

Handbook
for
Undergraduate
Students

Case Western Reserve University
2007-2008

UNDERGRADUATE HANDBOOK

EMERGENCY AND SERVICE TELEPHONE NUMBERS

From on-campus telephones, dial 9 before dialing all off-campus numbers. The area code is 216.

EMERGENCY NUMBERS

| | |
|--------------------------------|----------|
| Campus Security..... | 368-3333 |
| University Circle Police..... | 368-2222 |
| From off-campus..... | 791-2444 |
| University Health Service..... | 368-2450 |

COMMUNITY RESOURCES (24 hours)

| | |
|---|----------|
| Domestic Violence Hotline..... | 391-4357 |
| Mental Health Emergency Hotline (suicide, etc.) | 623-6888 |
| Poison Control Center (drug overdoses, etc.) | 231-4455 |
| Rape Crisis Center | 619-6192 |

CITY OF CLEVELAND

| | |
|----------------------------|----------|
| Police Emergency | 911 |
| Police Non-Emergency | 621-1234 |
| Fire Department..... | 911 |
| Ambulance | 911 |

SERVICE NUMBERS

| | |
|------------------------------------|----------|
| Information | 368-2000 |
| Car Emergency..... | 368-3228 |
| Telephone Repair | 368-2111 |
| North Campus Residence Halls | 368-1010 |
| South Campus Residence Halls | 368-1011 |

MEDICAL EMERGENCY

| | |
|---|----------|
| If you need an ambulance, call | |
| University Security | 368-3333 |
| If you need help in evaluating your symptoms call, | |
| Cleveland Clinic Advice Nurse (7 am to 11 pm) | 444-1234 |
| Metro Health Medical Center | |
| Health Information Line (7 am to 11 pm) | 778-7878 |
| University Health Service..... | 368-2450 |

MENTAL HEALTH/EMOTIONAL CRISIS

| | |
|---|----------|
| During normal business hours, call University Counseling Services in | |
| 201 Sears Building | 368-5872 |
| After hours and on weekends, call and request the answering service to page | |
| the "counselor on call" for University Counseling Services..... | 844-8892 |
| University Health Service..... | 368-2510 |

Case Western Reserve University Statement of Ethics

Universities seek to preserve, disseminate and advance knowledge. At Case, as elsewhere, we recognize that to fulfill these purposes requires a norm of expected conduct shared by all in the University community, governed by truthfulness, openness to new ideas, and consideration for the individual rights of others, including the right to hold and express opinions different from our own.

The University's mission rests on the premise of intellectual honesty in the classroom, the laboratory, the office, and the solitary examination desk. Without a prevailing ethic of honor and integrity not only in scientific pursuits but also in all scholarly activity, the very search for knowledge is impaired. In these respects, each of us -- especially but not exclusively faculty--must regard oneself as a mentor for others.

These principles we strive to uphold make it possible for the larger society to place trust in the degrees we confer, the research we produce, the scholarship we represent and disseminate, and the critical assessments we make of the performance of students and faculty, as well as judgments of staff and administrators.

To safeguard the standards on which we all depend, each of us must, therefore, accept individual responsibility for our behavior and our work and refrain from taking credit for the work of others.

The culture of a university also requires that the rights of all be protected, particularly by those entrusted with authority for judgment of the work of others.

The University being a human community is subject to human failings, ambiguities, and errors. It is, therefore, the responsibility of the bodies regulating the affairs of faculty, students, and staff to maintain processes for judging and resolving instances where these principles may have been violated. However, all such systems depend for their effectiveness, in turn, on the acceptance of common norms of contact -- the ties of trust which bind the university community together.

Academic Freedom

Fundamental to the purposes of the University is the belief that progress in social and individual welfare is ultimately dependent on the maintenance of freedom in academic processes. Especially vital is the protection of expression which is critical toward conventional thought or established interests.

Academic freedom is a right of both tenured and non-tenured faculty members, and applies to University activities including teaching and research. Specifically, each faculty member may consider in his or her classes any topic relevant to the subject matter of the course as defined by the appropriate educational unit. Each faculty member is entitled to full freedom of scholarly investigation and publication of his or her findings.

Notice of Policy on Email Communications

Official communications from the University may be sent electronically using the student's University-assigned e-mail address. The University expects that students will read such official University communications in a timely fashion. Students who choose to forward e-mail from their University account to another e-mail address remain responsible for receiving and reading official University communications.

Access to and Expectations of Persons Using Case Western Reserve University Computing Technology Resources

It is the policy of Case Western Reserve University to maintain access for its community to local, national and international sources of electronic information in order to provide an atmosphere that encourages the free exchange of ideas and sharing of information. Case maintains a variety of information technologies for use as resources for people, catalysts for learning, and increased access to technology and an enriched quality of learning. Access to this environment and the University's information technology resources is a privilege and must be treated with high ethical and legal standards.

Preserving the access to information resources is a community effort that requires each member to act responsibly and guard against abuses. Therefore, both the Case community as a whole and each individual user have an obligation to abide by the following standards of acceptable and ethical use:

- Use only those computing and information technology resources and data for which you have authorization and only in the manner and to the extent authorized.
- Use computing and information technology resources only for their intended purpose.
- Protect the access and integrity of computing and information technology resources.
- Abide by applicable laws and University policies and all applicable contracts and licenses and respect the copyright and intellectual property rights of others, including the legal use of copyrighted material.
- Respect the privacy and person rights of others.

Access to Case Western Reserve University information technology and computing resources is a privilege granted to students, faculty, and staff of Case. The university extends access privileges to individual users of the University's information technology and computing resources. The extension of these privileges is predicated on the user's acceptance of and adherence to the corresponding user responsibilities detailed in this policy and addendum. The University reserves the rights to limit, restrict, or extend access to information technology resources. For the full policy statement, see www.case.edu/its/features/pdf/itsaup.pdf

Notice of Policy Regarding Requests for Exceptions

Requests for exceptions to any academic or administrative policy must be submitted within three months of the end of the semester for which the exception is sought.

Notice of University, City, State or National Emergency

In the event of a University, city, state or national emergency, information will be provided to the University community, if possible, via the University website.

Notice of Nondiscriminatory Policy as to Students

Case Western Reserve University admits students of any race, religion, age, sex, color, disability, sexual orientation, gender identity, and national or ethnic origin to all the rights and privileges, programs, and activities generally accorded or made available to students at the University. It does not discriminate on the basis of race, religion, age, sex, color, disability, sexual orientation, gender identity, or national or ethnic origin in administering its educational policies, admission policies, employment, promotion and compensation policies, scholarship and loan programs, and athletic or other University-administered programs.

Foreword

This *Case Western Reserve University Handbook for Undergraduate Students* is intended to provide faculty, staff, and students with information about student life and campus resources and with concise descriptions of the academic requirements, programs, and regulations that apply to students who are candidates for any of the several baccalaureate degrees offered by Case Western Reserve University. The information contained herein is subject to change at any time. For more detailed information regarding the academic programs, rules, regulations and procedures of the colleges, consult the *Bulletin*, your dean, or your advisor.

Students are responsible for familiarizing themselves with the requirements, regulations and deadlines that pertain to their academic programs and activities. Ignorance of this information is not justification for exceptions or exemptions.

Students matriculating in fall 2007 or spring/summer 2008 must fulfill the degree requirements as described in this Handbook.

Students who matriculated in Case Western Reserve University prior to fall 2007 may choose to fulfill the requirements as described in this Handbook or in the Handbook published in the year of matriculation.

