 Mathematical Modeling (4 hours)
- MTH 495 Senior Seminar (2 hours)
- Select one of the following courses:
  - MTH 420 Combinatorial Math (4 hours)
  - MTH 424 Applications of Probability (4 hours)
  - MTH 434 Differential Geometry (4 hours)
  - MTH 487 Dynamical Systems (4 hours)
  - MTH 497 Readings in Math (4 hours)

3. Integrated Social Studies Education, Grades 7 to 12 (98 to 103 hours)

History Core (54 to 56 hours)

- HIS 101 Western Civilization I (4 hours) or HIS 102 Western Civilization II (4 hours)
- HIS 111 US History to 1877 (4 hours)
- HIS 112 US History since 1877 (4 hours)
- HIS 165 Introduction to Latin American History (4 hours) or HIS 175 Introduction to African History (4 hours)
- HIS 215 History of African Americans to 1877 (4 hours) or HIS 216 History of African Americans since 1877 (4 hours) or HIS 306 History of Ohio (4 hours)
- HIS 370 World Civilization (4 hours)
- HIS 400 Local History Seminar (4 hours) or HIS 393 Non-Western History for Teachers (4 hours)
- ECN 201 Principles of Macroeconomics (4 hours)
- ECN 202 Principles of Microeconomics (4 hours)
- PSC 111 American Government (4 hours)
- PSC 221 Comparative Politics (4 hours) or PSC 231 International Politics (4 hours)
- HIS 200 Introduction to Geography (4 hours)
- PSC/HIS/ANT/SOC 227 Power, Authority, and Society in Nonwestern Communities (3 to 4 hours)
- ANT 202 The Study of Culture (3 hours) or HIS 323 American People in 20th Century (4 hours) or SOC 101 Introduction to Sociology (3 hours)

Second Core: Select 1 of 3 areas below

Anthropology Core (16 hours)

Two of the following:
- ANT 270 African-American Culture (4 hours)
- ANT 324 Anthropology of Gender (4 hours)
- ANT 351 Native North Americans (4 hours)
Two of the following:

- ANT 352 Native South Americans (4 hours)
- ANT 353 Cultures of Africa (4 hours)
- ANT 354 Cultures of Oceania (4 hours)
- ANT 355 Cultures of South East Asia (4 hours)
- ANT 494 Advanced Area Studies in Anthropology (4 hours)

Political Science Core (15 to 16 hours)

One of the following:

- PSC 217 Urban Politics & the African-American Experience (3 hours)
- PSC 305 Cultural Diversity in US Politics (4 hours)

One of the following:

- PSC 318 The Presidency and Congress (4 hours)
- PSC 342 American Political Thought (4 hours)

Two of the following:

- PSC 310 Constitutional Law (4 hours)
- PSC 311 Civil Rights & Civil Liberties (4 hours)
- PSC 314 State Government & Politics (4 hours)
- PSC 315 Public Policy Administration (4 hours)
- PSC 327 Peaceful Change (4 hours)

Sociology Core (13 to 15 hours)

- SOC 101 Introduction to Sociology (3 hours)

Two of the following:

- SOC 201 Race, Class and Gender (3 hours)
- SOC 203 Sociology of Poverty (3 hours)
- SOC 215 Black/White Interaction (3 hours)
- SOC 267 Studies in the Black Family (3 hours)
- SOC 317 Sociology of Gender (4 hours)
- SOC 380 Minorities (4 hours)

One of the following:

- SOC 342 Sociology of Law (4 hours)
- SOC 383 Political Sociology (4 hours)

Distribution: Additional course(s) needed. At least one course must be included from Anthropology, Sociology, and Geography

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4. Integrated Science Education, Grades 7 to 12 (Includes earth sciences, biology, chemistry, and physics)

Geology Major (Environmental Science Concentration) (88 hours)

Required Geology Courses (33 hours)

- GEO 100 Introductory Geology (3 hours)
- GEO 101 Introductory Geology Lab (1 hour)
- GEO 150 Geological History of the Earth (4 hours)
• GEO 223 Map Interpretation and the Visualization of Space (3 hours)
• GEO 230 Natural Resources (3 hours)
• GEO 490/496/497 Internship/Research Project (3 hours)
• EVS 206 Introduction to Environmental Science (4 hours)
• UST 289 Physical Geography (3 hours)
• And two elective courses in geology (8 hours)

Required Biology Courses (16 hours)

• BIO 200 Introductory Biology I (4 hours)
• BIO 201 Introductory Biology II (4 hours)
• BIO 264 Introductory Microbiology (4 hours)
• BIO 471 or 473 Local Flora (4 hours)

Required Chemistry Courses (28 hours)

• CHM 261/266 General Chemistry I and Laboratory (5 hours)
• CHM 262/267 General Chemistry II and Laboratory (5 hours)
• CHM 331/336 Organic Chemistry I and Laboratory (6 hours)
• CHM 332/337 Organic Chemistry II and Laboratory (6 hours)
• CHM 310 Survey of Analytical Chemistry (2 hours)
• CHM 315 Survey of Analytical Chemistry Lab (2 hours)
• CHM 401 Chemical Information (2 hours)

Required Physics Courses (17 hours)

• PHY 221 College Physics I (5 hours)
• PHY 222 College Physics II (5 hours)
• PHY 330 Introduction to Modern Physics (3)
• And one of the two following courses:
  • PHY 201 Astronomy: Stars and Galaxies (4 hours)
  • PHY 202 Astronomy: Planets, Asteroids and Comets (4 hours)

Biology Major (92 to 98 Hours)

Required Biology Courses (39 to 42 hours)

• BIO 200 Introductory Biology I (4 hours)
• BIO 201 Introductory Biology II (4 hours)
• BIO 300 Plant Biology (4 hours)
• BIO 301 Animal Biology (4 hours)
• BIO 302 Biochemistry and Molecular Biology (4 hours)
• BIO 303 Cell Biology (4 hours)
• BIO 304 Population Biology and Evolution (4 hours)
• BIO 492 or BIO 495 Seminar (1 hour)
• BIO 416 Microbiology (3 hours)
• BIO 417 Microbiology Laboratory (2 hours)
• ANT 301 Biological Anthropology (4 hours)
• And one semester-hour seminar
  • or independent research project/
  • or one biology elective

Required Chemistry Courses (20 hours)

• CHM 261/266 General Chemistry I and Laboratory (5 hours)
• CHM 262/267 General Chemistry II and Laboratory (5 hours)
• CHM 331/336 Organic Chemistry I and Laboratory (6 hours)
• CHM 310 Survey of Analytical Chemistry (2 hours)
• CHM 315 Survey of Analytical Chemistry Laboratory (2 hours)
Required Geology Courses (16 to 18 hours)

- GEO 100 Introductory Geology (3 hours)
- GEO 101 Introductory Geology Lab (1 hour)
- GEO 150 Geological History of the Earth (4 hours)
- EVS 206 Introduction to Environmental Science (4 hours)
- UST 289 Physical Geography (3 hours)
- And one semester hour independent research project or one course from the following:
  - GEO 210 The Earth and Human Affairs (3 hours)
  - GEO 230 Natural Resources (3 hours)
  - GEO 358 Field Geology of the Cleveland Area (2 hours)
  - GEO 359 Field Geology of the Cleveland Area Lab (1 hour)
  - GEO 404 Environmental Science for Teachers (3 hours)
  - GEO 408 Environmental Geology for Teachers (3 hours)

Required Physics Courses (17 hours)

- PHY 221 College Physics I (5 hours)
- PHY 222 College Physics II (5 hours)
- PHY 330 Introduction to Modern Physics (3 hours)
- And one of following courses:
  - PHY 201 Astronomy: Stars and Galaxies (4 hours)
  - PHY 202 Astronomy: Planets, Asteroids and Comets (4 hours)

Chemistry Major (100 to 101 hours)

Required Chemistry Courses (42 hours)

- CHM 261 General Chemistry I (4 hours)
- CHM 266 General Chemistry Lab I (1 hour)
- CHM 262 General Chemistry II (4 hours)
- CHM 267 General Chemistry Lab II (1 hour)
- CHM 331 Organic Chemistry I (4 hours)
- CHM 336 Organic Chemistry Lab I (2 hours)
- CHM 332 Organic Chemistry II (4 hours)
- CHM 337 Organic Chemistry Lab II (2 hours)
- CHM 320 Survey Physical Chemistry (4 hours)
- CHM 310 Analytical Chemistry (2 hours)
- CHM 315 Analytical Chemistry Lab (2 hours)
- CHM 402 Biochemistry (3 hours)
- CHM 471 Faculty Colloquium (1 hour)
- And two elective courses in chemistry (8 hours)

Required Biology Courses (25 hours)

- BIO 200 Introductory Biology I (4 hours)
- BIO 201 Introductory Biology II (4 hours)
- BIO 301 Animal Biology (4 hours)
- BIO 303 Cell Biology (4 hours)
- BIO 416 Microbiology (3 hours)
- BIO 417 Microbiology Lab (2 hours)
- BIO 430 Genetics (4 hours)

Required Geology Courses (16 to 18 hours)

- GEO 100 Introductory Geology (3 hours)
- GEO 101 Introductory Geology Laboratory (1 hour)
- GEO 150 Geological History of the Earth (4 hours)
- EVS 206 Introduction to Environmental Science (4 hours)
- **UST 289 Physical Geography (3 hours)**
- And one semester hour independent research project or one course from the following:
  - GEO 210 The Earth and Human Affairs (3 hours)
  - GEO 230 Natural Resources (3 hours)
  - GEO 359 Field Geology of the Cleveland Area (3 hours)
  - GEO 404 Environmental Science for Teachers (3 hours)
  - GEO 408 Environmental Geology for Teachers (3 hours)

**Required Physics Courses (17 hours)**
- PHY 221 College Physics I (5 hours)
- PHY 222 College Physics II (5 hours)
- PHY 330 Introduction to Modern Physics (3 hours)
- And one of following courses:
  - PHY 201 Astronomy: Stars and Galaxies (4 hours)
  - PHY 202 Astronomy: Planets, Asteroids and Comets (4 hours)

**Physics Major (81 to 91 hours)**

**Required Physics Courses (29 to 37 hours)**
- PHY 243 University Physics I (5 hours)
- PHY 244 University Physics II (5 hours)
- PHY 330 Introduction to Modern Physics (3 hours)
- PHY 474 Thermal Physics (4 hours)
- PHY 201 Astronomy: Stars and Galaxies (4 hours) and/or
  - PHY 202 Astronomy: Planets, Asteroids, & Comets (4 hours)
- And 8 to 12 semester hours of physics electives from the following:
  - PHY 310 Introduction to Holography (3 hours)
  - PHY 320 Introduction to Computational Physics (4 hours)
  - PHY 340 Mechanics and Vibrations (4 hours)
  - PHY 350 Electricity and Magnetism (4 hours)
  - PHY 360 Electronics Laboratory (3 hours)
  - PHY 470 Environmental Physics (4 hours)

**Required Chemistry Courses (20 hours)**
- CHM 261/266 General Chemistry I and Laboratory (5 hours)
- CHM 262/267 General Chemistry II and Laboratory (5 hours)
- CHM 331/336 Organic Chemistry I and Laboratory (6 hours)
- CHM 310 Survey of Analytical Chemistry (2 hours)
- CHM 315 Survey of Analytical Chemistry Laboratory (2 hours)

**Required Geology Courses (16 to 18 hours)**
- GEO 100 Introductory Geology (3 hours)
- GEO 101 Introductory Geology Lab (1 hour)
- GEO 150 Geological History of the Earth (4 hours)
- EVS 206 Introduction to Environmental Science (4 hours)
- UST 289 Physical Geography (3 hours)
- And one semester hour independent research project or one course from the following:
  - GEO 210 The Earth and Human Affairs (3 hours)
  - GEO 230 Natural Resources (3 hours)
  - GEO 359 Field Geology of the Cleveland Area (3 hours)
  - GEO 404 Environmental Science for Teachers (3 hours)
  - GEO 408 Environmental Geology for Teachers (3 hours)

**Required Biology Courses (16 hours)**
BIO 200 Introductory Biology I (4 hours)
BIO 201 Introductory Biology II (4 hours)
BIO 264 Introductory Microbiology (4 hours)
And one course from the following:
  - BIO 300 Plant Biology (4 hours)
  - BIO 301 Animal Biology (4 hours)
  - BIO 303 Cell Biology (4 hours)
  - BIO 304 Population Biology and Evolution (4 hours)

Licensure programs are also available in the dual fields of physics and chemistry and in the single fields of life and earth sciences. Information about program requirements is available in the Education Advising Office, RT 1401, (216) 687-4625.

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College Graduates Seeking Adolescent and Young Adult or Multi-Age Licensure

Introduction

The College of Education offers a post-baccalaureate program for college graduates seeking secondary licensure to teach the earth sciences, integrated language arts, integrated mathematics, integrated social studies, the life sciences, or the physical sciences in grades 7 through 12. Similarly, a post-baccalaureate program exists for college graduates interested in obtaining multi-age licensure to teach physical education, French, Spanish, music, or the visual arts to students ages 3 to 21. As discussed below, these undergraduate-level programs consist of four components: general education requirements, prerequisites to the professional education sequence, professional education requirements, and discipline-specific requirements in the selected teaching field. In addition to needed course work, recommendation for provisional licensure requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office, RT 1401.