UNDERGRADUATE ACADEMIC CALENDAR

| FALL | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 |
|--|---------------|---------------|---------------|---------------|
| Registration (and Drop/Add) Begin (UG) | Apr 16 | Apr 7 | Apr 6 | Apr 5 |
| Classes Begin | Aug 27 | Aug 25 | Aug 24 | Aug 23 |
| Late Registration Fee (\$25) Begins | Aug 28 | Aug 26 | Aug 25 | Aug 24 |
| Last Day to Withdraw Without Financial Penalty | Aug 31 | Aug 29 | Aug 28 | Aug 27 |
| Labor Day Holiday | Sep 3 | Sep 1 | Sep 7 | Sep 6 |
| Late Registration and Drop/Add End | Sep 7 | Sep 5 | Sep 4 | Sep 3 |
| Deadline Credit/Audit (UG) | Sep 7 | Sep 5 | Sep 4 | Sep 3 |
| Fall Break | Oct 22/23 | Oct 20/21 | Oct 19/20 | Oct 18/19 |
| Mid-Term Grades Due (UG) | Oct 22 | Oct 20 | Oct 19 | Oct 18 |
| Deadline for removal of prev. term "I" grades (UG) | Nov 9 | Nov 7 | Nov 6 | Nov 5 |
| Deadline for Class Withdrawal for All except First Time, First Year Students | Nov 9 | Nov 7 | Nov 6 | Nov 5 |
| Registration for Spring Begins (UG) | Nov 12 | Nov 10 | Nov 9 | Nov 8 |
| Thanksgiving Holidays | Nov 22/23 | Nov 27/28 | Nov 26/27 | Nov 25/26 |
| First Time, First Year Students' Class Withdrawal Deadline | Dec 7 | Dec 5 | Dec 4 | Dec 3 |
| Pass/No Pass Option & Course Repeat Option Forms Due | Dec 7 | Dec 5 | Dec 4 | Dec 3 |
| Last Day of Class | Dec 7 | Dec 5 | Dec 4 | Dec 3 |
| Reading Days | Dec 10, 14 | Dec 8, 12 | Dec 7, 11 | Dec 6, 10 |
| Final Exams Begin | Dec 11 | Dec 9 | Dec 8 | Dec 7 |
| Final Exams End | Dec 19 | Dec 17 | Dec 16 | Dec 15 |
| Final Grades Due by 11:00 am | Dec 21 | Dec 19 | Dec 18 | Dec 17 |
| Fall Awarding of Degrees | Jan 18 (2008) | Jan 16 (2009) | Jan 15 (2010) | Jan 14 (2011) |
| | | | | |
| SPRING | 2008 | 2009 | 2010 | 2011 |
| Registration (and Drop/Add) Begin (UG) | Nov 12 (2007) | Nov 10 (2008) | Nov 9 (2009) | Nov 8 (2010) |
| Martin Luther King Jr. Holiday | Jan 21 | Jan 19 | Jan 18 | Jan 17 |
| Classes Begin | Jan 14 | Jan 12 | Jan 11 | Jan 10 |
| Late Registration Fee (\$25) Begins | Jan 15 | Jan 13 | Jan 12 | Jan 11 |
| Last Day to Withdraw Without Financial Penalty | Jan 18 | Jan 16 | Jan 15 | Jan 14 |
| Late Registration and Drop/Add End | Jan 25 | Jan 23 | Jan 22 | Jan 21 |
| Deadline Credit/Audit (UG) | Jan 25 | Jan 23 | Jan 22 | Jan 21 |
| Mid-Term Grades Due (UG) | Mar 10 | Mar 9 | Mar 8 | Mar 7 |
| Spring Break | Mar 10-14 | Mar 9-13 | Mar 8-12 | Mar 7-11 |
| Deadline for removal of prev. term "I" grades(UG) | Mar 28 | Mar 27 | Mar 26 | Mar 25 |
| Deadline for Class Withdrawal | Mar 28 | Mar 27 | Mar 26 | Mar 25 |
| Open registration for Fall Begins (UG) | Apr 7 | Apr 6 | Apr 5 | Apr 4 |
| Open registration for Summer Begins (UG) | Apr 14 | Apr 13 | Apr 12 | Apr 11 |
| First Time, First Year Students' Class Withdrawal Deadline | Apr 28 | Apr 27 | Apr 26 | Apr 25 |
| Pass/No Pass Option & Course Repeat Option Forms Due | Apr 28 | Apr 27 | Apr 26 | Apr 25 |
| Last Day of Class | Apr 28 | Apr 27 | Apr 26 | Apr 25 |
| Reading Days | Apr 29/30 | Apr 28/29 | Apr 27/28 | Apr 26/27 |
| Final Exams Begin | May 1 | Apr 30 | Apr 29 | Apr 28 |
| Final Exams End | May 8 | May 7 | May 6 | May 5 |
| Final Grades Due by 11:00 am | May 10 | May 9 | May 8 | May 7 |
| University Commencement | May 18 | May 17 | May 16 | May 15 |
| | | | | |
| SUMMER | 2008 | 2009 | 2010 | 2011 |
| Classes Begin | Jun 2 | Jun 1 | Jun 1 | Jun 6 |
| Independence Day Holiday | Jul 4 | Jul 3 | Jul 5 | Jul 4 |
| Classes End | Jul 28 | Jul 27 | Jul 27 | Aug 1 |
| Final Grades Due 12:00 noon | Jul 30 | Jul 29 | Jul 29 | Aug 3 |
| Summer Awarding of Degrees | Aug 8 | Aug 7 | Aug 13 | Aug 12 |

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CURRICULUM

OFFICE OF UNDERGRADUATE STUDIES:

357 Sears Building
Phone: (216) 368-2928
Fax: (216) 368-4718
ug-studies@case.edu

The Office of Undergraduate Studies is responsible for the oversight of the academic advising, activities, progress, and performance of undergraduate students in Case Western Reserve University. Any questions regarding academic regulations, standards, policies, or programs should be referred to this office.

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To reach the Office of Undergraduate Studies, access Case's home page at: www.case.edu; choose "Schools & Colleges"; choose "The Office of Undergraduate Studies;" or, type the following URL directly: www.case.edu/provost/ugstudies/undstud.htm

Bachelor's degree programs are described in this Handbook under the headings of the faculties which offer the programs. They are:

COLLEGE OF ARTS AND SCIENCES
CASE SCHOOL OF ENGINEERING
FRANCES PAYNE BOLTON SCHOOL OF NURSING
WEATHERHEAD SCHOOL OF MANAGEMENT

GENERAL REQUIREMENTS FOR ALL BACHELOR'S DEGREES

Students matriculating as first-year, transfer, or binary students in fall 2007, spring 2008, or summer 2008, must complete degree requirements as described in this Handbook. Transfer students entering in fall 2006, spring 2007, or summer 2007 with fewer than 27 credit hours must complete degree requirements as described in this Handbook. Students who matriculated prior to fall 2007, may complete degree programs as prescribed in this Handbook, or may complete degree programs as prescribed by the Handbook published for the academic year in which they matriculated.

The bachelor's degree programs require students to study one field in depth (the major), and to complete general education requirements or a core curriculum as appropriate to the major field and degree program selected. There is overlap among core curricula and general education requirements, which allows students flexibility in the choice of majors and degree programs.

Every candidate for a baccalaureate degree from the University must:

- A. Complete a foundation curriculum (see page 2) (core curriculum or general education requirements), as specified for the degree sought, that incorporates the requirements of the Seminar Approach to General Education and Scholarship (SAGES);
- B. Complete a course of studies with a cumulative grade point average of no less than 2.00 for work taken at Case Western Reserve University;
- C. Earn in residence at Case Western Reserve University a minimum of 60 semester hours, of which at least 30 must be earned after the student achieves senior status;
- D. Complete two semesters of physical education. This is completed through a combination of half and/or full semester offerings in Physical Education Activity courses.

*There are four foundation curricula which incorporate the SAGES curricular requirements:

1. *Arts and Sciences General Education Requirements* (page 10). Required for the Bachelor of Arts (B.A.) and the following Bachelor of Science (B.S.) degrees: Applied Mathematics, Art Education, Astronomy, Biochemistry, Biology, Chemistry, Geological

GENERAL REQUIREMENTS FOR ALL BACHELOR'S DEGREES (continued)

Sciences, Mathematics, Mathematics and Physics, Music Education, Nutrition, Nutritional Biochemistry and Metabolism, Physics, Statistics and Systems Biology.

2. *Engineering Core Curriculum* (page 44) Required for the Bachelor of Science in Engineering (B.S.E.) degree. Required, with specific course exceptions, for the Bachelor of Science (B.S.) degree in Computer Science.
3. *School of Nursing General Education Requirements* (page 54) Required of all candidates for the Bachelor of Science in Nursing (B.S.N.) degree.
4. *Weatherhead School of Management General Education Requirements* (page 58) Required of students who are candidates for the Bachelor of Science (B.S.) degree in Accounting or in Management.

SAGES

The Seminar Approach to General Education and Scholarship (SAGES) provides a foundation in critical thinking, written and oral communication, the use of information, quantitative reasoning, engagement with ethical issues and diversity, and exposure to experimental and theoretical approaches to understanding human culture and behavior, scientific knowledge, and methods of research through the following:

- A. First Seminar, taken in the first semester, introduces students to the seminar format through reading, discussion, and intensive writing, and incorporates activities with University Circle institutions; First seminar will be selected from offerings in the Life of the Mind, the Natural World, the Social World or the Symbolic World;
- B. Two University Seminars, taken after the First Seminar and before the end of the student's second year, and selected from seminars that address specific topics that fall under broad themes: Thinking About the Natural World, Thinking About the Social World, Thinking About the Symbolic World;
- C. A Department Seminar, generally taken in the junior year, that focuses on methods and modes of inquiry and communication that are practiced within a specific discipline;
- D. A Senior Capstone, a one-or two-semester capstone project integrating the knowledge, initiative, problem-solving skills, and powers of communication developed by the student; substantial writing and a

final public presentation are required.

Information about specific department seminars and capstones will be available from department academic representatives and on the Searchable Schedule of Classes.

DEAN'S APPROVED MAJOR

Any student interested in developing a major of his/her own design may submit, before the end of the second year, a proposed program for approval by the Deans' Committee. For additional information contact the Office of Undergraduate Studies, 357 Sears Bldg.

DUAL DEGREE

To qualify for two undergraduate degrees (i.e., a B.A. and a B.S. degree, or two B.S. degrees), a student must satisfy all requirements for each degree, and complete for the second degree thirty semester hours of study beyond the hours required for the first degree. A student may, however, complete two or more majors within the 120 hour minimum requirement for the B.A. degree. Students completing both a B.A. and a B.S. degree are exempted from six hours of the 90 hour arts and sciences requirement for the B.A. A student pursuing two degrees is encouraged meet with a dean in the Office of Undergraduate Studies, 357 Sears Bldg., to discuss requirements.

MINORS

For the degrees described above, minors are not required. However, students have the option of completing a minor in a discipline other than the major, in addition to the major. A minor concentration normally requires 15-18 semester hours, and will be indicated on a student's transcript if the requirements, as outlined below, are fulfilled. See minor programs on page 4.

Minors for Students Majoring in Fields Other Than Engineering

1. A minor program shall consist of no fewer than 15 and no more than 18 semester hours of specified course work in a discipline other than the student's major.
2. The responsibility for designating the requirements for a minor shall lie with the department offering the minor.
3. For all courses taken to satisfy minor requirements and for which grades are averaged, students pursuing degrees based on the SAGES General Education Requirements of the College of Arts and Sciences, the Weatherhead SAGES General Education Requirements or the School of Nursing SAGES General Education Requirements, must earn

a minimum cumulative average of 2.00. Transfer students who wish to complete a minor must complete at Case Western Reserve University at least half the requirements for the minor.

Minors for Engineering Majors

An engineering student's academic work in a discipline other than the student's major may be recognized as a minor. A student will be entitled to have the minor designation recorded on his/her transcript upon successful completion of a basic academic program in a discipline not within the student's major.

The completion of a minor academic program does not relieve the student of any requirements for his/her major degree. The following rules govern the minor program for an engineering student:

1. A minor program shall consist of no fewer than 15 and no more than 18 semester hours of course work.
2. The responsibility for designating the requirements for a minor shall lie with the department offering the minor.
3. For minors in areas other than humanities and social sciences, no more than two courses taken for the minor may be used simultaneously to satisfy the requirements of the student's major field, including department requirements, technical electives and the SAGES Engineering Core.
4. An engineering student who chooses to do so may, by taking work that goes beyond the requirement for four courses in the humanities and/or social sciences, complete a minor in either of these areas, and count towards the minor up to 12 hours of humanities/social science courses that are also being used to fulfill the breadth requirement of the SAGES Engineering Core. For such a minor to be posted on a transcript, the student must earn a cumulative grade point average of 2.00 for all courses taken to satisfy minor requirements and for which grades are averaged.

APPLICATION FOR GRADUATION

Students must file an application in the Office of Undergraduate Studies, 357 Sears Bldg., by the following dates: October 1 for January graduation; December 1 for May graduation; June 1 for August graduation. Students who have completed all degree requirements at the end of four years or more must graduate at that time. Students completing all requirements in less than four years may choose to graduate early or at the end of four years.

GRADUATION CHECK

Students must ensure that their Degree Progress Reports

(DPRs) reflect accurately their progress toward their degrees. All requested corrections and exceptions must be submitted on a Degree Progress Report Correction Form to the Office of Undergraduate Studies at least one semester prior to graduation. DPRs are available online at <http://my.case.edu>. DPR Correction Forms are available online at <http://www.case.edu/provost/ugstudies/DPRcorrection.pdf>.

PARTICIPATION IN COMMENCEMENT

An undergraduate student is eligible to participate in May Commencement activities provided that he or she meets any of the following criteria:

1. All degree requirements have been completed during that Spring Semester or the immediately preceding Fall or Summer Semesters.
2. The undergraduate has one final course to complete for degree requirements.
3. The undergraduate has requirements that can be completed during the coming summer, adding up to no more than 12 credit-hours.

A student may participate in Commencement only once as a bachelor's degree candidate, though exceptions are sometimes made for students receiving a second bachelor's degree at least one year after the first.

2007–2008 Majors and Minors for Case Undergraduate Degrees

Major - program of ten or more courses (required)

Major* - available only as 2nd major for a B.A.; may be sole major for a B.A. student who also completes a B.S.