- EDC 300 Diversity in Educational Settings (3 hours)
- PSY 221 Adolescent Psychology (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 18 to 42 hours depending on the teaching field. See the earlier sections on secondary education and multi-age licensure for specific professional education requirements by field or secure a checklist from the College of Education's Advising Office, RT 1401.

D. Discipline-Specific or Content Area Requirements

While previous completion of an academic major in the preferred teaching field is often sufficient to meet licensure requirements, this is not always the case. Consequently, students are strongly encouraged to consult with an advisor in the College of Education's Advising Office, RT 1401, to ensure that all such requirements are met. The College of Education may recommend the granting of a multi-age or adolescent/young adult teaching license in a field other
than the student's major to a person who has met the college and state requirements for such a credential.
Post-Baccalaureate Teacher Preparation Programs

Introduction

The College of Education offers a variety of teacher preparation programs for college graduates who have had little or no professional training in education. While these programs lead to licensure, most of the course work they require cannot be applied to a graduate degree. All post-baccalaureate students seeking teacher licensure must fully meet the college's admission requirements and professional standards as outlined earlier in this chapter. Moreover, students must be available for fieldwork in area schools during the day and are urged to carefully plan their program of study since they must apply for practicum and student teaching placements two semesters in advance of registration for these experiences. An individual appointment with an advisor in the College of Education Advising Office is required prior to acceptance into any of the post-baccalaureate programs described below. During the appointment, the advisor will provide a personalized assessment of required course work. Upon program completion, students are also invited to make use of the University's Career Services Center for help in obtaining employment.
College Graduates Seeking Early Childhood Licensure

Introduction

As outlined below, the post-baccalaureate licensure program in early childhood education consists of three components: general education requirements, prerequisites to the professional education sequence, and professional education requirements. The program is designed to prepare college graduates with little or no formal course work in education for teaching children ages 3 to 8 (grades PreK to 3), including youngsters with special learning needs. Graduates of highly specialized undergraduate degree programs (such as music, fine arts, and business administration) may need to complete additional general education requirements in order to qualify for early childhood licensure. Without exception, recommendation for provisional licensure further requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

Requirements

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office (RT 1401)

- ART 252 or ART 253 Introduction to Western Art (4 hours)
- EDC 300 Diversity in Educational Settings (3 hours)
- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)
- PSY 220 Child Development (3 hours)
- PSY 221 Adolescent Psychology (3 hours)
- SPH 229 Speech and Language Development (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 75 hours. Because certain courses in this sequence must be taken concurrently or in a prescribed order, students are strongly advised to seek assistance from the College’s Student Services Center, RT 1401, before registering for classes.

Foundations
- EDB 200 Teaching as a Profession (2 hours)
- EDB 300 Educational Technology (2 hours)
- EDB 301 Social Foundations of Education (3 hours)
- EDB 302 Psychological Foundations of Education (3 hours)
- ECE 300 Introduction to Early Childhood Education (3 hours)

**Literacy**
- EDL 300 Phonics Assessment and Instruction (3 hours)
- EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)
- EDL 311 Emergent Literacy (3 hours)
- EDL 312 Literature-Based Reading Methods for Children (3 hours)

**Curriculum and Methods**
- ECE 401 Developmental Curriculum for Early Childhood Programs (4 hours)
- ECE 402 Teaching Methods in Early Childhood Education (4 hours)
- ECE 403 Teaching Young Children with Mild and Moderate Disabilities (3 hours)

**Special Methods**
- ESE 415 Assessing Young Children (4 hours)
- ECE 415 Mathematics Instruction in Preschool and the Primary Grades (3 hours)
- ECE 416 Social Studies Instruction in Preschool and the Primary Grades (3 hours)
- ECE 417 Science Instruction in Preschool and the Primary Grades (3 hours)
- EDC 309 Art Methods for the Classroom Teacher (2 hours)
- MUS 301 Music Fundamentals and Methods for the Classroom Teacher (4 hours)
- PED 316 Health and Physical Education for the Classroom Teacher (3 hours)

**Culminating Experiences**
- EST 370 Practicum in Early Childhood Education (3 hours)
- ECE 412 Collaboration with Families and Professionals in Early Childhood Settings (4 hours)
- EST 480 Student Teaching in Early Childhood Education (10 hours)
College Graduates Seeking Middle Childhood Licensure

Introduction

As outlined below, the post-baccalaureate licensure program in middle childhood education consists of four components: general education requirements, prerequisites to the professional education sequence, professional education requirements, and discipline-specific requirements in two of four teaching fields (such as reading and language arts, mathematics, science, social studies). The program is designed to prepare college graduates with little or no formal course work in education for teaching children ages 8 to 14 (grades 4 to 9). In addition to needed course work, recommendation for provisional licensure requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including concentrated study of at least two teaching fields that are broad, multidisciplinary, and encompass the major areas in those fields as described in Section D below.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Student Services Center, RT 1401.

- EDC 300 Diversity in Educational Settings (3 hours)
- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)
- PSY 220 Child Development (3 hours)
- PSY 221 Adolescent Psychology (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 52 hours. Because certain courses in this sequence must be taken concurrently and in a prescribed order, students are strongly advised to seek assistance from the college's advising office before registering for classes.

- EDB 200 Teaching as a Profession (2 hours)
• EDB 300 Educational Technology (2 hours)
• EDB 301 Social Foundations of Education (3 hours)
• EDB 302 Psychological Foundations of Education (3 hours)
• EDB 303 Teaching and Management in the Middle School (3 hours)
• EDB 304 History and Philosophy of the Middle School (1 hour)
• EDB 400 Communication and Collaboration (2 hours)
• EDL 300 Phonics Assessment and Instruction (3 hours)
• EDL 301 Beginning and Intermediate Reading Instruction and Assessment (3 hours)
• EDL 305 Reading in the Content Areas (3 hours)
• EDL 313 Literature-Based Reading Methods for Adolescents (3 hours)

Two of the following EDM offerings:
- EDM 313 Teaching and Assessing Language Arts in Middle School (4 hours)
- EDM 315 Teaching and Assessing Mathematics in the Middle School (4 hours)
- EDM 316 Teaching and Assessing Social Studies in the Middle School (4 hours)
- EDM 317 Teaching and Assessing Science in the Middle School (4 hours)

• ESE 404 Teaching Students of Varying Abilities (3 hours)
• EST 371 Practicum in Middle Childhood Education (3 hours)
• EST 481 Student Teaching in Middle Childhood Education (10 hours)

D. Discipline-Specific or Content Area Requirements

Middle childhood licensure requires concentrated study in at least two of the following multidisciplinary teaching fields: reading and language arts, mathematics, science, and/or social studies. As outlined below, the distributitional requirements for these fields include course work from the various disciplines of which they are comprised and may demand further study beyond that completed as an undergraduate. With approval, interdisciplinary courses may be used to fulfill multiple standards. For example, a physical science course like EDC 418 that includes coverage of both chemistry and physics could be used to satisfy the requirement for course work in both disciplines. Similarly, a course in physical geography such as GEO 209 might be used to meet concentration requirements in both science and social studies.

1. The concentration in Reading and Language Arts requires a minimum of 17 semester hours of course work distributed over the following major areas of study: advanced composition, linguistics, literature, and speech/communication, theater/drama and/or media studies. The following courses or their equivalencies are required:

- COM 225 Media Writing or ENG 304 Creative Writing for Teachers (4 hours)
- COM 242 Public and Professional Speaking or DRA 225 Principles of Acting (3 to 4 hours)
- EDM 313 Teaching and Assessing Language Arts in the Middle School (4 hours)
- ENG 206 Literature and American Culture (3 hours)
- ENG 342 Survey of American Literature (4 hours)
- EDL 408 Applied Linguistics for Teachers or ENG 310 Traditional Grammar or ENG 311 Elements of Linguistics (3 to 4 hours)

2. The concentration in Mathematics requires a minimum of 20 semester hours of course work well distributed over the following major areas of study: college algebra or calculus, geometry, number systems, and probability and statistics. The following courses or their equivalencies are required:

- EDM 315 Teaching and Assessing Mathematics in the Middle School (4 hours)
- MTH 115 Applied Algebra (4 hours)
- MTH 147 Statistical Concepts with Applications (4 hours)
- MTH 151/152/153 Mathematical Concepts (4 hours)
- MTH 154/155/156 Mathematical Concepts (4 hours)

3. The concentration in Science requires a minimum of 32 semester hours of course work well distributed over the following major areas of study: the biological or life sciences, chemistry, earth science, environmental science, physics, and space science. The following courses or their equivalencies are required:

- BIO 103 and BIO 109 Environmental Ecology and Lab (5 hours)
4. The concentration in Social Studies requires a minimum of 30 semester hours of course work well distributed over the following major areas of study: economics, geography (physical, cultural, and/or economic), history (world or non-Western, American, and Ohio), and American government. The following courses or their equivalencies are required:

- ECN 201 Principles of Macroeconomics (3 hours)
- ECN 202 Principles of Microeconomics (3 hours)
- EDM 316 Teaching and Assessing Social Studies in the Middle School (4 hours)
- HIS 111 United States History to 1865 (4 hours)
- HIS 112 United States History after 1865 (4 hours)
- HIS 200 Introduction to Geography (4 hours)
- HIS 306 History of Ohio (4 hours) or HIS 400 Local History Seminar (4 hours)
- PSC 221 Comparative Politics (4 hours) or PSC 231 International Politics (4 hours)
College Graduates Seeking Special Education Licensure as Mild/Moderate Intervention Specialists

Introduction

As outlined below, the post-baccalaureate program for obtaining licensure as a mild/moderate intervention specialist consists of three components: general education requirements, prerequisites to the professional education sequence, and professional education requirements. The program is designed to prepare college graduates with little or no formal course work in education for working with individuals — ages 5 through 21 — that have specific learning disabilities, mild/moderate mental retardation, or mild/moderate behavioral disorders. Graduates of highly specialized undergraduate degree programs (such as music, fine arts, and business administration) may need to complete additional general education requirements in order to qualify for licensure. Without exception, recommendation for provisional licensure further requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office, RT 1401:

- ART 252 or ART 253 Introduction to Western Art (4 hours)
- EDC 300 Diversity in Educational Settings (3 hours)
- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)
- PSY 220 Child Development (3 hours)
- PSY 221 Adolescent Psychology (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 65 hours. Because certain courses in this sequence must be taken concurrently and in a prescribed order, students are strongly advised to seek assistance from the college's advising office before registering for classes.

- EDB 200 Teaching as a Profession (2 hours)
- **EDB 300 Educational Technology** (2 hours)
- **EDB 301 Social Foundations of Education** (3 hours)
- **EDB 302 Psychological Foundations of Education** (3 hours)
- **ECE 415 Mathematics Instruction in Preschool and the Primary Grades** (3 hours)
- **EDC 470 Science Instruction in Preschool and Primary Grades** (3 hours)
- **EDL 300 Phonics Assessment and Instruction** (3 hours)
- **EDL 301 Beginning and Intermediate Reading Instruction and Assessment** (3 hours)
- **EDL 305 Reading in the Content Areas** (3 hours)
- **EDL 313 Literature-Based Reading Methods for Adolescents** (3 hours)
- **ESE 400 Introduction to Special Education** (4 hours)
- **ESE 402 Introduction to Individuals With Mild/Moderate Educational Needs** (4 hours)
- **ESE 411 Classroom Management and Intervention for Severe Behavior Problems** (4 hours)
- **ESE 412 Collaboration and Partnerships Among Parents and Professionals in Special Education** (4 hours)
- **ESE 416 Life Skills and Career Planning in Special Education** (2 hours)
- **ESE 417 Assessment, Curriculum, and Instruction for Students with Mild/Moderate Educational Needs** (4 hours) or **EST 421 Assessment for Instructional Needs** (4 hours)
- **ESE 422 Assessment-Based Curriculum and Instruction for Students with Mild/Moderate Disabilities** (4 hours)
- **EST 377 Practicum in Special Education: Mild/Moderate Educational Needs** (4 hours)
- **EST 487 Student Teaching for Mild/Moderate Educational Needs** (12 hours)
College Graduates Seeking Special Education Licensure as Moderate/Intensive Intervention Specialists

Introduction

As outlined below, the post-baccalaureate program for obtaining licensure as a moderate/intensive intervention specialist consists of three components: general education requirements, prerequisites to the professional education sequence, and professional education requirements. The program is designed to prepare college graduates with little or no formal course work in education for working with individuals — ages 5 through 21 — who have moderate, severe, or profound mental retardation; severe emotional disorders; or multiple disabilities. Graduates of highly specialized undergraduate degree programs (such as music, fine arts, and business administration) may need to complete additional general education requirements in order to qualify for licensure. Without exception, recommendation for provisional licensure further requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

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A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office, RT 1401.

- ART 252 or ART 253 Introduction to Western Art (4 hours)
- EDC 300 Diversity in Educational Settings (3 hours)
- MTH 127 Mathematics for Elementary and Middle School Teachers I (4 hours)
- MTH 128 Mathematics for Elementary and Middle School Teachers II (4 hours)
- MTH 129 Mathematics for Elementary and Middle School Teachers III (2 hours)
- PSY 220 Child Development (3 hours)
- PSY 221 Adolescent Psychology (3 hours)
- SPH 229 Speech and Language Development (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 67 hours. Because certain courses in this sequence must be taken concurrently and in a prescribed order, students are strongly encouraged to complete them in the sequence listed.
advised to seek assistance from the college's advising office before registering for classes.