Minor - program of 15-19 hours (optional)

Foundation Curriculum – for each degree/major a student must complete the foundation curriculum required for that degree/major:

A&S - SAGES = based on College of Arts and Sciences - SAGES; EC - SAGES = based on School of Engineering - SAGES CORE; FPB - SAGES = based on FPB School of Nursing - SAGES; WSOM = based on Weatherhead School of Management - SAGES

| Department Code | Subject | Degree(s) | Available as: | Foundation Curriculum |
|-----------------|--------------------------------|-----------|-----------------------------|-----------------------|
| ACC | Accounting | BS | Major or Minor | WSOM – SAGES |
| EAR | Aerospace Engineering | BSE | Major | EC – SAGES |
| AMS | American Studies | BA | Major* or Minor | A&S – SAGES |
| ANT | Anthropology | BA | Major or Minor | A&S – SAGES |
| APM | Applied Mathematics | BS | Major | A&S – SAGES |
| ARE | Art Education | BS | Major | A&S – SAGES |
| ARH | Art History | BA | Major or Minor | A&S – SAGES |
| ARS | Art Studio | --- | Minor | --- |
| AIN | Artificial Intelligence | --- | Minor | --- |
| ASI | Asian Studies | BA | Major, Major*, minor | A&S – SAGES |
| AST | Astronomy | BA or BS | Major or Minor | A&S – SAGES |
| BAF | Banking and Finance | --- | Minor | --- |
| BCH | Biochemistry | BA or BS | Major or Minor | A&S – SAGES |
| BIO | Biology | BA or BS | Major or Minor | A&S – SAGES |
| EBI | Biomedical Engineering | BSE | Major or Minor | EC – SAGES |
| ECE | Chemical Engineering | BSE | Major or Minor | EC – SAGES |
| CHE | Chemistry | BA or BS | Major or Minor | A&S – SAGES |
| CHS | Childhood Studies | --- | Minor | --- |
| CHI | Chinese | --- | Minor | --- |
| ECI | Civil Engineering | BSE | Major or Minor | EC – SAGES |
| CLS | Classics | BA | Major or Minor | A&S – SAGES |
| COG | Cognitive Science | BA | Major or Minor | A&S – SAGES |
| COS | Communication Sciences | BA | Major or Minor | A&S – SAGES |
| ECM | Computer Engineering | BSE | Major or Minor | EC – SAGES |
| CMP | Computer Science | BA | Major or Minor | A&S – SAGES |
| CMP | Computer Science | BS | Major or Minor | EC – SAGES |
| DAM | Dean's Approved Major | BA or BS | Individually Designed Major | TBD |
| ECO | Economics | BA | Major or Minor | A&S – SAGES |
| EAP | Electrical Engineering | BSE | Major or Minor | EC – SAGES |
| ELN | Electronics | --- | Minor (for BA only) | --- |
| EGR | Engineering – Undesignated | BSE | Major | EC – SAGES |
| EPH | Engineering Physics | BSE | Major | EC – SAGES |
| EGL | English | BA | Major or Minor | A&S – SAGES |
| ENT | Entrepreneurial Studies | --- | Minor | --- |
| GNV | Environmental Geology | BA | Major | A&S – SAGES |
| EST | Environmental Studies | BA | Major* or Minor | A&S – SAGES |
| ETS | Ethnic Studies | --- | Minor | --- |
| EVB | Evolutionary Biology | BA | Major* or Minor | A&S – SAGES |
| FRC | French | BA | Major or Minor | A&S – SAGES |
| FFS | French and Francophone Studies | BA | Major or Minor | A&S – SAGES |
| GEO | Geological Sciences | BA or BS | Major or Minor | A&S – SAGES |
| GEM | German | BA | Major or Minor | A&S – SAGES |
| GES | German Studies | BA | Major or Minor | A&S – SAGES |

**2007–2008 Majors and Minors for Case Undergraduate Degrees
(Continued)**

| Department Code | Subject | Degree(s) | Available as: | Foundation Curriculum |
|-----------------|---|-----------|-----------------|-----------------------|
| GER | Gerontological Studies | BA | Major* or Minor | A&S – SAGES |
| HCO | Health Communication | --- | Minor | --- |
| HST | History | BA | Major or Minor | A&S – SAGES |
| HSP | History and Philosophy of Science | BA | Major or Minor | A&S – SAGES |
| HSS | History of Technology and Science | --- | Minor | --- |
| IST | International Studies | BA | Major | A&S – SAGES |
| ITL | Italian | --- | Minor | --- |
| JPN | Japanese | --- | Minor | --- |
| JPS | Japanese Studies | BA | Major | A&S – SAGES |
| JDS | Judaic Studies | --- | Minor | --- |
| MGT | Management | BS | Major | WSOM – SAGES |
| MID | Management Information and Decision Systems | --- | Minor | --- |
| MKR | Marketing | --- | Minor | --- |
| EMS | Materials Science and Engineering | BSE | Major or Minor | EC – SAGES |
| MAT | Mathematics | BA or BS | Major or Minor | A&S – SAGES |
| MAP | Mathematics and Physics | BS | Major | A&S – SAGES |
| EMC | Mechanical Engineering | BSE | Major | EC – SAGES |
| MUS | Music | BA | Major or Minor | A&S – SAGES |
| MUE | Music Education | BS | Major | A&S – SAGES |
| NAT | Natural Sciences | BA | Major* or Minor | A&S – SAGES |
| NUR | Nursing | BSN | Major | FPB – SAGES |
| NTR | Nutrition | BA or BS | Major or Minor | A&S – SAGES |
| NBM | Nutritional Biochemistry and Metabolism | BA or BS | Major | A&S – SAGES |
| PHI | Philosophy | BA | Major or Minor | A&S – SAGES |
| PHY | Physics | BA or BS | Major or Minor | A&S – SAGES |
| POS | Political Science | BA | Major or Minor | A&S – SAGES |
| POL | Polymer Science and Engineering | BSE | Major or Minor | EC – SAGES |
| PAR | Pre-Architecture | BA | Major* or Minor | A&S – SAGES |
| PSY | Psychology | BA | Major or Minor | A&S – SAGES |
| PPY | Public Policy | --- | Minor | --- |
| RLG | Religious Studies | BA | Major or Minor | A&S – SAGES |
| RUS | Russian | --- | Minor | --- |
| SOC | Sociology | BA | Major or Minor | A&S – SAGES |
| SPA | Spanish | BA | Major or Minor | A&S – SAGES |
| SPM | Sports Medicine | --- | Minor | --- |
| STA | Statistics | BA or BS | Major or Minor | A&S – SAGES |
| SYB | Systems Biology | BS | Major | A&S – SAGES |
| ESY | Systems and Control Engineering | BSE | Major or Minor | EC – SAGES |
| EDT | Teacher Education | BA | Major* | A&S – SAGES |
| THR | Theatre/Dance | BA | Major or Minor | A&S – SAGES |
| WMN | Women's Studies | BA | Major* or Minor | A&S – SAGES |
| WLT | World Literature | BA | Major or Minor | A&S – SAGES |

ACADEMIC REPRESENTATIVES AND CONTACTS FOR FIRST YEAR STUDENTS/ADVISORS

| Department/Program | Contact | Office | Phone | E-mail |
|----------------------------|---------------------------|------------------------------|--------------|---------------|
| Accounting | Prof. Larry Parker | 459 Peter B. Lewis Bldg. | 368-2065 | lmp3 |
| Accounting | Mr. Kevin Carduff ♦ | 206 Wolstein Hall | 368-1093 | kcc |
| Accounting | Ms. Tiffany Welch ♦ | 111 Wolstein Hall | 368-2052 | tjw5 |
| Aerospace Engineering | Prof. Chih-Jen Sung | 415 Glennan Bldg. | 368-2942 | cjs15 |
| American Studies | Prof. Renée Sentilles | 206 Mather House | 368-5413 | rms30 |
| Anthropology | Prof. Lawrence Greksa | 234 Mather Memorial | 368-6777 | lpg2 |
| Anthropology | Prof. Cynthia Beal ♦ | 217 Mather Memorial | 368-2277 | cmb2 |
| Anthropology | Prof. Charlotte Ikels ♦ | 207 Mather Memorial | 368-5331 | cxi |
| Anthropology | Prof. James Shaffer ♦ | 240 Mather Memorial | 368-2267 | jgs3 |
| Applied Mathematics | Prof. David Singer | 307A Yost Hall | 368-2892 | das5 |
| Art Education | Prof. Timothy Shuckerow | 2215 Adelbert Rd. | 368-2714 | txs10 |
| Art History | Prof. Charles Burroughs | 103 Mather House | 368-6095 | ceb33 |
| Art Studio | Prof. Timothy Shuckerow | 2215 Adelbert Rd. | 368-2714 | txs10 |
| Artificial Intelligence | Prof. Michael Branicky | 517B Glennan Bldg. | 368-6430 | msb11 |
| Asian Studies | Prof. Charlotte Ikels | 207 Mather Memorial | 368-5331 | cxi |
| Asian Studies | Prof. William Deal ♦ | 219 Mather House | 368-2205 | wed |
| Astronomy | Prof. Earle Luck | 560 Sears Bldg. | 368-6697 | rel2 |
| Astronomy | Prof. Heather Morrison ♦ | 558 Sears Bldg. | 368-6698 | hlm5 |
| Banking and Finance | Prof. Ajai Singh | 361 Peter B. Lewis Bldg. | 368-0802 | aks8 |
| Biochemistry | Prof. David Samols | RT 400-8, School of Medicine | 368-3520 | drs10 |
| Biology | Prof. Richard Drushel | 402 Clapp Hall | 368-4804 | rfd |
| Biomedical Engineering | Prof. David Wilson | 426 Wickenden | 368-4099 | dlw |
| Biomedical Engineering | Prof. Dustin Tyler ♦ | 319 Wickenden | 368-0319 | dxt23 |
| Chemical Engineering | Prof. Peter Pintauro | 116 Smith Bldg. | 368-4150 | pnp3 |
| Chemical Engineering | Prof. J. Adin Mann♦ | 129 Smith Bldg. | 368-4122 | jam12 |
| Chemistry | Prof. John Stuehr | 212 Clapp Hall | 368-5099 | jes6 |
| Chemistry | Prof. Michael Kenney♦ | 205 Millis Hall | 368-3736 | mjk56 |
| Childhood Studies | Prof. Jill Korbin | 713 Crawford Hall | 368-4413 | jek7 |
| Chinese | Prof. Yuxiu Liang | 313 Guilford House | 368-2102 | yxl34 |
| Civil Engineering | Prof. Robert Mullen | 206 Bingham Bldg. | 368-2423 | rlm |
| Classics | Prof. Martin Helzle | 404 Mather House | 368-2294 | mxh13 |
| Cognitive Science | Prof. Fey Parrill | 612B Crawford Hall | 368-2795 | fxp26 |
| Cognitive Science | Prof. Mark Turner | 607 Crawford Hall | 368-4413 | mbt8 |
| Communication Sciences | Prof. Stephen Haynesworth | Hearing & Speech Center | 368-2470 | seh5 |
| Communication Sciences | Prof. Angela Ciccio ♦ | Hearing & Speech Center | 368-5385 | amh11 |
| Computer Engineering | Prof. Swarup Bunia | 514A Glennan Bldg. | 368-5550 | skb21 |
| Computer Engineering | Prof. Tekin Ozsoyoglu ♦ | 506 Olin Bldg. | 368-5029 | gxo3 |
| Computer Engineering | Prof. Tekin Ozsoyoglu ♦ | 506 Olin Bldg. | 368-5029 | gxo3 |
| Economics | Prof. Robin Dubin | 264 Peter B. Lewis Bldg. | 368-3981 | rad4 |
| Economics | Prof. Gary Murphy ♦ | 227 Peter B. Lewis Bldg. | 368-3969 | gvm1 |
| Education | Prof. William Bauer | 306 Haydn Hall | 368-0792 | wib2 |
| Education | Prof. Edward Bernetich ♦ | 1 Mather House | 368-0792 | eab50 |
| Electrical Engineering | Prof. Wyatt Newman | 516A Glennan Bldg. | 368-6432 | wsn |
| Electronics | Prof. Frank Merat | 518 Glennan Bldg. | 368-4572 | flm |
| Engineering – Undesignated | Prof. Patrick Crago | 500B Nord Hall | 368-4436 | pec3 |
| Engineering Physics | Prof. Kenneth Singer | 225D Rockefeller | 368-4017 | kds4 |
| English | Prof. William Siebenschuh | 106 Guilford House | 368-2364 | wrs2 |
| English | Prof. Mary Grimm ♦ | 318 Guilford House | 368-2355 | mcg3 |
| Entrepreneurial Studies | Prof. Leonard Lynn | 227 Peter B. Lewis Bldg. | 368-6048 | lhl |
| Entrepreneurial Studies | Mr. Kevin Carduff | 206 Wolstein Hall | 368-1093 | kcc |
| Environmental Geology | Prof. Gerald Matisoff | 206 A.W. Smith Bldg. | 368-3677 | gxm4 |
| Environmental Studies | Prof. Peter McCall | 211C A.W. Smith Bldg. | 368-3676 | plm4 |

ACADEMIC REPRESENTATIVES AND CONTACTS FOR FIRST YEAR STUDENTS/ADVISORS (continued)