- **EDB 200** Teaching as a Profession (2 hours)
- **EDB 300** Educational Technology (2 hours)
- **EDB 301** Social Foundations of Education (3 hours)
- **EDB 302** Psychological Foundations of Education (3 hours)
- **ECE 415** Mathematics Instruction in Preschool and the Primary Grades (3 hours)
- **EDC 309** Art Methods for the Classroom Teacher (2 hours)
- **EDL 300** Phonics Assessment and Instruction (3 hours)
- **EDL 301** Beginning and Intermediate Reading Instruction and Assessment (3 hours)
- **EDL 311** Emergent Literacy (3 hours)
- **EDL 312** Literature-Based Reading Methods for Children (3 hours)
- **ESE 400** Introduction to Special Education (4 hours)
- **ESE 403** Introduction to Individuals With Moderate/Severe Educational Needs (4 hours)
- **ESE 410** Diagnostic Assessment and Multifactored Evaluation for Students with Moderate and Severe Disabilities (2 hours)
- **ESE 411** Classroom Management and Intervention for Severe Behavior Problems (4 hours)
- **ESE 412** Collaboration and Partnerships Among Parents and Professionals in Special Education (4 hours)
- **ESE 413** Supporting Medical and Intensive Educational Needs (4 hours)
- **ESE 419** Life Skills Assessment, Curriculum, and Instruction (4 hours)
- **ESE 420** Assessment, Curriculum, and Instruction to Meet the Academic and Behavioral Needs of Students with Moderate/Severe Educational Needs (4 hours)
- **EST 378** Practicum in Special Education: Moderate/Severe Educational Needs (4 hours)
- **EST 488** Student Teaching for Moderate/Severe Educational Needs (12 hours)
College Graduates Seeking Adolescent and Young Adult or Multi-Age Licensure

Introduction

The College of Education offers a post-baccalaureate program for college graduates seeking secondary licensure to teach the earth sciences, integrated language arts, integrated mathematics, integrated social studies, the life sciences, or the physical sciences in grades 7 through 12. Similarly, a post-baccalaureate program exists for college graduates interested in obtaining multi-age licensure to teach physical education, French, Spanish, music, or the visual arts to students ages 3 to 21. As discussed below, these undergraduate-level programs consist of four components: general education requirements, prerequisites to the professional education sequence, professional education requirements, and discipline-specific requirements in the selected teaching field. In addition to needed course work, recommendation for provisional licensure requires the successful completion of any applicable PRAXIS II examinations prescribed by the State Board of Education.

A. General Education Requirements

Course work of at least 30 semester or 45 quarter hours, including offerings in composition, mathematics and logic, arts and humanities, social sciences, and natural sciences.

B. Prerequisites

Equivalent courses taken at other universities may substitute for the following prerequisites pending prior approval of the College of Education's Advising Office, RT 1401.

- EDC 300 Diversity in Educational Settings (3 hours)
- PSY 221 Adolescent Psychology (3 hours)

C. Professional Education Requirements

Course work in education and related professional experiences are included in this area for a total of 18 to 42 hours depending on the teaching field. See the earlier sections on secondary education and multi-age licensure for specific professional education requirements by field or secure a checklist from the College of Education's Advising Office, RT 1401.

D. Discipline-Specific or Content Area Requirements

While previous completion of an academic major in the preferred teaching field is often sufficient to meet licensure requirements, this is not always the case. Consequently, students are strongly encouraged to consult with an advisor in the College of Education's Advising Office, RT 1401, to ensure that all such requirements are met. The College of Education may recommend the granting of a multi-age or adolescent/young adult teaching license in a field other
than the student's major to a person who has met the college and state requirements for such a credential.
Endorsement Programs for Practicing Teachers

Introduction

The College of Education can recommend endorsement in the following teaching fields for candidates who hold an Ohio teaching license or certificate, have completed an approved program of preparation, and have successfully passed any PRAXIS II examinations prescribed by the State Board of Education: reading, and Teaching English to Speakers of Other Languages (TESOL). (Note that these endorsements are now limited to the age and grade levels listed on the initial license or certificate.)

Reading Endorsement

Requires a minimum of 20 semester or 30 quarter hours of course work as outlined below:

- EDL 300/500 Phonics Assessment and Instruction (3 hours)
- One of the following: EDL 301/501 Beginning and Intermediate Reading Instruction and Assessment or EDL 402/502 Foundations of Literacy: Theory and Practice (3 hours)
- One of the following: EDL 311/511 Emergent Literacy, EDL 312/512 Literature-Based Reading Methods for Children, or EDL 313/513 Literature-Based Reading Methods for Adolescents (3 hours)
- EDL 403/503 Assessment and Evaluation of Diverse Literacy Learners (4 hours)
- EDL 404/504 Literacy Development: Meeting the Needs of Diverse Learners (4 hours)
- EDL 305/505 Reading in the Content Areas (3 hours)

Teaching English to Speakers of Other Languages (TESOL) Endorsement

Requires a minimum of 20 semester or 30 quarter hours of course work as outlined below:

- EDC 300 Diversity in Educational Settings (3 hours)
- EDL 406 Second Language Learning and Pedagogy (3 hours)
- EDL 407 TESOL Methods (3 hours)
- EST 373 Practicum in TESOL (3 hours)
- EDL 408 Applied Linguistics for Teachers (3 hours)
- EDL 409 Assessment and Evaluation in the ESL/Bilingual Classroom (3 hours)
- EDL 410 Pedagogical Grammar (3 hours)
- Linguistics Elective (3 hours minimum, selected with advisor)
### Bachelor of Engineering Degree Requirements

Requirements for specific degree programs are set forth in the following sections of this catalog.

- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Computer Engineering
- Bachelor of Electrical Engineering
- Bachelor of Industrial Engineering
- Bachelor of Mechanical Engineering
- Bachelor of Science in Engineering Technology Programs
  - Bachelor of Science in Electronic Engineering Technology
  - Bachelor of Science in Mechanical Engineering Technology

- Surveying Certificate Program
- Go to Fenn College of Engineering Web Site

### Introduction

The fields of engineering and engineering technology have been fundamental forces in the advancement of humanity. The Fenn College of Engineering offers a variety of programs to students who wish to contribute to the world's progress through engineering and technology.

Students planning to enter the engineering profession may major in Chemical, Civil, Computer, Electrical, Industrial, or Mechanical Engineering. Those who plan to become engineering technologists may major in Electronic Engineering Technology or Mechanical Engineering Technology.

In addition, the College of Engineering offers graduate programs at both the master's and doctoral level in conjunction with the College of Graduate Studies. For further information, consult the Cleveland State University Catalog, Graduate Issue, or call the Dean's Office at: (216) 687-2555.

### Degrees

The faculty of Fenn College of Engineering offers programs leading to the following degrees:

- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Computer Engineering
- Bachelor of Electrical Engineering
- Bachelor of Industrial Engineering
- Bachelor of Mechanical Engineering
- Bachelor of Science in Electronic Engineering Technology
- Bachelor of Science in Mechanical Engineering Technology
Evening Programs

It is possible to obtain an engineering degree with evening classes in the following areas: electrical engineering, electronic engineering technology, mechanical engineering, and mechanical engineering technology. In addition, many of the classes required by the remaining engineering majors are offered in the evening.

Summer Programs

The College of Engineering offers a number of engineering science courses during the summer semester. Departmental courses are offered on a limited basis.

General Requirements

A minimum of 128 credits of academic work is required for a bachelor of engineering degree (this does not include credits earned in the Cooperative Education Program and Orientation).

All degree candidates must satisfy the university requirements which include English and general education requirements.

Degree candidates must attain a cumulative grade point average of at least 2.00 for all work and at least 2.00 for all required courses — including technical electives — in the combined areas of engineering, computer science, mathematics, physics, and chemistry.

Technical electives are courses in engineering, mathematics, physical sciences, or computer science at the 300 level or above. These electives must not duplicate any courses used to satisfy other credit requirements in the student's program. Courses chosen to satisfy the technical elective requirement must have advisor approval and must be taken for a grade.

All students are assigned to an engineering faculty member who will serve as their advisor. It is the responsibility of students to keep the advisor informed of their academic progress.

Students may not enroll in any courses for which they lack the required prerequisites. It is the responsibility of the student to see that all course prerequisites are satisfied.

The college reserves the right to alter the content of courses and curricula without previous notice and to provide suitable transition curricula which phase students into the newer courses and curricula.

Transfer Policy

Students enrolled in a college at CSU other than the College of Engineering who wish to be considered for transfer to the College of Engineering should complete MTH 181, 182, CHM 261, 266, ENG 101, 102, and PHY 241. The College of Engineering requires a C or better in each of these courses, and an overall GPA of at least 2.2. The GPA will be calculated excluding remedial and pre-calculus courses.

University Electives for Engineering Students

In addition to engineering college and departmental requirements, and English requirements, university elective courses must be completed in the following areas for a total of 21 credit hours which will complete the University
General Education (GenEd) Requirements:

Arts/Humanities:
- 9 credit hours, including PHL 215

The Social Sciences:
- 9 credit hours, including ESC 282

One Western Culture and Civilization Course**

One Non-Western Culture and Civilization Course**

One course in Human Diversity (HD) or African-American Experience**

One course in African-American Experience (AAE)

*Students are advised to refer to the General Education Requirements (GenEd) of the university, in an earlier part of the Bulletin for details.

**Both the Nonwestern and the Western Culture and Civilization courses and one of the HD or AAE courses can double count with the arts/humanities or social sciences.

Closed Course Sections

In courses for which a waiting list is maintained, students may be admitted above the authorized size specified by the college, up to the room capacity, at the discretion of the instructor, and taking into account the availability of other sections.

For a course section that is closed and for which a student waiting-list is maintained, a student already enrolled in the section but unable to attend the first class period must notify the course instructor. After one class period, the college reserves the right to reassign the seat of a student not in attendance to someone from the course waiting list.

Course Withdrawal Policy

The College of Engineering enforces a strict policy concerning student withdrawal from a course after the course has begun. A student may withdraw from a course until the university's published date for withdrawal. Engineering students are not allowed to withdraw from a course after that date. However, if extreme circumstances arise which may necessitate a student's withdrawal from a course, the student may submit a petition to the Engineering College Petitions Committee. The petition must state the specific reasons for withdrawal. These reasons must be fully documented. The petition must be signed by the student's advisor. The Petitions Committee will determine if the reason is compelling enough to require withdrawal from a course. The particular course or courses to be dropped must be determined in consultation between the student and the advisor. Poor academic performance in a course is not considered a valid reason for late withdrawal. Students should not stop attending a course unless approval of the petition is granted, since very few petitions are approved.

Enrollment in Engineering Courses by Non-Engineering Students
Enrollment in 200-level or above engineering courses is only open to students in the College of Engineering. If a nonengineering student wishes to take an engineering course as an elective, the student must first obtain the permission of the faculty advisor, who will determine the appropriateness of the course to the student's overall plan of study.

The student then must obtain approval by the Dean of Engineering. If the student receives approval, written authorization will be given, which must be submitted when registering for the course. However, students in the Biotechnology Certificate program on any track can take the relevant engineering courses without need for any written authorization.

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**Engineering Cooperative Education Program**

In order for students of the Fenn College of Engineering to participate in the Engineering Cooperative Education Program, they must satisfy the following requirements:

1. Complete **CSC 121** (Career Orientation)
2. Be in good academic standing (not on probation) with a cumulative grade point average of 2.20 or better
3. Complete all courses through freshmen or sophomore year, depending on major
4. Transfer students must complete at least 8 credit hours of course work at CSU in the engineering program, plus meet requirements 1, 2, and 3 above
5. Approval of the engineering cooperative education coordinator
6. Approval of the Dean of Engineering

To remain in the engineering co-op program a student must:

1. Maintain a cumulative GPA of 2.00 or better and not be on probation
2. Register for **CSC 300** before each work assignment
3. Complete all required paperwork and reports on time
4. Not deviate from the co-op schedule unless approved by the engineering cooperative education coordinator and the Dean of Engineering

Students who have been accepted into the Engineering Cooperative Education Program are expected to remain in the program and to complete the schedule approved. A student can withdraw from the program only after giving adequate notice to the cooperative education office and getting approval from that office.

A student who withdraws from the program is not eligible to reapply. A minimum of three semesters of co-op experience is required to qualify as a graduate of the Engineering Cooperative Education Program. Credits earned in the Engineering Cooperative Education Program are in addition to the credits required for an engineering degree.

Students who wish to enter the Engineering Cooperative Education Program should go to the Cooperative Education Office in the Career Services Center and request permission to enter the program. The cooperative plan of education consists of alternating periods of employment and full-time study. Special permission is required to take a course while on a co-op assignment. Table J below shows the typical schedules of the program.

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<td><strong>Year 1</strong></td>
<td>1st semester</td>
<td>2nd semester</td>
<td>vacation</td>
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Engineering Minor

There are no minors available in the College of Engineering.