| Department/Program | Contact | Office | Phone | E-mail |
|---|----------------------------|--------------------------------------|--------------|---------------|
| Ethnic Studies | Prof. Gilbert Doho | 204 Guilford House | 368-4885 | gxd22 |
| Ethnic Studies | Prof. Alice Bach ♦ | 105 Mather House | 368-1637 | ahb5 |
| Ethnic Studies | Prof. Jacqueline Nanfito ♦ | 308 Guilford House | 368-5264 | jcn |
| Ethnic Studies | Prof. Cheryl Toman ♦ | 207 Guilford House | 368-2233 | cat12 |
| Evolutionary Biology | Prof. Cynthia Beall | 238 Mather Memorial | 368-2277 | cmb2 |
| French | Prof. Christine Cano | 205 Guilford House | 368-4888 | cmc21 |
| French and Francophone Studies | Prof. Cheryl Toman | 207 Guilford House | 368-2233 | cat12 |
| Geological Sciences | Prof. Gerald Matisoff | 206 A.W. Smith Bldg. | 368-3677 | gxm4 |
| German | Prof. Jutta Ittner | 305 Guilford House | 368-6202 | jxi6 |
| German | Prof. Margaretmary Daley | 303 Guilford House | 368-2303 | mx43 |
| German | Prof. Peter Yang | 307 Guilford House | 368-2234 | pjy2 |
| German Studies | Prof. Jutta Ittner | 305 Guilford House | 368-6202 | jxi6 |
| Gerontological Studies | Prof. Dale Dannefer | 223B Mather Memorial | 368-5091 | dxd79 |
| Gerontological Studies | Prof. Gary Deimling | 231A Mather Memorial | 368-5173 | gtd |
| Health Communication | Prof. Kyra Rothenberg | 406 Cleveland Hearing & Speech Bldg. | 368-2556 | kpr4 |
| History | Prof. Renée Sentilles | 206 Mather House | 368-5413 | rms30 |
| History and Philosophy of Science | Prof. Colin McLarty | 203A Clark Hall | 368-2621 | cxm7 |
| History of Technology and Science | Prof. Miriam Levin | 213 Mather House | 368-2624 | mrl3 |
| International Studies | Prof. Vincent McHale | 222 Mather House | 368-2425 | vem |
| Italian | Prof. Denise Caterinacci | 213 Guilford House | 368-2374 | dmc7 |
| Japanese | Prof. Linda Ehrlich | 305 Guilford House | 368-2232 | lce2 |
| Japanese | Prof. Takao Hagiwara ♦ | 203 Guilford House | 368-6188 | txh13 |
| Japanese Studies | Prof. Linda Ehrlich | 305 Guilford House | 368-2232 | lce2 |
| Judaic Studies | Prof. Peter Haas | 112 Mather House | 368-2741 | pjh7 |
| Management | Prof. Tim Fogarty | 350 Peter B. Lewis Bldg. | 368-3938 | tjf |
| Management | Ms. Tiffany Welch | 111 Wolstein Hall. | 368-2058 | tjw5 |
| Management | Mr. Kevin Carduff | 206 Wolstein Hall | 368-1093 | kcc |
| Management | Mr. Jim Hurley | 208 Wolstein Hall | 368-3856 | jxh12 |
| Management Information and Decision Systems | Prof. Fred Collopy | 527 Peter B. Lewis Bldg. | 368-2048 | flc2 |
| Marketing | Prof. Stan Cort | 336 Peter B. Lewis Bldg. | 368-2064 | sgc3 |
| Materials Science and Engineering | Prof. Mark DeGuire | 506 White Bldg. | 368-4221 | mrd2 |
| Mathematics | Prof. David Singer | 307A Yost Hall | 368-2892 | das5 |
| Mathematics | Prof. Chris Butler ♦ | 317 Yost Hall | 368-2881 | cxb10 |
| Mathematics and Physics | Prof. David Singer | 307A Yost Hall | 368-2892 | das5 |
| Mechanical Engineering | Prof. Clare Rinnac | 620A Glennan Bldg. | 368-6442 | cmr10 |
| Music | Prof. Kathleen Horvath | 214 Haydn Hall | 368-1613 | kah24 |
| Music | Prof. Juanita Karpf ♦ | 309 Haydn Hall | 368-1602 | jxk178 |
| Music Education | Prof. Kathleen Horvath | 304 Haydn Hall | 368-1613 | kah24 |
| Natural Sciences | Prof. Joanne Westin | 214 DeGrace | 368-3566 | jxw3 |
| Nursing | Prof. Lynn Lotas | 1610 School of Nursing | 368-5129 | mjl25 |
| Nursing | Prof. Marcella Hovancsek ♦ | 1550 School of Nursing | 368-5985 | mth7 |
| Nutrition | Prof. James Swain | WG 48, Medical School | 368-8554 | jhs31 |
| Nutritional Biochemistry and Metabolism | Prof. Hope Barkoukis | WG 48, Medical School | 368-2441 | hdb |
| Philosophy | Prof. Colin McLarty | 201 Guilford House | 368-4476 | cxm7 |
| Physics | Prof. Gary Chottiner | 104D Rockefeller | 368-4024 | gsc2 |
| Political Science | Prof. Joseph White | 113 Mather House | 368-2426 | jxw87 |
| Polymer Science and Engineering | Prof. Jerome Lando | 321 Kent Hale Smith Bldg. | 368-6366 | jbl2 |

ACADEMIC REPRESENTATIVES AND CONTACTS FOR FIRST YEAR STUDENTS/ADVISORS (continued)

| Department/Program | Contact | Office | Phone | E-mail |
|---------------------------------|--------------------------|-----------------------|--------------|---------------|
| Pre-Architecture | Prof. Timothy Shuckerow | 2215 Adelbert Rd. | 368-2714 | txs10 |
| Psychology | Prof. Robert Greene | 124 Mather Memorial | 368-6473 | rlg2 |
| Public Policy | Prof. Joseph White | 113 Mather House | 368-2426 | jxw87 |
| Religious Studies | Prof. Peter Haas | 112 Mather House | 368-2741 | pjh7 |
| Religious Studies | Prof. Deepak Sarma♦ | 215 Mather House | 368-4790 | |
| Russian | Prof. Tatiana Zilotina | 302 Guilford House | 368-2230 | tmz2 |
| Sociology | Prof. Dale Dannefer | 223 B Mather Memorial | 368-5091 | dxd79 |
| Sociology | Prof. Emilia McGucken | 223D Mather Memorial | 368-8847 | exm54 |
| Spanish | Prof. Antonio Candau | 309 Guilford House | 368-8976 | axc102 |
| Spanish | Prof. Gabriela Copertari | 216 Guilford House | 368-4324 | mgc6 |
| Spanish | Prof. Jacqueline Nanfito | 308 Guilford House | 368-5264 | jcn |
| Sports Medicine | Prof. Carrie Fister | Veale Center | 368-2863 | clo5 |
| Statistics | Prof. Paula Fitzgibbon | 321 Yost Hall | 368-2306 | paf3 |
| Systems and Control Engineering | Prof. Marc Buchner | 707 Olin Bldg. | 368-4096 | mxh11 |
| Systems Biology | Prof. Robin Snyder | 510 Millis Hall | 368-8838 | res29 |
| Theater (Drama) | Prof. Catherine Albers | Eldred Theater | 368-5926 | cla2 |
| Theater (Dance) | Prof. Karen Potter | Mather Dance Center | 368-1491 | klp13 |
| Women's Studies | Prof. Margaretmary Daley | 303 Guilford House | 368-2303 | mxd43 |
| World Literature | Prof. Antonio Candau | 309 Guilford House | 368-8976 | axc102 |
| World Literature | Prof. Martin Helzle | 404 Guilford House | 368-2294 | mxh13 |

♦ Contact for First Year Students/Advisors Only

COLLEGE OF ARTS AND SCIENCES

Office of the Dean
Crawford Hall, 7th floor, 368-4413
E-mail: casdean@case.edu
www.case.edu/artsci/

Degrees and Degree Requirements

Bachelor of Arts (B.A.) Degree - College of Arts and Sciences

The University offers programs in Arts, Computer Science, Humanities, Mathematics, Natural Sciences, Nutrition, Social and Behavioral Sciences, and Statistics, leading to the B.A. degree from the College of Arts and Sciences. Candidates for the Bachelor of Arts degree, in addition to meeting the general requirements for bachelor's degrees as described on page 1, must also complete the following requirements:

- A. A minimum of 120 semester hours earned.
 1. No more than 42 hours beyond the 100 level in any one department may be applied to the 120 semester hour total.
 2. The 120 semester hours must include at least 90 semester hours in arts and sciences. These credits may be drawn from those offered by the College of Arts and Sciences as well as those in economics, biochemistry, nutrition, and computer science. (Students completing both a B.A. and B.S. degree are exempt from 6 hours of the 90 hour arts and sciences requirement for the B.A.).
- B. The SAGES General Education Requirements of the College of Arts and Sciences.
- C. A minimum of 30 semester hours of courses at the 300-400 level.
- D. The requirements for a major as specified in this Handbook. A major requires a minimum of 30 semester hours, at least 24 of which are taken in the major department. For all courses taken in the major department and for which grades are averaged, and for all courses taken to satisfy major requirements and for which grades are averaged, a B.A. candidate must earn a minimum cumulative average of 2.00. Major requirements include all required and elective work completed in the major department combined with required courses completed in related fields. Transfer students must complete at Case Western Reserve University at least half the hours required in the major department.

Bachelor of Science (B.S.) Degree - College of Arts and Sciences

The College of Arts and Sciences offers programs leading to the Bachelor of Science degree in the following areas: Applied Mathematics, Art Education, Astronomy, Biochemistry, Biology, Chemistry, Geological Sciences, Mathematics, Mathematics and Physics, Music Education, Nutrition, Nutritional Biochemistry and Metabolism, Physics, Statistics, and Systems Biology. Candidates for these Bachelor of Science degrees, in addition to meeting the general requirements for bachelor's degrees as described on page 1, must also complete the following requirements:

- A. A minimum of 120-133 hours as specified by the requirements for each B.S. program.
- B. The SAGES General Education Requirements of the College of Arts and Sciences.
- C. A minimum of 30 semester hours of courses at the 300-400-level.
- D. The requirements for a major as specified in this Handbook. For all courses taken in the major department and for which grades are averaged, and for all courses taken to satisfy major requirements and for which grades are averaged, a B.S. candidate must earn a minimum cumulative average of 2.00. Major requirements include all required and elective work completed in the major department combined with required courses completed in related fields. Transfer students must complete at Case Western Reserve University at least half the hours required in the major department.