Late Registration and Late Adding a Course

No registration or adds will be permitted after the end of the first week of class. Students must complete the registration process by the end of the first week of class in the semester in which enrollment is sought. Also, students can add courses to their registration only through the first week of class in the semester in question.
Bachelor of Chemical Engineering At-A-Glance

Minimum hours required for degree:
134 (not including credits earned in the Engineering Cooperative Education Program and Orientation)

Admission to major: Completion of Fenn College of Engineering

Hours required for minor:
There is no authorized minor in the Chemical Engineering Program. The chemical engineering curriculum fulfills the requirements for a minor in chemistry; the requirements for a minor in physics can be fulfilled with 4 additional credit hours. Interested students must complete an application with the Chemistry and Physics Departments.

Certificate Program: Biotechnology - Engineering Track
(see description or call the department at (216) 687-2571 for additional information.)

Evening Program: No evening program, but most non-CHE courses (and CHE electives) are offered evenings

Advising: All faculty of the department advise students during advising week each quarter; phone: (216) 687-2569

Student Organizations: American Institute of Chemical Engineers (AIChE), Student Chapter

Chemical Engineering Educational Objectives

The chemical engineering curriculum prepares the student for a successful career in a dynamic and progressive profession. A chemical engineer may pursue a wide scope of projects. Chemical engineers are responsible for the design and operation of processes that accomplish chemical changes. Examples of such processes are the production of antibiotics, detergents, drugs, paints, plastics, petrochemicals, advanced materials, and synthetics. A chemical engineer may also work on the research and development preceding or accompanying a given process design, or the management of a plant or an entire enterprise. The CSU chemical engineering curriculum provides a strong foundation to work in energy conservation and utilization, environmental pollution control, as well as the petrochemical industry and many other chemical-related industries. Consistent with mission of the university, college and department, this program has been designed to provide an attractive avenue for students interested in Chemical Engineering, aiming to:

- Provide a sound education in Chemical Engineering fundamentals and related topics
- Train students such as they can design, analyze, and operate manufacturing processes involving physical and chemical changes
- Train students such as they can design and operate chemical processes satisfying social, environmental, and economical constraints
- Prepare students for careers in the chemical and related industry within the Northeast Ohio region and beyond
- Prepare students for practical engineering applications, as well as providing the depth of knowledge required for graduate studies
- Motivate graduates' participation in life-long learning and professional development activities

Special Notes:
**Advanced Chemistry and Science Electives:**
A minimum of 9 credit hours of chemistry electives are required for the degree. These electives must be major courses at the 300-level or above, and include 4 credit hours of organic chemistry and a 2-credit hour chemistry laboratory. In addition, 3 credit hours of advanced science are required. The advanced science credits must be earned in a 300-level or above course in the fields of chemistry, physics, biology or geology. Students can plan their electives sequence to fulfill the requirements for minors in chemistry and physics.

**Chemical Engineering Electives:**
Two chemical engineering electives are also required. These elective courses must be approved by the department, for engineering design and science contents. A varied selection is offered each year. These electives can be selected to satisfy the Biotechnology Certificate track.

**2-D in ESC and CHE rule:**
Chemical engineering students are limited to a combined maximum of two grades of D in Engineering Science (ESC) or Chemical Engineering (CHE) courses to be eligible for graduation.

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**Program for Chemical Engineering**

**First Year, Fall Semester**
- **ENG 101 English I**
- **MTH 181 Calculus I**
- **CHM 261 General Chemistry I**
- **CHM 266 General Chemistry Lab I**
- **ESC 150 FORTRAN**
  or **ESC 151 ANSI C**
- **ESC 100 New Student Orientation** *

Total: 16-17 credits

**First Year, Spring Semester**
- **ENG 102 English II** or Technical Writing (2 or 3 hours)
- **MTH 182 Calculus II**
- **PHY 241 University Physics I**
- **CHM 262 General Chemistry II**
- **CHM 267 General Chemistry Lab II**
- **CSC 121 Career Orientation** **

Total: 16-18 credits

**Second Year, Fall Semester**
- **PHY 242 University Physics II**
- **CHE 300 Chemical Engineering Principles**
- **ESC 250 Differential Equations for Engineers**
- GenEd Elective
- GenEd Elective

Total: 18 credits

**Second Year, Spring Semester**
- **ESC 321 Thermodynamics I**

Total: 3 credits
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC 301 Fluid Mechanics</td>
<td>2</td>
</tr>
<tr>
<td>ESC 350 Linear Algebra and Numerical Methods in Engineering</td>
<td></td>
</tr>
<tr>
<td>ESC 315 Electrical Engineering Concepts or ESC 201 Static's</td>
<td>3</td>
</tr>
<tr>
<td>MTH 283 Multivariable Calculus</td>
<td></td>
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<tr>
<td>GenEd Elective</td>
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**Third Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CHE 302 Chemical Engineering Thermodynamics</td>
<td>4</td>
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<tr>
<td>CHE 306 Transport Phenomena</td>
<td>4</td>
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<tr>
<td>ESC 270 Materials Science</td>
<td>3</td>
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<tr>
<td>CHM 331 Organic Chemistry I</td>
<td>4</td>
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<tr>
<td>CHM 336 Organic/Adv. Chem. Lab I</td>
<td>2</td>
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**Third Year, Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CHE 404 Introduction to Reactor Design (Writing)</td>
<td>4</td>
</tr>
<tr>
<td>CHE 408 Separation Processes</td>
<td>4</td>
</tr>
<tr>
<td>ESC 282 Engineering Economy</td>
<td>3</td>
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<tr>
<td>CHM 322 Physical Chemistry II</td>
<td>4</td>
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**Fourth Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHE 440 Process Design I (Writing)</td>
<td>3</td>
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<tr>
<td>CHE 430 Process Control</td>
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<tr>
<td>CHE 4xx CHE Elective I</td>
<td>3</td>
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<tr>
<td>CHM 3xx Advanced Chemistry Elective</td>
<td>3</td>
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<tr>
<td>PHL 215 Engineering Ethics</td>
<td>3</td>
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**Fourth Year, Spring Semester**

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CHE 441 Process Design II (Writing)</td>
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<tr>
<td>CHE 4xx CHE Elective II</td>
<td>3</td>
</tr>
<tr>
<td>CHE 420 CHE Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Chemistry/Science Elective</td>
<td>3</td>
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<tr>
<td>GenEd Elective</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

*Not required for transfer students

**Required for co-op

Return to top
Bachelor of Civil Engineering At-a-Glance

Minimum hours required for degree:
134 (does not include hours earned in the Engineering Cooperative Education Program and Orientation)

Admission to major: Admission to the Fenn College of Engineering

Hours required for minor: There is no authorized minor in the Civil Engineering Degree Program

Evening Program:
There is no Civil Engineering evening program; however, many courses required for the degree are offered evenings

Advising:
Students must be advised during advising week each semester (usually the eighth week of the semester). Each student is assigned a personal advisor who is a faculty member of the department

The Civil Engineering profession deals with the design and construction of facilities necessary for the quality of life.

From the pyramids to the space station, Hoover Dam to the Golden Gate Bridge, civil engineers leave their mark on the world. They are responsible for skyscrapers, sports arenas, housing facilities, roads, highways, bridges, dams, lakes, tunnels, airport terminals and runways, rocket-launching support structures, and space stations. Without these projects, as well as air- and water-pollution control systems, solid and hazardous waste disposal facilities, water and waste treatment facilities, sewer and water supply networks, drainage and irrigation systems and land reclamation from the sea, all civil engineering projects, what would our civilization be like?

The Civil and Environmental Engineering Department prepares its students to meet the challenges of such projects. Students in the program develop a clear, deep understanding in the areas of structural, environmental, and water resources and geotechnical engineering. They also study transportation, planning, surveying, and construction.

Students develop insights into the physical, economical, sociological, and political constraints which must be considered in engineering analysis and design. Upon completion of the program, the new engineers are able to make a smooth transition to civil engineering practice and research.

Program Objectives:

The objectives of the Civil Engineering program are consistent with the mission statements and guiding principles of the college and the university. The objectives are to produce graduates who:

1. have demonstrated proficiency in written, graphic, and oral engineering communication
2. are prepared to help meet regional needs of business, industry, government, and the engineering profession
3. are prepared to apply the principles of civil engineering
4. understand the principles of ethical behavior and the society-serving role of practicing civil engineers
5. are capable of identifying, formulating and solving a wide range of civil engineering problems
6. are capable of designing and conducting experiments, plus analyzing and interpreting data related to civil engineering
7. are capable of designing a system, component or process to meet desired specifications related to at least four recognized major civil engineering areas
8. are capable of functioning as part of a multi-disciplinary group
9. are motivated to continue their professional growth through graduate education and/or professional development

Special Notes

3-C Policy in ESC courses:
Civil Engineering students must earn a grade of C or better in ESC 201, ESC 211, and ESC 301 before registering for any higher-level course for which any of these three courses are a prerequisite.

2-D Rule in CVE courses: Students are limited to two grades of D in Civil Engineering courses and Civil Engineering Technical electives to be eligible for graduation.

Required Civil Engineering Technical Electives: The two required Civil Engineering Technical Electives must be selected from the available 400-level civil engineering courses and satisfy the engineering science and design requirements of the selected track.

When used as a course prerequisite, Senior Standing means that all required engineering college and civil engineering courses through the junior year must be completed.

First Year, Fall Semester Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>ENG 101 English I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 181 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 261 General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 266 General Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory I</td>
<td></td>
</tr>
<tr>
<td>ESC 100 New Student Orientation *</td>
<td>1</td>
</tr>
<tr>
<td>*Not required for transfer students</td>
<td></td>
</tr>
<tr>
<td>ESC 150 Fortran or ESC 151 ANSI C</td>
<td>3</td>
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<td>Total</td>
<td>16-17</td>
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First Year, Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 102 English II</td>
<td>3</td>
</tr>
<tr>
<td>MTH 182 Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 241 University Physics I</td>
<td>5</td>
</tr>
<tr>
<td>CVE 211 Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Gen Ed Elective</td>
<td>3</td>
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<tr>
<td>CSC 121 Career Orientation **</td>
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<tr>
<td>**Required for co-op</td>
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Second Year, Fall Semester

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MTH 283 Multi. Calc. for Engineers</td>
<td>2</td>
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<tr>
<td>PHY 242 University Physics II</td>
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<tr>
<td>Course</td>
<td>Credits</td>
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<tr>
<td>-----------------------------------------------------------------------</td>
<td>---------</td>
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<tr>
<td>ESC 201 Statics</td>
<td>3</td>
</tr>
<tr>
<td>ESC 250 Differential Equations for Engineers</td>
<td>3</td>
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<tr>
<td>CVE 212 Surveying Laboratory</td>
<td>2</td>
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<td>Gen Ed Elective</td>
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**Second Year, Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ESC 211 Strength of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ESC 301 Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>ESC 310 Engineering Statistics and Probability</td>
<td>3</td>
</tr>
<tr>
<td>ESC 315 Electrical Engineering Concepts</td>
<td>3</td>
</tr>
<tr>
<td><strong>OR</strong></td>
<td></td>
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<tr>
<td>ESC 321 Thermodynamics</td>
<td>3</td>
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<tr>
<td>ESC 350 Linear Algebra and Numerical Methods in Engineering</td>
<td>3</td>
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<tr>
<td>Gen Ed Elective</td>
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<td><strong>Total</strong></td>
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**Third Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CVE 310 Strength of Materials Laboratory</td>
<td>2</td>
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<tr>
<td>CVE 312 Structural Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>CVE 361 Hydraulic Engineering</td>
<td>3</td>
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<td>CVE 362 Hydraulics Lab</td>
<td>1</td>
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<td>CVE 371 Environmental Engineering I</td>
<td>3</td>
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<tr>
<td>ESC 202 Dynamics</td>
<td>3</td>
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<tr>
<td>PHL 215 Engineering Ethics (Writing)</td>
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**Third Year, Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CVE 322 Structural Steel Design</td>
<td>3</td>
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<tr>
<td>CVE 331 Introduction to Geotechnical Engineering</td>
<td>3</td>
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<tr>
<td>CVE 332 Geotechnical Engineering Lab (Writing)</td>
<td>2</td>
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<tr>
<td>CVE 412 Structural Analysis II</td>
<td>3</td>
</tr>
<tr>
<td>CVE 473 Environmental Engineering II</td>
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<tr>
<td>CVE 474 Environmental Engineering Laboratory</td>
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**Fourth Year, Fall Semester**

<table>
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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CVE 422 Reinforced Concrete Design</td>
<td>3</td>
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<tr>
<td>CVE 426 Senior Design (Writing)</td>
<td>1</td>
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<tr>
<td>Civil Engineering Tech Elective</td>
<td>3</td>
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<tr>
<td>ESC 282 Engineering Economy</td>
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<tr>
<td>CVE 429 Foundation Engineering</td>
<td>3</td>
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<td>Gen Ed Elective</td>
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<tr>
<td>Course</td>
<td>Credits</td>
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<tr>
<td>CVE 403 Construction Planning and Estimating</td>
<td>3</td>
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<tr>
<td>CVE 426 Senior Design (Writing)</td>
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<tr>
<td>CVE 446 Transportation Engineering</td>
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<td>Civil Engineering Tech Elective</td>
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<td>Gen Ed Elective</td>
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<td>Total</td>
<td>14</td>
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</table>
Bachelor of Computer Engineering

At-a-Glance

Minimum hours required for the degree: 137. This does not include credits earned in the Engineering Cooperative Education Program and Orientation.