**College of Arts and Sciences General Education Requirements
SAGES (Seminar Approach to General Education and Scholarship)
Effective Fall, 2007**

SAGES is an innovative undergraduate experience designed to establish foundations for academic inquiry. Students fulfill their College of Arts and Sciences General Education Requirements with a sequence of specially developed seminars and selected courses. Course credit earned by Advanced Placement, International Baccalaureate, proficiency examinations, and transfer may be used to satisfy general education requirements.

SAGES Program Seminars (13 semester hours)

The First Seminar* (4 semester hours, to be taken in the first semester of enrollment)

The First Seminar focuses on the development of critical thinking and communication skills through the use of a variety of approaches, media, and perspectives to explore the human mind and the nature of inquiry. This course is designed to strengthen writing and analytical skills while building a foundation in ethics, information literacy, and cultural diversity. **Select from:**

- First Seminar: The Life of the Mind (FSCC 100) or**
- First Seminar: Natural World (FSNA 1xx) or**
- First Seminar: Social World (FSSO 1xx) or**
- First Seminar: Symbolic World (FSSY 1xx)**

Term _____ Course _____ Grade _____

**Transfer Students only. Transfer students who have completed the English composition/expository writing requirement with a grade of C or higher at the college/university at which they previously matriculated will receive transfer credit for FSCC T100 (3 – 6 semester hours) and will be required to complete a supplemental 1-semester hour SAGES introductory seminar – FSTS 100.*

***English as a Second Language Students only. On the basis of a writing diagnostic that demonstrates need for additional writing support, students for whom English is a second language will be placed into an English as a Second Language First Seminar (4 semester hours). Most students in this seminar will continue their First Seminar experience into their second semester by enrolling in and completing FSCS 150 – First Seminar: Continuing Semester (3 semester hours).*

University Seminars (6 semester hours, minimum of two seminars, to be completed in the first two years of enrollment as specified below)

After completion of the First Seminar, students must complete two University Seminars, with each seminar selected from a different thematic group and from a thematic group different from that of the student's First Seminar. Each University Seminar explores one of three themes, with the content determined according to the interests of the faculty. University Seminars provide continued experience in critical reading, writing, and oral communication as well as information literacy, ethics, and cultural diversity. **Select from:**

- University Seminar: Thinking About the Natural World (USNA 2xx)**
- University Seminar: Thinking About the Social World (USSO 2xx)**
- University Seminar: Thinking About the Symbolic World (USSY 2xx)**

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Department Seminar (3 semester hours)

The Department Seminar includes seminar-based discussion as well as instruction and experience in the kinds of writing characteristic of the Department Seminar's discipline. The Department Seminar may be taken in the department of the student's major or in another department. It is taken after the completion of the University Seminars, ordinarily in the fourth – sixth semester of study. **NOTE:** *Students pursuing a degree from the College of Arts and Sciences may not fulfill the department seminar requirement by taking a course that is being used to fulfill an Arts & Humanities, Social Science, or Natural and Mathematical Science breadth requirement. A course that has been designated as a Department Seminar and that also falls into the Global and Cultural Diversity category may be used to fulfill both requirements.*

Term _____ Course _____ Grade _____

University Composition Requirement

Students develop a Writing Portfolio comprising final graded writing assignments from the First Seminar and University Seminars. The Writing Portfolio is submitted for evaluation after completing the final University seminar. Writing competence must be established in order to fulfill the University's English Composition requirement for graduation.

Writing Portfolio Term _____ Grade _____

Physical Education (Must total 2 full semesters at zero credits): Students choose from half-semester and full-semester course offerings to be completed in the first year.

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____
Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

College of Arts and Sciences General Education Requirements – SAGES (continued)

Breadth Requirements (18 semester hours – minimum of six 3 or 4-semester hour courses)

NOTE: Two courses used to fulfill requirements for the major also may be used to fulfill the breadth requirements.

Arts and Humanities (6 – 8 semester hours)

Two 3 or 4-semester hour Arts and Humanities courses

Select from:

Arabic (ARAB), Art History (ARTH), Art Studio (ARTS), Chinese (CHIN), Classics (CLSC), Dance (DANC), English (ENGL), French (FRCH), German (GRMN), Greek (GREK), Hebrew (HBRW), History (HSTY), Italian (ITAL), Japanese (JAPN), Latin (LATN), Music - General (MUGN), Music - History (MUHI), Music - Theory (MUTH), Philosophy (PHIL), Religion (RLGN), Russian (RUSN), Spanish (SPAN), Theater (THTR), World Literature (WLIT)

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Natural and Mathematical Sciences (6 - 8 semester hours)

Two 3 or 4-semester hour Natural and Mathematical Science courses

Select from:

Astronomy (ASTR), Biochemistry (BIOC), Biology (BIOL), Chemistry (CHEM), Geology (GEOL), Mathematics (MATH), Nutrition (NTRN), Physics (PHYS), Statistics (STAT), and all courses in the Computer Science area.

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Social Sciences (6 semester hours)

Two 3-semester hour Social Science courses

Select from:

Anthropology (ANTH), Cognitive Science (COGS), Communication Sciences (COSI), Economics (ECON), Political Science (POSC), Psychology (PSCL), Sociology (SOCL)

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Quantitative Reasoning (3 – 4 semester hours)

Each student must complete at least one 3 or 4-semester hour course identified as a mathematical reasoning course. Such a course may also be used to fulfill a major or minor requirement, and/or one of the breadth requirements.

Select from:

ANTH 319, ENGR 131, MATH 121, 123, 125, 150, PHIL 201, PSCL 282, STAT 201

Term _____ Course _____ Grade _____

Global and Cultural Diversity (3 – 4 semester hours)

Each student must complete at least one 3 or 4-semester hour course identified as a global and cultural diversity course. Such a course may also be used to fulfill a major requirement and/or one of the breadth requirements.

Select from:

ANTH 233, 240, 314, 322, 352, 353, 356, 357, 388, ARTH 104, 203, 220, 240, 290, 302, 340, ASIA/HSTY 133, 134, 284, ASIA/WLIT 235, COSI 260, ECON 375, ENGL/HSTY/PHIL/RLGN 270/WMST 201, ENGL/WLIT 363H, 365E, 365N, 365Q, 366G, ETHS 251, 251A, ETHS/HSTY 252A, 252B, ETHS/RLGN 259, ETHS 287, ETHS/FRCH/WLIT 295, ETHS/FRCH/WLIT/WMST 335, ETHS 336, ETHS/FRCH/WLIT 338, FRCH/WLIT 308, FRCH 375, HSTY 113, HSTY135/ETHS 253A, HSTY 136/ETHS 253B, HSTY/WMST 232, HSTY 258, 260, 261, 262, 268, 282, 285, 287, 336, JAPN/WLIT 225, JDST 150/RLGN 233, JDST 220, 228, 233, JDST/RLGN 280, MUED 305, MUHI 310, 311, PHIL/RLGN 221, PHIL 356, POSC 362, 364, 366, 370C, 370K, 374, 377, 379, RLGN 204, 208, 215, 216, 217, 218, 219, 223, 233, 234, 251, 254, 260, 280, 303, SOCL 302, 326, SPAN 315, 317, 339, 342, 343, 356, WLIT 326, 355; any 200 or 300-level course in Arabic, Chinese, Hebrew, Japanese, or Russian.