Admission to major: Admission to the Fenn College of Engineering.

Hours required for minor: There is no authorized minor in the Computer Engineering Program.

Evening Program: There is no evening program in Computer Engineering.

Advising: All students are advised by the faculty member currently serving as the departmental undergraduate advisor in the Department of Electrical and Computer Engineering. Phone: (216) 687-2589.

Student organizations: Institute of Electrical and Electronics Engineers; Eta Kappa Nu - Honor Society for Electrical Engineering and Computer Engineering.

Additional information: Students in the Computer Engineering Program choose areas of interest from technical electives in the senior year.

The Computer Engineering Program is a program in the Department of Electrical and Computer Engineering. The Computer Engineering Program emphasizes the use of computers in engineering systems, and interfacing of computers to physical systems; it is intended for those preparing to enter industry as well as those who wish to pursue graduate degrees in Computer Engineering, Electrical Engineering, Software Engineering, or Computer Science.

The program includes a spectrum of courses and considerable laboratory experience. In addition, depth in computer engineering is provided by technical electives. This program is extensively supported by the Department of Computer and Information Science.

Program Objectives: The Computer Engineering Program is designed to produce graduates who are able to

1. practice computer engineering
2. define and diagnose problems, and provide and implement computer engineering solutions in industry, business, and government
3. observe engineering ethics in the practice of computer engineering
4. communicate effectively with technically diverse audiences
5. Collaborate with others as a member or as a leader in an engineering team.
6. Develop their knowledge beyond the undergraduate level and keep current with advancements in computer engineering.

Computer engineering students are limited to two grades of D in EEC courses. Technical electives must be chosen from the available EEC elective courses.

## Program for Computer Engineering

### First Year, Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 261 General Chemistry I</td>
<td>4</td>
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<tr>
<td>CHM 266 General Chemistry Laboratory I</td>
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<tr>
<td>ENG 101 English I</td>
<td>4</td>
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<tr>
<td>ESC 100 New Student Orientation*</td>
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<td>GENEd Elective</td>
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### First Year, Spring Semester

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CIS 260 Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>CSC 121 Career Orientation**</td>
<td>1</td>
</tr>
<tr>
<td>ENG 102 English II</td>
<td>3</td>
</tr>
<tr>
<td>MTH 182 Calculus II</td>
<td>4</td>
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<tr>
<td>PHY 243 University Physics I (Writing)</td>
<td>5</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16-17</strong></td>
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### Second Year, Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EEC 310 Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>ESC 250 Differential Equations for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>MTH 220 Discrete Mathematics</td>
<td>4</td>
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<tr>
<td>MTH 284 Matrices for Engineers</td>
<td>2</td>
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<tr>
<td>PHY 244 University Physics II (Writing)</td>
<td>5</td>
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### Second Year, Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CIS 265 Data Structures and Algorithms</td>
<td>4</td>
</tr>
<tr>
<td>EEC 311 Electronic Circuits II</td>
<td>4</td>
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<tr>
<td>EEC 313 Electronics I</td>
<td>4</td>
</tr>
<tr>
<td>ESC 310 Engineering Statistics and Probability</td>
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<tr>
<td>Course</td>
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<tr>
<td><strong>Third Year, Fall Semester</strong></td>
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<tr>
<td>CIS 335 Language Processors</td>
<td>4</td>
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<tr>
<td>CIS 345 Operating System Principles</td>
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<tr>
<td>EEC 316 Electronic Devices Laboratory</td>
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<td>EEC 380 Digital Systems</td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>Third Year, Spring Semester</strong></td>
<td></td>
</tr>
<tr>
<td>EEC 381 Digital Systems Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>EEC 483 Computer Organization</td>
<td>4</td>
</tr>
<tr>
<td>ESC 282 Engineering Economy</td>
<td>3</td>
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<tr>
<td>ESC Engineering Science Elective</td>
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</tr>
<tr>
<td>PHL 215 Engineering Ethics (Writing)</td>
<td>3</td>
</tr>
<tr>
<td>GenEd Elective</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
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<tr>
<td><strong>Fourth Year, Fall Semester</strong></td>
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</tr>
<tr>
<td>EEC 480 Modern Digital Design</td>
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</tr>
<tr>
<td>EEC 481 Digital Systems Laboratory II</td>
<td>2</td>
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<tr>
<td>EEC 484 Computer Networks</td>
<td>4</td>
</tr>
<tr>
<td>EEC 485 High Performance Architectures</td>
<td>4</td>
</tr>
<tr>
<td>EEC Technical Elective</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<tr>
<td><strong>Fourth Year, Spring Semester</strong></td>
<td></td>
</tr>
<tr>
<td>EEC 482 Computer Engineering Laboratory</td>
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<tr>
<td>EEC 490 Senior Design</td>
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<tr>
<td>EEC Technical Elective</td>
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<tr>
<td>EEC Technical Elective</td>
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<tr>
<td>GenEd Elective</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>
Bachelor of Electrical Engineering  
At-a-Glance

Minimum hours required for the degree:
130. This does not include credits earned in the Engineering Cooperative Education Program and Orientation.

Admission to major: Admission to the Fenn College of Engineering.

Hours required for minor: There is no authorized minor in the Electrical Engineering Program.

Evening Program: The Electrical Engineering Program is offered in the evening on a two- to three-year cycle.

Advising:
All students are advised by the faculty member currently serving as the departmental undergraduate advisor in the Department of Electrical and Computer Engineering. Phone: (216) 687-2589.

Student organizations:
Institute of Electrical and Electronics Engineers; Eta Kappa Nu - Honor Society for Electrical Engineering and Computer Engineering.

Additional information:
Students in the Electrical Engineering Program choose areas of interest from an array of technical electives in the senior year.

The Electrical Engineering Program is a program in the Department of Electrical and Computer Engineering. Electrical engineering provides a variety of opportunities in work related to digital computers, electronics, control systems, communication systems, power electronics and systems, and other areas. The electrical engineer is particularly well-qualified to help solve the technical problems of modern society because of the breadth of the profession and the close relationships between electrical engineers and other engineers and scientists.

The electrical engineering curriculum is intended to provide students with a background suitable for either industrial employment or advanced education at the graduate level. The program includes a spectrum of courses and considerable laboratory experience. In addition, depth in areas of specialization within electrical engineering is provided by several technical electives.

Program objectives: The Electrical Engineering Program is designed to produce graduates who are able to

1. practice electrical engineering in one or more of the following areas: communications, computers, controls, power electronics, and power systems
2. define and diagnose problems, and provide and implement electrical engineering solutions in industry, business, and government
3. observe engineering ethics in the practice of electrical engineering
4. communicate effectively with technically diverse audiences
5. collaborate with others as a member or as a leader in an engineering team
6. develop their knowledge beyond the undergraduate level and keep current with advancements in electrical engineering.

Electrical engineering students are limited to two grades of D in EEC courses. Technical electives must be chosen from the available EEC elective courses.

Program for Electrical Engineering

**First Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHM 261 General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 266 General Chemistry Laboratory</td>
<td>1</td>
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<tr>
<td>ENG 101 English I</td>
<td>4</td>
</tr>
<tr>
<td>ESC 100 New Student Orientation</td>
<td>1</td>
</tr>
<tr>
<td>MTH 181 Calculus I</td>
<td>4</td>
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<tr>
<td>GenEd Elective</td>
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</tr>
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<td><strong>Total</strong></td>
<td><strong>16-17</strong></td>
</tr>
</tbody>
</table>

**First Year, Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CSC 121 Career Orientation</td>
<td>1</td>
</tr>
<tr>
<td>ENG 102 English II</td>
<td>3</td>
</tr>
<tr>
<td>ESC 151 ANSI C</td>
<td>3</td>
</tr>
<tr>
<td>MTH 182 Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 243 University Physics I (Writing)</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15-16</strong></td>
</tr>
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</table>

**Second Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEC 310 Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>ESC 250 Differential Equations for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>MTH 283 Multivariable Calc. For Engineers</td>
<td>2</td>
</tr>
<tr>
<td>MTH 284 Matrices for Engineers</td>
<td>2</td>
</tr>
<tr>
<td>PHY 244 University Physics II (Writing)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Second Year, Spring Semester**

- EEC 311 Electric Circuits II       | 4
- EEC 313 Electronics I             | 4
- ESC 310 Engineering Statistics & Probability | 3
- GenEd Elective                    | 3
- GenEd Elective                    | 3

**Total**                            | **17**
### Third Year, Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EEC 314 Electronics II</td>
<td>4</td>
</tr>
<tr>
<td>EEC 315 Electronics Lab</td>
<td>2</td>
</tr>
<tr>
<td>EEC 361 Electromechanical Energy Conversion</td>
<td>4</td>
</tr>
<tr>
<td>EEC 380 Digital Systems</td>
<td>4</td>
</tr>
<tr>
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**Total**                                          **17**

### Third Year, Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EEC 381 Digital Systems Lab</td>
<td>2</td>
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<tr>
<td>ESC 203 Statics &amp; Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ESC 282 Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>PHL 215 Engineering Ethics (Writing)</td>
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</tr>
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**Required for all students admitted to Engineering College Fall 1999 and after**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>GenEd Elective</td>
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**Total**                                          **15**

### Fourth Year, Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EEC 440 Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>EEC 441 Control Systems Lab</td>
<td>2</td>
</tr>
<tr>
<td>EEC 450 Communications</td>
<td>4</td>
</tr>
<tr>
<td>EEC 451 Communications Lab</td>
<td>2</td>
</tr>
<tr>
<td>EEC 470 Power Electronics</td>
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**Total**                                          **16**

### Fourth Year, Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEC 471 Power Electronics &amp; Machines Lab</td>
<td>2</td>
</tr>
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**Required for all students admitted to Engineering College Fall 2001 and after**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EEC 490 Senior Design</td>
<td>4</td>
</tr>
<tr>
<td>EEC Technical Elective</td>
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</tr>
<tr>
<td>EEC Technical Elective</td>
<td>4</td>
</tr>
<tr>
<td>EEC Technical Elective</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total**                                          **18**

Return to top
Bachelor of Industrial Engineering

At-a-Glance

Minimum hours required for degree: 128. This does not include 1 credit earned in New Student Orientation.

Admission to major: Admission to Fenn College of Engineering

Hours required for minor: There is no authorized minor in the industrial engineering program.

Evening program:
No evening program, but the majority of advanced IME courses are offered during late afternoon and evening timeslots.

Advising:
All faculty of the department advise students during advising week each semester. Appointments are strongly recommended. Phone: (216) 687-2044.

Student organizations:
Institute of Industrial Engineers, Student Chapter, Society of Manufacturing Engineers, Alpha Pi Mu (Honor Society), American Society for Quality, American Society for Engineering Education

Additional Information

Industrial engineering is concerned with the design, improvement, control, and management of integrated systems of people, materials, and equipment. In this profession, comprehension and skills in four major fields of knowledge are required: science (the systematic body of knowledge concerning the nature of the world and the laws governing the interaction of its parts); technology (the applied arts that use scientific knowledge for the control of matter, energy, and information to accomplish useful purposes); economics (the principles by which technology is evaluated, along with marketing, financing, and legal aspects that incorporate the business enterprise); and interpersonal relationships (the field of communication and cooperation between people which includes the skills of managing, working for, and getting along with others).

An engineer trained in this discipline may be employed in such diverse fields as manufacturing, transportation, public utilities, health services, defense establishments, banking, insurance, and capital and consumer goods marketing. Solutions to problems in industrial engineering deal with the complexities of technical designs, human interactions, decisions under certainty and uncertainty, economic constraints, and rationalization of the man-machine interface within the broad ecological system.

The Industrial Engineering curriculum is designed to provide a sound basis for formal advanced study and selfdevelopment. Participation in the Engineering Cooperative Education Program is strongly recommended. In concert with the recommendations of the Accreditation Board for Engineering and Technology, Inc. (ABET) the program is designed to fulfill the following objectives.
Program objectives:

The objectives of the Bachelor of Industrial Engineering degree program are to produce graduates who are able to:

1. Practice industrial engineering in one or more of the enterprise areas such as: manufacturing systems, quality systems, operations analysis, production planning or facilities planning and design.

2. Define and diagnose problems from an industrial engineering perspective, and implement solutions in an enterprise-wide environment.

3. Communicate effectively with technically and professionally diverse audiences at all levels of the enterprise.

4. Collaborate with others as a member or as a leader of an engineering or cross-functional enterprise team.

5. Continue to pursue lifelong learning to develop knowledge professionally and keep current with the latest advancements in industrial engineering.

6. Pursue graduate studies leading to graduate degrees.

Industrial engineering students are limited to no more than one grade of D in IME courses and ESC 282 and ESC 310.

Students must choose two technical electives with advisor approval. Technical electives may be 300-level or 400-level courses in industrial engineering, other engineering disciplines, science, mathematics, computer science, or business.

Industrial engineering students can be nominated into the honors organization Alpha Pi Mu during their junior or senior year.

Program for Industrial Engineering Degree

**First Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101 English I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 181 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 261 General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 266 General Chemistry Lab I</td>
<td>1</td>
</tr>
<tr>
<td>ESC 101 Graphical Concepts/CAD</td>
<td>3</td>
</tr>
<tr>
<td>ESC 100 New Student Orientation *</td>
<td>1</td>
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<tr>
<td>Total</td>
<td>16</td>
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**First Year, Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 102 English</td>
<td>3</td>
</tr>
<tr>
<td>ENG 105 Writing Center I</td>
<td>2</td>
</tr>
<tr>
<td>MTH 182 Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 243 Univ. Physics I with Lab (Writing)</td>
<td>5</td>
</tr>
<tr>
<td>CSC 121 Career Orientation *</td>
<td>1</td>
</tr>
<tr>
<td>Gen Ed Elective</td>
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<tr>
<td>Total</td>
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**Second Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MTH 284 Matrices for Engineers</td>
<td>2</td>
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<tr>
<td>Course</td>
<td>Credits</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>PHY 244 Univ. Physics II with Lab (Writing)</td>
<td>5</td>
</tr>
<tr>
<td>ESC 151 Programming</td>
<td>3</td>
</tr>
<tr>
<td>ESC 250 Differential Equations for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ESC 270 Materials Science</td>
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<tr>
<td><strong>Total</strong></td>
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**Second Year, Spring Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC 203 Statics &amp; Dynamics</td>
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<tr>
<td>ESC 310 Eng. Statistics &amp; Prob.</td>
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</tr>
<tr>
<td>ESC 321 Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>COM 242 Public &amp; Professional Speaking</td>
<td>3</td>
</tr>
<tr>
<td>GenEd Elective</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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**Third Year, Fall Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IME 250 Material Processing and Methods</td>
<td>3</td>
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<tr>
<td>IME 251 Material Processing and Methods Lab</td>
<td>1</td>
</tr>
<tr>
<td>IME 304 Work Methods &amp; Measurements</td>
<td>3</td>
</tr>
<tr>
<td>IME 305 Work Methods and Measurements Lab</td>
<td>1</td>
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<tr>
<td>IME 320 Engineering Experimental Design</td>
<td>3</td>
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<tr>
<td>IME 330 Operations Research I</td>
<td>3</td>
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<tr>
<td>ESC 282 Engineering Economy</td>
<td>3</td>
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<td><strong>Total</strong></td>
<td><strong>17</strong></td>
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**Third Year, Spring Semester**

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<th>Course</th>
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<tr>
<td>IME 331 Operations Research II</td>
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<tr>
<td>IME 405 Industrial Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>IME 410 Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>IME 477 Facility Planning</td>
<td>3</td>
</tr>
<tr>
<td>IME 478 Facility Planning Lab</td>
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<tr>
<td>PHL 215 Engineering Ethics (Writing)</td>
<td>3</td>
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<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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</table>

**Fourth Year, Fall Semester**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>IME 465 Manufacturing Systems Engineering</td>
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<tr>
<td>IME 475 Systems Simulation</td>
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</tr>
<tr>
<td>IME 480 Engineering Design</td>
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<td>GenEd Elective</td>
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<tr>
<td><strong>Total</strong></td>
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**Fourth Year, Spring Semester**

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<tr>
<th>Course</th>
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<tr>
<td>IME 470 Production Planning &amp; Control</td>
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<tr>
<td>IME 481 Senior Design</td>
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<tr>
<td>Technical Elective</td>
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<tr>
<td>GenEd Elective</td>
<td>3</td>
</tr>
<tr>
<td>GenEd Elective</td>
<td>3</td>
</tr>
</tbody>
</table>
Technical Electives:
Students are required to take a minimum of 6 hours. A student may, with department approval, substitute courses from another engineering department or from another college within Cleveland State University.

Industrial Engineering Technical Electives (6-hour minimum)

- IME440 Applications of PLC's
- IME 450/451 Industrial Automation/Lab
- IME 471 Operational Level Scheduling
- IME 474 Expert Systems for Engineers
- IME 476 Law for Engineers
- PSY 331 Industrial-Organizational Psychology
- IME 506 Industrial Safety and Health
- IME 540 Quality System Design
- IME 570 Continuous Quality Improvement
- IME 580 Engineering Management
Bachelor of Mechanical Engineering At-a-Glance

Minimum hours required for degree:
137 (not including credits earned in the Engineering Cooperative Education Program and Orientation)

Admission to major:
Students may select the mechanical engineering major once they have been admitted to the engineering college.

Hours required for minor:
There is no authorized minor in the mechanical engineering program.

Evening program:
The mechanical engineering evening program offers courses on a two-year cycle.

Advising:
All faculty of the department advise students each semester during advising week. Phone: (216) 687-2576

Student organizations:
American Society of Mechanical Engineers, Society of Automotive Engineers, and American Institute for Aeronautics and Astronautics

The professional work of the mechanical engineer falls into three general areas: design, research and development, and management of technical activities. The mechanical engineer draws upon a broad educational background (which includes energy and structures/motion in mechanical systems) and works in diverse areas of employment. Mechanical engineers deal with product design, manufacturing techniques, energy utilization and conversion, thermal system design, and system control. The industries utilizing the mechanical engineer's talents range from automotive, manufacturing, and power generation to aerospace, cryogenic, oceanographic, robotic, and bioengineering sectors.

Young engineers usually begin their career performing design-oriented tasks. As they gain experience and professional maturity, they take on the technical direction of activities that cut across several disciplines. Moreover, they must lay the groundwork for their personal development as productive members of society, responsive to its needs and capable of assuming leadership.

The mechanical engineering curriculum reflects the special skills needed for this engineering profession. The curriculum goes beyond the specific technological needs of the field to prepare students for the changing nature of their work and a lifetime of learning. The CSU course structure blends study in the humanities, social sciences, and the physical and engineering sciences with study in the technical aspects of mechanical engineering. The Cooperative Education Program provides practical engineering experience during the program of study and is highly recommended since it brings students into intimate contact with engineering and aids in career development.

Program Objectives

The Mechanical Engineering Program is designed to produce graduates who:

1. Practice mechanical engineering in fluid thermal/energy conversion and machine system stems of the discipline in private, government or industrial organizations.
2. Practice mechanical engineering in environments that require a variety of roles including engineering problem definitions, application of advanced methods of analysis, problem diagnosing, and solution of real-world engineering design problems that are subject to realistic constraints such as cost, safety, etc.

3. Take the role of a team member or a team leader in the engineering profession of their employment, in professional organizations.

4. Enhance their knowledge beyond a B.S. level, encouraging them to be a life-long learner, and keep current with the advancements in engineering and the technology.

5. Become an active member of the engineering profession by taking and passing the principles and practice exams and become a licensed professional engineer.

Mechanical engineering students are limited to a total of two grades of D in ESC and MCE courses.

**Elective Program:**

Three MCE elective courses (including one lab) are required to focus the student's abilities in specific technical areas and provide advanced, application-oriented instruction. The MCE elective courses are listed below.

- MCE 424 Heat Transfer II
- MCE 425 HVAC
- MCE 430 Fluid Mechanics II
- MCE 444 Applied Combustion Processes
- MCE 445 Modern Controls
- MCE 465 Advanced Machine Analysis
- MCE 466 Machine Design II
- MCE 471 Dynamics of Machinery
- MCE 482 Machine Systems Laboratory
- MCE 483 Thermal Systems Laboratory
- MCE 493 Special Topics
- MCE 496 Independent Study

Program for Mechanical Engineering

**First Year, Fall Semester**

- ENG 101 English I 4
- MTH 181 Calculus I 4
- CHM 261 General Chemistry I 4
- CHM 266 General Chemistry Laboratory I 1
- ESC 101 Graphical Concepts/CAD 3
- ESC 100 New Student Orientation " 1

*Total* 16-17

**First Year, Spring Semester**

- MCE 102 Technical Writing and Professional Communication 2
- MTH 182 Calculus II  
- PHY 241 University Physics I  
- ESC 150 Fortran or ESC 151 ANSI C  
- ESC 270 Materials Science  
- CSC 121 Career Orientation **  

Total 17-18

Second Year, Fall Semester
- ESC 250 Differential Equations for Engineers  
- PHY 242 University Physics II  
- ESC 201 Statics  
- IME 250 Material Processing and Metrology  
- IME 251 Material Processing and Metrology Laboratory  
- MTH 283 Multivariable Calculus  

Total 17

Second Year, Spring Semester
- ESC 350 Linear Algebra and Numerical Methods in Engineering  
- MCE 255 Computer-Aided-Engineering  
- ESC 202 Dynamics  
- ESC 211 Strength of Material  
- ESC 315 Electrical Engineering Concepts  
- GenEd Elective  

Total 18

Third Year, Fall Semester
- MCE 305 Kinematics
<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ESC 301 Fluid Mechanics</td>
<td>3</td>
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<tr>
<td>ESC 321 Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>MCE 365 Design of Machine Components</td>
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<tr>
<td>MCE 371 Vibrations</td>
<td>3</td>
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<tr>
<td>PHL 215 Engineering Ethics (Writing)</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>19</td>
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</tbody>
</table>

**Third Year, Spring Semester**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MCE 322 Thermodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>MCE 324 Heat Transfer I</td>
<td>3</td>
</tr>
<tr>
<td>MCE 366 Machine Design I</td>
<td>3</td>
</tr>
<tr>
<td>MCE 380 Instrumentation and Measurements Lab</td>
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**Fourth Year, Fall Semester**

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MCE 450 Design Project I (Writing)</td>
<td>2</td>
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<tr>
<td>ESC 282 Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>ESC 310 Engineering Statistics and Probability</td>
<td>3</td>
</tr>
<tr>
<td>MCE 441 Introduction to Linear Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>GenEd Elective</td>
<td>3</td>
</tr>
<tr>
<td>MCE Lab Elective</td>
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<tr>
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</table>

**Fourth Year, Spring Semester**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MCE 451 Design Project II (Writing)</td>
<td>3</td>
</tr>
<tr>
<td>MCE 473 Design of Thermal Systems</td>
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</tr>
<tr>
<td>MCE Elective</td>
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</tbody>
</table>
• MCE Elective  
 3

• GenEd Elective  
 3

• GenEd Elective  
 3

Total  
18

*Not required for transfer students.

**Optional course. Required by co-op program.
Bachelor of Science in Engineering Technology Degree Programs
At-a-Glance

- Go to Department of Engineering Technology

**Degrees Granted:**
Bachelor of Science in Electronic Engineering Technology (BSEET) and Bachelor of Science in Mechanical Engineering Technology (BSMET)

**Minimum Hours Required for Degree:**
129 semester hours (Includes approximately 64 semester credit hours transferred with the Associate of Applied Science degree)

**Admission to Major:**
Completion of the Associate of Applied Science (AAS) degree in Electronic Engineering Technology or Mechanical Engineering Technology from a regionally accredited community college, accredited technical institute, or university branch

**Technology Minor:**
For students in other technical fields outside of engineering who wish to broaden their career opportunities or to strengthen their credentials with additional training in the methods or subject matter of Electronic or Mechanical Engineering Technology

**Advising:** Contact the department chairperson. Phone: (216) 687-2559

**Student Organization:**
Federation of Engineering Technology Students (FETS), and American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE).

**Additional Information:**
The Engineering Technology Department offers two-degree programs, leading to a bachelor of science in Electronic Engineering Technology (BSEET) or bachelor of science in Mechanical Engineering Technology (BSMET). These are junior- senior-year level baccalaureate degree programs; students must first earn an Associate of Applied Science (AAS) degree in electronic or mechanical engineering technology from an accredited college, university or technical institute before transferring to CSU to complete the upper two-year courses in the program. Qualified CSU students who minor in engineering technology can enroll in upper-division courses without the required community college prerequisites.

The 2 + 2 program's primary goal is to provide the student with sufficient skills to obtain immediate employment after completion of the associate degree, while providing a path for furthering education and career opportunities with the completion of the bachelor of science degree.

The engineering technology programs at CSU are offered on both a full- and part-time basis. The full-time programs normally require two years for completion. The part-time programs normally require four years for completion.

Engineering Technology students are limited to two grades of D in their major courses to be eligible for graduation.
Students in Engineering Technology may select an option in Robotics requiring them to choose technical elective courses from the list of courses that focuses on that area.

A bachelor of science in Engineering technology graduate is qualified to work in positions requiring the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities.

CSU’s engineering technology graduates are employed in a diverse range of industries. Most importantly, the programs prepare graduates to contribute immediately in these industries.

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### Full-Time Program for Electronic Engineering Technology

#### Fifth Semester, Fall

- EET 315 Microprocessors and Digital System Design 3
- EET 316 Microprocessors and Digital System Design Lab 1
- MTT 300 Applied Math 4
- GET 310 Computer System Technology 3
- *Advisor’s List 9

**Total** 20

#### Sixth Semester, Spring

- MTT 301 Advanced Applied Math 4
- EET 320 Embedded Microprocessor Systems 3
- EET 321 Embedded Microprocessor Systems Lab 1
- EET 330 Advanced Circuit Analysis 3
- *Advisor's List 9

**Total** 20

#### Seventh Semester, Fall

- EET 410 Power Elect. Systems 3
- EET 411 Power Elect. Systems Lab 1
- EET 415 Electronic Circuits, Signals, and Systems 3
- EET 416 Electronic Circuits, Signals, and Systems Lab 1
- EET 430 Applications of FPGA and VHDL 3
- EET 460 Senior Design A 1
- *Advisor's List 6

**Total** 18

#### Eighth Semester, Spring

- EET 440 Feedback Control Systems 3
<table>
<thead>
<tr>
<th>Semester,</th>
<th>Credits</th>
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<tr>
<td>Fifth Semester, Fall</td>
<td>11</td>
<td>EET 315 Microprocessors and Digital System Design</td>
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<td>EET 316 Microprocessors and Digital System Design Lab</td>
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<td>Sixth Semester, Spring</td>
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<td>MTT 301 Advanced Applied Math</td>
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<td>EET 320 Embedded Microprocessor Systems</td>
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<td>GET 310 Computer System Technology</td>
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<td>Eighth Semester, Spring</td>
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<td>EET 330 Advanced Circuit Analysis</td>
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<td>EET 410 Power Electronics Systems</td>
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<td></td>
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<td>EET 430 Applications of FPGA</td>
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<td><strong>Tenth Semester, Spring</strong></td>
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</tr>
<tr>
<td>• EET 440 Feedback Control Systems</td>
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<td>• EET 441 Feedback Control Systems Lab</td>
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<tr>
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<td>• EET 415 Electronic Circuits, Signals, and Systems</td>
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<td>• EET 416 Electronic Circuits, Signals, and Systems Lab</td>
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<td>• EET 460 Senior Design A</td>
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<tr>
<td><strong>Twelfth Semester, Spring</strong></td>
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<tr>
<td>• EET 480 Senior Design B</td>
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<tr>
<td>• GET 440 Applications of PLCs</td>
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| Program Total | 75 |

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**Full-Time Program for Mechanical Engineering Technology**

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<td><strong>Fifth Semester, Fall</strong></td>
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<tr>
<td>• MTT 300 Applied Math</td>
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<tr>
<td>• MET 320 Advanced Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>• MET 345 Thermodynamics</td>
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<tr>
<td>• MTT 301 Advanced Applied Math</td>
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<tr>
<td>• MET 330 Advanced Dynamics</td>
<td>4</td>
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<tr>
<td>• MET 350 Fluid Mechanics</td>
<td>3</td>
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<td>• MET 351 Thermal Fluids Lab</td>
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<tr>
<td><strong>Seventh Semester, Fall</strong></td>
<td></td>
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<tr>
<td>• MET 410 Design of Machine Components</td>
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### MET 411 Mechanical Measurements Lab
- Credits: 6

### MET 420 Heat Transfer

### MET 445 Solid Modeling Applications

### MET 470 Senior design A
- Credits: 3

### Advisor's List
- Credits: 4

### Total
- Credits: 18

### Eighth Semester, Spring Credits
- GET 430 Electric Power, Controls, and Instrumentations
  - Credits: 3
- GET 431 Electric Power, Controls, and Instrumentations Lab
  - Credits: 1
- AoC Selection
  - Credits: 3
- MET 480 Senior Design B
  - Credits: 3
- Advisor's List
  - Credits: 9

### Total
- Credits: 19

### Program Total
- Credits: 65

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### Part-Time Program for Mechanical Engineering Technology

#### Fifth Semester, Fall Credits
- MTT 300 Applied Math
  - Credits: 4
- MET 320 Advanced Mechanics of Materials
  - Credits: 3
- Advisor's List
  - Credits: 3

### Total
- Credits: 10

#### Sixth Semester, Spring Credits
- MTT 301 Advanced Applied Math
  - Credits: 4
- MET 330 Advanced Dynamics
  - Credits: 4
- Advisor's List
  - Credits: 3

### Total
- Credits: 11

#### Seventh Semester, Fall Credits
- MET 345 Thermodynamics
  - Credits: 4
- Advisor's List
  - Credits: 6

### Total
- Credits: 10

#### Eighth Semester, Spring Credits
- MET 350 Fluid Mechanics
  - Credits: 3
- MET 351 Thermal Fluids Lab
  - Credits: 2
- Advisor's List
  - Credits: 3

### Total
- Credits: 8

#### Ninth Semester, Fall Credits
- MET 410 Design of Machine Components
  - Credits: 3

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• MET 411 Mechanical Measurements Lab 2
• MET 420 Heat Transfer 3
Total 8

Tenth Semester, Spring

• GET 430 Electric Power, Controls, and Instrumentations 3
• GET 431 Electric Power, Controls, and Instrumentations Lab 1
• AoC Selection 3
• *Advisor's List 3
Total 10

Eleventh Semester, Fall

• MET 445 Solid Modeling Applications 3
• MET 470 Senior Design A 1
• *Advisor's List 6
Total 10

Twelfth Semester, Spring

• MET 480 Senior Design B 3
• *Advisor’s List 6
Total 9

Program Total 76

†Area of Concentration (AoC):

Students must select one of the following courses based on desired area of concentration:

• MET 450 Mechanical System Design
• MET 460 Thermal System Design
• GET 455 Robotic System Design

*The Advisor's List is comprised of the following:

1. Technical Electives—3 courses
   (9-12 credits)
2. Basic Science Elective—4 credits
3. Communications Elective—3 credits
4. University General Education (GenEd) Requirements—15 credits

The Engineering Technology Department advisor specifies items 1 and 2. See your advisor to obtain a current listing of applicable courses.

Items 3 and 4 may vary in the number of credits required, if any, depending upon what courses transferred. See your Engineering Technology Department advisor to find out what is applicable.

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Introduction

The Maxine Goodman Levin College of Urban Affairs teaches men and women how to work effectively in the urban community. By blending a broad understanding of the urban environment with advanced problem-solving skills, urban affairs graduates qualify for a variety of positions in the public, private, and nonprofit sectors. Research undertaken through the college directly links the university with the concerns of the Cleveland metropolitan area.

Both the instructional and research programs of the college are interdisciplinary in character, drawing on resources and specialized skills throughout the university. The full-time faculty and staff of the college are supplemented by adjunct faculty from community agencies and government.

The college offers the B.A. in Urban Studies, the B.A. in Environmental Studies, the B.A. in Urban Services Administration, and the B.A. in Public Safety Management during both day and evening hours. In addition, the college offers programs in conjunction with the College of Graduate Studies leading to the master of science and doctor of philosophy degrees in Urban Studies, the master of public administration, the master of urban planning, design, and development, and the master of environmental studies.

The Levin College of Urban Affairs has articulation agreements with Cuyahoga Community College, Lakeland Community College, and Lorain County Community College, which include 2+2 programs for graduates of law enforcement, fire science, nursing, human services, physician assistant, and paralegal studies programs.

Credit for life experience is available to students whose prior learning meets the criteria established by the faculty for academic credit toward the bachelor's degree.

The college coordinates the Training Opportunities for Program Staff (TOPS) for Cleveland State University. The TOPS program provides funding for 10 credit hours of tuition per semester for permanent full-time Ohio Department of Human Services state and county employees who are interested in furthering their education through selected courses approved by their supervisors.

A certificate program in Urban Geographic Information Systems (GIS) is offered by the college in keeping with its mission to "provide academic and professional education, expertise, and research capabilities to enhance the quality of life in urban communities." The certificate program consists of four courses and is open to all university students and to professionals who meet university requirements for nondegree seeking status.
College Computing and Technology

In order to promote computer literacy and provide computer-based academic resources, the Levin college maintains two student computer labs with a total of 49 Pentium II PCs running Windows 2000. The computer labs, located in UR39 and UR40, offer software applications for word processing, spreadsheet analysis, database, computer-aided presentation, Geographic Information Systems (GIS), ArcInfo, Internet access, and statistical analysis. The labs provide access to laser printers for high quality black-and-white output, a color laser printer for GIS maps and a color scanner for capture of graphics. Each lab is equipped with a permanently mounted LCD projector for teaching computer-based classes. Any student enrolled in a Levin college program or class may apply for a computer lab account and use the labs. In addition, Levin college lab account holders are provided with: disk space on the networked server for conveniently storing class work; an e-mail account for communicating with persons on campus and around the world; and disk space for creating personal web pages. The Interactive Media Lab (IML) is available for production of DVDs, CD-ROMs, video/audio streams and advanced graphics. Digital video/audio capture equipment is available. The IML is equipped with Apple Macintosh G4 dual processor computers and a Quick Time streaming server. Visit the college website at http://urban.csuohio.edu for more computing information.

Financial Assistance

The Levin College of Urban Affairs offers a number of scholarships to undergraduate students. Students interested in scholarships should contact the Levin college for application materials. (Also see the section on Expenses and Financial Aid at the beginning of this catalog.)

Office of Student Services

The Levin College's Office of Student Services (OSS) is a unique unit dedicated to meeting the diverse needs of students. OSS staff has a wide range of responsibilities, including recruitment, registration, and academic advising. Internships, graduate assistantships, and scholarship awards are also coordinated through this office. A variety of career-development aids are available to current students and alumni such as mentoring, resume review, and job referrals. Additional information about the OSS is available on the Levin College Web page.

The Levin College's Web Page address is http://urban.csuohio.edu.

Degrees

The Levin College of Urban Affairs offers the following degree programs and majors:

- Bachelor of Arts
  - Environmental Studies
  - Public Safety Management
  - Urban Services Administration
  - Urban Studies

Degree Requirements

The faculty of the Levin college awards the bachelor of arts degree to students who fulfill the following requirements:

- A minimum of 128 credit hours of academic work, of which 36 credit hours must be upper-division (300- and 400-level) courses
Achievement of a grade point average of 2.00 or better
Completion of the foreign language requirement, if necessary to remedy a high-school deficiency
Completion of ASC 101, Introduction to University Life (freshmen only)
Completion of university, college, and major-field requirements

General Education Requirements

University and Levin college requirements will be met upon completion of the courses (or their transfer equivalents) listed below:

- ASC 101 Introduction to University Life (freshmen only)
- ENG 101 English I
- UST 102 Professional Writing or ENG 102 English II
- ANT 202 Study of Culture (or equivalent)
- UST 200 Introduction to Urban Studies
- UST 202 Cleveland: Past, Present, and Future or HIS 304 American Urban History
- UST 240 Democracy and the Bureaucratic City or PSC 111 American Government
- ENV 259 Natural History of the Cleveland Area
- UST 289 Physical Geography
- UST 290 Urban Geography
- UST 401 Computer Applications for Urban Research
- UST 404 Urban Data Analysis
- UST 490 Urban Internship or ENV 490 Environmental Internship

In addition to the above specific requirements, students select courses from the following categories to complete their general education requirements:

- Math/Logic ........................................... 6 credits
- Arts/Humanities ...................................... 9 credits
- Non-Western Culture and Civilization ........... 3 credits

Students entering as freshmen must take three designated writing courses over and above ENG 101 and 102. These courses may simultaneously fulfill other university or college requirements. Transfer students (juniors, 60 to 89 credit hours) must complete two courses; seniors (at least 90 credit hours,) must complete one course.

Department of Urban Studies

Undergraduate students may pursue a major in Urban Studies, Environmental Studies, Public Safety Management, or Urban Services Administration leading to the bachelor of arts degree. Students in any discipline may elect to pursue a minor in Urban Studies. Graduates of community colleges with degrees in law enforcement, fire science, paralegal studies, nursing, physician assistant, and human services may complete their bachelor of arts degree through articulation agreements between their college and the Levin college.

Urban Affairs graduates are employed in the public, private, and nonprofit sectors. They are engaged in city planning, program development, community organizing, criminal justice, management, environmental assessment, and economic development. Many graduates have found the urban affairs majors to be a good foundation for advanced study in law, urban planning, or public administration.

- Environmental Studies
- Public Safety Management
- Urban Services Administration
- Urban Studies
Albert A. Levin Chair of Urban Studies and Public Service

The Albert A. Levin Chair of Urban Studies and Public Service is the first endowed chair established at Cleveland State University. The chair is dedicated to the memory of Albert A. Levin, a Cleveland attorney involved in commercial real estate who was committed to the preservation of the city as a vital center.

The general purpose of the Levin Chair is to attract leading professionals in the field of urban affairs to Cleveland State University. The chair holder is involved with both the community and university, acting as a catalyst in relating the resources of the university to the needs and problems of the urban community.


Research and Public Service Initiative

Students have opportunities to work with faculty and staff in the research, public service (including training), centers, programs, and related initiatives in the Levin college.

These include major programs in economic and neighborhood development, public finance, public works management, public management and capacity-building training, all of which come under the Research and Public Service Initiative heading. These activities support the academic programs of the Department of Urban Studies by providing opportunities for graduate and undergraduate students to participate in ongoing research, training, technical assistance, and data base development projects. Some of the major programs include:

**Housing and Neighborhood Development Program**

The Center for Neighborhood Development provides assistance to nonprofit, neighborhood-based development organizations, helping them implement a broad range of housing and economic development projects. The center also directs Neighborhood Leadership Cleveland.

The Housing Policy Research Program studies critical housing supply and demand issues. In addition to undertaking a comprehensive inventory and analysis of the region's housing stock and its conditions, the program also identifies and analyzes housing directions and trends useful for neighborhood and regional revitalization.

**Economic Development Program**

The Economic Development Program encompasses research and technical assistance activities aimed at furthering the development potential of the Cleveland region. It concentrates on the analysis of federal, state, and local public policies and their impact on the economic functions, growth, and development of Cleveland and the region. This unit also houses the Regional Environmental Finance Center.

**Public Management**

The Public Management Program provides technical assistance to state of Ohio departments, local governments, civic
groups, and nonprofit organizations in such areas as strategic planning and fiscal analysis.

Public Works Management

The Public Works Management Program focuses its educational activities on the needs of public works professionals who deliver governmental services such as transportation, roads and bridges, and utilities. The program's technical assistance and research activities are aimed at improved operations and enhanced public works/infrastructure management and public awareness on public works issues.

NODIS

The Northern Ohio Data Information Service (NODIS) has been named one of the three regional data centers in the state by the state of Ohio and the U.S. Bureau of the Census. NODIS provides northern Ohio residents with access to census and other data resources and serves as a census summary tape-processing center. It also provides GIS services and training.

Nonprofit Connection

The Nonprofit Connection is a recent initiative that includes research, teaching and public service. This project was begun to provide capacity-building services to the smaller community-based and faith-based nonprofits in the Cleveland area and to strengthen the nonprofit sector as a whole. The Levin college offers a five-course Certificate in Nonprofit Management at the graduate level; two of the courses, UST 456, Institutional Development of Non-profits, and UST 410, Proposal Writing and Program Development, are also offered in the Urban Services Administration curriculum.

Ohio Center for the Advancement of Women in Public Service

The Ohio Center for The Advancement of Women in Public Service promotes women in public service careers within the executive, legislative, and judicial branches of government. Key functions of the center are to research the state of women's careers in public service, identify particular barriers to the movement of women into positions of authority and leadership, and devise strategies to address these barriers. The center holds forums, workshops, and conferences to address these issues. Through the college's Mentoring Program, the center provides mentors in senior levels of government who will help participants explore careers in public service.

The Urban Child Research Center

The mission of the Urban Child Research center is to study critical issues in the development and education of urban children and youth, and to map directions for new approaches and new solutions to problems that plague young people. The center is organized to conduct interdisciplinary research, evaluations, provide technical assistance and policy analyses, and to disseminate information about children and youth in the urban setting. Specifically, the center produces information about how families, schools, and community institutions and agencies affect the development of children and youth.
Environmental Studies At-a-Glance

Degree granted: Bachelor of Arts

Hours required for major: 55 to 63

Special Tracks: environmental/natural resources geology, environmental management

Advising: designated college advisor: phone: (216) 687-2138

Student Organization: Environmental Care Organization

Major Field Requirements:
Environmental Studies majors are required to take the following courses, or their transfer equivalents:

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Major Field Requirements

A. Required Courses

- BIO 200 Introductory Biology I
- BIO 201 Introductory Biology II
- CHM 251/256 College Chemistry I and Lab
- CHM 252/257 College Chemistry II and Lab
- ENV 435 Environmental Policy and Administration
- ENV 489 Senior Project
- ENV 490 Environmental Internship
- EVS 206 Introduction to Environmental Science
- GEO 223 Map Interpretation and the Visualization of Space
- PHY 221 College Physics I
- PHY 470 Environmental Physics
- UST 300 Economics of Policy Analysis or ECN 202
- UST 403 Cartography and Graphics

B. Thematic Concentration

Students select one concentration from A or B below.

A. Environmental/Natural Resources Geology (15 credit hours)
B. Environmental Management (16 credit hours drawn from the following courses)

- COM 366 Communication and Conflict
- ECN 433 Industrial Organizations
- ENV 440 Environment and Human Affairs
- ENV 441 Environmental Planning
- ENV 442 Environmental Finance and Capital Budgeting
- PSC 315 Public Policy and Administration
- UST 433 Conflict Management
- UST 452 Management of Urban Organizations
- UST 453 Managing Urban Diversity
- UST 458 Urban Policy
- UST 459 Budgetary Policy
Public Safety Management At-a-Glance

Degree granted: Bachelor of Arts

Hours required for major: 32 to 36

Articulation Agreements:
fire technology, law enforcement, corrections, security administration, and paralegal studies

Advising: designated college advisor: phone (216) 687-2138

Student Organizations: Urban Studies Association

Additional Information:
Internship opportunities are available to all students; scholarships are available to qualified students; all courses in major fields are available in the evening; students with substantial prior learning experience may apply for credit through the Assessment and Accreditation of Prior Learning Experience program.

Opportunities to participate in small seminar groups, research projects, and on-line courses are available. Students may also participate in the Cooperative Education Program. Students should consult their advisors for assistance in planning course work.

Major Field Requirements

Public safety management majors are required to complete a minimum of 32 credit hours from the following courses, A and B.

A. Required Courses: (20 credit hours)
   - PSM 302 Contemporary Urban Issues
   - PSM 433 Conflict Management
   - PSM 451 Public Safety Management
   - PSM 452 Management of Urban Organizations
   - PSM 453 Managing Urban Diversity

B. Thematic Concentration:
   Students select a concentration from 1 or 2 below (12-16 credit hours).

1. Law Enforcement/Fire Science
   Students choose two courses from Group A and two courses from Group B.
Group A:
- COM 357 Principles of Public Relations
- COM 366 Communication and Conflict
- COM 444 Mediation and Collaborative Problem Solving
- MLR 302 Principles of Labor and Industrial Relations
- MLR 321 Organizational Behavior
- MLR 340 Human Resource Management
- MLR 422 Labor Law
- MLR 431 Employment Practices Law
- MLR 477 Managerial Skill Development

Group B:
- UST 458 Urban Policy
- SWK 240 Administration of Justice
- SWK 371 Constitutional Criminal Procedure
- SWK 374 Law Enforcement in Society
- SWK 375 Criminal Law
- ECN 350 Economics of Crime and Punishment
- SOC 340 Criminology
- SOC 341 Juvenile Delinquency
- SOC 344 U.S. Criminal Justice System
- PSC 311 Civil Rights and Civil Liberties

2. Paralegal Studies
Students choose four of the following courses:
- COM 366 Communication and Conflict
- COM 444 Mediation and Collaborative Problem Solving
- BLW 411 Ethics and Business Law I
- BLW 412 Ethics and Business Law II
- MLR 302 Principles of Labor and Industrial Relations
- MLR 340 Human Resource Management
- MLR 422 Labor Law
- MLR 431 Employment Practices Law
- MLR 477 Managerial Skill Development
- SWK 371 Constitutional Criminal Procedure
- SOC 342 Sociology of Law
- PSC 310 Constitutional Law
- PSC 311 Civil Rights and Civil Liberties
Urban Services Administration At-a-Glance

Degree granted: Bachelor of Arts

Hours required for major: 36

Articulation Agreements: human services, community health management

Advising: designated college advisor: phone: (216) 687-2138

Student organizations: Urban Studies Association, Pi Alpha Alpha, Future Public Servants of America

Additional Information: Internship opportunities are available to all students; scholarships are available to qualified students; eligible human services employees (state or county human services agencies) may apply for tuition support through the Training Opportunities for Program Staff (TOPS) program; all courses in major fields are available in the evening; students with substantial prior learning experience may apply for credit through the Assessment and Accreditation of Prior Learning Experience program.

Opportunities to participate in small seminar groups, research projects, and on-line courses are available. Students may also participate in the Cooperative Education Program. Students should consult their advisors for assistance in planning course work.

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Major Field Requirements

Urban services administration majors are required to complete a minimum of 36 credit hours from the following courses, A and B.

A. Required Courses (24 credit hours):

- UST 302 Contemporary Urban Issues
- USA 380 Urban Family Development
- USA 433 Conflict Management
- USA 452 Management of Urban Organizations
- USA 456 Institutional Development of the Nonprofit Organization
- USA 459 Budgetary Policy

B. Electives (12 credit hours) chosen from:

- USA 410 Proposal Writing and Program Evaluation
- UST 415 Neighborhood Analysis
- USA 453 Managing Urban Diversity
- USA 455 Gender and Leadership
- USA 493 Human Services Issues
- UST 458 Urban Policy
- SWK 303 Human Behavior and Social Environments
Maxine Goodman Levin College of Urban Affairs
Urban Studies

At-a-Glance

- Degree granted: Bachelor of Arts
- Hours required for major: 36
- Hours required for minor: 18
- Hours required for GIS Certificate: 16

Concentrations:
urban planning, urban management, environmental policy and management, historic preservation, and general urban studies

Articulation Agreements:
public safety management, community health management, paralegal studies, and human services

Advising: designated college advisor: phone: 687-2138

Student organizations: Urban Studies Association, Pi Alpha Alpha, American Planning Association

Additional Information:
Internship opportunities are available to all students; the Columbus Seminar and Washington Seminar provide on-site involvement in government in action; scholarships are available to qualified students; all courses in major fields are available in the evening; students with substantial prior learning experience may apply for credit through the Assessment and Accreditation of Prior Learning Experience program; eligible human services employees may apply for tuition support through the Training Opportunities for Program Staff (TOPS) program.

Opportunities to participate in small seminar groups, research projects, reading courses, and internships are available. Students may also participate in the Cooperative Education Program. Students majoring in Urban Studies should consult their advisors for assistance in planning course work.

Major Field Requirements

Urban studies majors are required to complete a minimum of 36 credit hours from the following courses, A through
C.

A. Required courses:

(15 to 16 credit hours)

- UST 300 Economics of Policy Analysis or ECN 202 Principles of Microeconomics
- UST 301 Urban Spatial Systems
- UST 302 Contemporary Urban Issues
- UST 489 Advanced Senior Seminar

B. Application Courses:

(eight credit hours), chosen from:

- UST 410 Proposal Writing and Program Evaluation
- UST 403 Cartography and Graphics
- UST 434 Introduction to GIS
- UST 473 Columbus Seminar
- UST 474 Washington Seminar

(Other appropriate courses may be substituted.)

C. Thematic Concentration:

Students select one concentration from 1 through 5 below (12 credit hours) or a 2+2 program area if transferring with a degree from a community college.

1. Urban Planning

Urban planners use their skills in research, design, and program development to effect social goals in cities. The urban planning concentration helps students use the heritage of urban planning to influence urban development. Planners analyze a range of data regarding an area — the economic base, the needs of the people, the available resources, and the effects of change — and make recommendations for action.

- UST/ART 374 American Architecture
- UST/ART 375 Cities and Planning
- UST/ART 475 Cleveland: Form and Development of an Urban Environment
- UST 418 Urban Planning *Required course
- UST 419 Neighborhood Planning
- FST 365 Changing Urban Neighborhoods
- UST 420 Urban Design Seminar *Required course
- UST 433 Conflict Management
- UST 441 Environmental Planning
- UST 463 Housing Analysis
- UST 472 Canadian Studies
- UST 476 Historic Preservation
- UST 478 Cleveland Sacred Landmarks

2. Urban Management

Urban managers develop budgets, strategic plans, policies, and programs for a variety of public and private organizations. The urban management concentration gives students basic management techniques and analytic skills necessary to manage effectively in an urban environment.
3. Environmental Policy and Management

This concentration is designed to give students an understanding of the economic, political, and social changes necessary for improving the quality of life in cities. Courses focus on domestic environmental policies and programs, environmental design, and issues related to sustainable development.

- BIO 108 Environmental Ecology (or equivalent) *Required course
- UST 418 Urban Planning
- UST 433 Conflict Management
- ENV 435 Environmental Policy and Administration
- ENV 440 Environment and Human Affairs
- ENV 441 Environmental Planning *Required course
- ENV 442 Environmental Finance and Capital Budgeting
- ENV 443 Environmental Regulatory Compliance
- PHY 470 Environmental Physics

4. Historic Preservation

This concentration is designed to increase students' awareness of the considerable resources of urban art, culture, history, and ethnicity found in major American cities. They will examine archival information and historic structures, and learn methodologies for preserving those physical aspects of cities that continue to contribute to the quality of life of their citizens.

- UST/ART 374 American Architecture
- UST/ART 375 Cities and Planning
- UST/ART 418 Urban Planning
- UST/ART 475 Cleveland: Form and Development of an Urban Environment
- UST 452 Management of Urban Organizations
- UST 476 Historic Preservation *Required course
- UST 478 Cleveland Sacred Landmarks *Required course

5. General Urban Studies

Students majoring in Urban Studies who wish to specialize in an area that is not offered as a departmental concentration may use this option to complete their major field requirements. Students design a three-course interdisciplinary program (12 credit hours) in consultation with their academic advisor and the program director. Examples of general urban studies concentrations include: comparative urban studies, criminal justice, economic development, and conflict management.

2+2 Programs

For community college transfer students with A.A.S. and A.A.B. degrees the following 2+2 programs may be completed with technical credits transferred into the Levin college.
Urban Studies Minor

- Go to Urban Studies Minor information website

(18 credit hours)

Students in any discipline may elect to minor in Urban Studies. The minor consists of 18 credit hours as follows:

- UST 200 Introduction to Urban Studies
- UST 290 Urban Geography
- UST 300 Economics of Policy Analysis
- UST 301 Urban Spatial Systems
- UST 418 Urban Planning
  or
- ENV 441 Environmental Planning

Certificate in Urban Geographic Information Systems

- Go to GIS Certificate information website

(16 credit hours)

The certificate program is open to all university students and to professionals who meet university requirements for non-degree seeking status. The following three courses are required:

- UST 401 Computer Applications for Urban Research
- UST 403 Cartography and Graphics
- UST 434 Introduction to Geographic Information Systems
- UST 490 Urban Internship