Term _____ Course _____ Grade _____

SAGES Senior Capstone (3 – 6 semester hours)

The Senior Capstone assimilates the knowledge and skills gained throughout the educational process. Students engage in a unique one or two semester experience designed in consultation with a faculty member. Each Capstone Experience must include key elements:

- Demonstration of critical thinking and writing skills;
- Regular oversight by the Capstone advisor;
- Periodic reporting of progress;
- Oral reports including a final public presentation at the Senior Capstone Fair, a conference, a performance, a public lecture, a teaching presentation, or other, as approved by the department of capstone origin.

Courses meeting this requirement include the designation "Approved SAGES Capstone" in their course descriptions. Some majors include and specify a senior capstone. Please review the specific requirements of your major(s) in your *Handbook for Undergraduate Students*.

SAGES Senior Capstone Term _____ Course _____ Grade _____

Undergraduate Programs of The College of Arts and Sciences

All major programs described in this section require completion of the SAGES General Education Requirements of the College of Arts and Sciences (see page 10). Students who matriculated prior to fall 2007 may complete degree programs in arts and sciences as described in this Handbook, or may complete degree programs as prescribed by the Handbook published in the year in which they matriculated.

ACCOUNTING (ACC)

Major and minor programs in accounting are offered through the Weatherhead School of Management. See page 60.

AMERICAN STUDIES (AMS)

www.case.edu/artsci/hsty/amst/index.html

Academic Representative, Contact for First Year Students/Advisors and Undergraduate Research

Contact:

Professor Renée Sentilles
206 Mather House, 368-5413
E-mail: rms30@case.edu

Major (for B.A.) Hours: 30

A. Required Courses (12 hours)

1. AMST 117, HSTY 112, and AMST 390
2. One course selected from: ARTH 270, ENGL 368B, HSTY 361, 381, SOCI 349

B. Elective Courses (18 hours)

In consultation with the program director, students are to choose 18 hours making certain that these represent at least *two disciplines, though no more than four; or courses may constitute at least two but no more than three areas of concentration*. Areas of concentration may consist of courses from more than one department and may center on an issue or theme in American cultures.

NOTE: No more than one course being used to satisfy the requirement (B) for the two areas of concentration may apply simultaneously toward the completion of a minor concentration.

NOTE: American Studies is available only as a second major for the B.A. To declare the major students should have declared a first major. Up to six credits in courses taken by students for the first major may be applied to American Studies major. For a student who completes a Bachelor of Science degree (B.S., B.S.E., or B.S.N.),

American Studies may serve as the sole major for a B.A. degree.

Minor Hours: 15

AMST 117, and four additional courses selected in consultation with the Program Director.

Independent Study

AMST 390

ANTHROPOLOGY (ANT)

www.case.edu/artsci/anth/anth.html

Academic Representative:

Professor Lawrence Greksa
234 Mather Memorial, 368-6777
E-mail: lpg2@case.edu

Contacts for First Year Students/Advisors:

Professor Charlotte Ikels
207 Mather Memorial, 368-5331
E-mail: cxi@case.edu

Professor Cynthia Beall
217 Mather Memorial, 368-2277
E-mail: cmb2@case.edu

Professor James Shaffer
240 Mather Memorial, 368-2267
E-mail: jgs3@case.edu

Concentrations for the major (for B.A.)

A. General Anthropology Concentration Hours: 36

1. ANTH 102, 103
2. ANTH 319
3. At least one course dealing with a geographic area, such as: ANTH 330, 331, 341, 352, 353, 357
4. Approved Anthropology electives: 24 hours

B. Health Science Oriented Anthropology Concentration Hours: 36

1. ANTH 102, 103, 215
2. ANTH 319

3. At least one course dealing with a geographic area, such as: ANTH 341, 352, 353, 357
 4. At least three courses dealing with health-related topics, such as: ANTH 301, 304, 306, 309, 312, 317, 318, 323, 324, 359, 361, 363, 369, 371, 376, 393, 397
 5. Approved Anthropology electives: 12 hours
- C. Archaeology Concentration Hours: 36
1. ANTH 102, 103, 107
 2. ANTH 319
 3. At least one course dealing with a geographic area such as: ANTH 202, 330, 331, 333, 341, 352, 353, 356, 357
 4. Three approved Archaeology courses such as: ANTH 202, 321, 324, 330, 331, 333, 399, Summer Field Work
 5. Four approved electives: 12 hours
- D. Physical Anthropology Concentration Hours: 36
1. ANTH 102, 103
 2. ANTH 319
 3. At least one course dealing with a geographic area such as: ANTH 341, 353, 357
 4. At least three courses dealing with Physical Anthropology, such as: ANTH 295, 301, 302, 369, 393, 397; ANAT 375, 377, 383
 5. Approved Anthropology electives: 15 hours

Concentrations for the minor

- A. General Anthropology Minor Hours: 15
1. ANTH 102 and 103
 2. At least one course dealing with a geographic area such as: ANTH 330, 331, 341, 352, 353, 357
 3. Two approved electives: 6 hours
- B. Health Science Oriented Anthropology Minor Hours: 15
1. ANTH 102, 103, and 215
 2. One course dealing with a geographic area such as: ANTH 341, 352, 353, 357
 3. One course dealing with health-related topics such as: ANTH 301, 304, 306, 309, 312, 317, 318, 323, 343, 359, 361, 363, 369, 371, 376, 393, 397
- C. Archaeology Minor Hours: 15
1. ANTH 102, 103, 107
 2. At least one course dealing with a geographical area such as: ANTH 330, 331, 341, 352, 353, 357
 3. At least one approved Archaeology elective such

as: ANTH 202, 321, 324, 330, 331, 333, 399, Summer Field Work

- D. Physical Anthropology Minor Hours: 15
1. ANTH 102, 103
 2. At least one course dealing with a geographic area such as: ANTH 330, 331, 341, 352, 353, 357
 3. At least two approved Physical Anthropology electives such as: ANTH 295, 301, 302, 369, 393, 397; ANAT 375, 377, 383

ART EDUCATION (ARE), ART STUDIO (ARS) AND PRE-ARCHITECTURE (PAR)

www.case.edu/artsci/artedu/main.html

www.case.edu/artsci/artedu/connect.html

Academic Representative and

Contact for First Year Students/Advisors:

Professor Timothy Shuckerow
2215 Adelbert Rd., 368-2714
E-mail: txs10@case.edu

ART EDUCATION (ARE) (B.S.)

Hours required for graduation: 124

The mission of the Art Education Program is *“to prepare Proactive Scholar-Practitioners who will develop into leaders, teachers, and talented artists in the field of art education.”*

The Bachelor of Science program in Art Education is designed to educate professional teachers of art. There are four Decision Points in the Art Education program. For each of the decision points, there are three possible outcomes: unconditional admission; conditional admission with a prescribed remedial plan which when successfully completed will result in unconditional admission; or denial of admission. Denial of admission at any decision point means the student is no longer able to pursue an Art Education Degree at Case.

Decision Point 1: Application for Admission to the program

Official admission to the Art Education Program generally happens at the end of the fall semester Sophomore year. Admission to the program requires: (1) being accepted to Case; (2) being accepted as an art major through a portfolio review before matriculation; (3) successful completion of ARTS 295, including evaluation of an initial Teaching ePortfolio; (4) cumulative Case GPA of 2.5 or better; (5) submission of a signed Statement of Assurance of Good Moral Character, and (6) a satisfactory interview with Art Education Faculty, documented on the Teacher

ART EDUCATION (continued)

Licensure Admission Assessment Form.

Decision Point 2: Application for Advanced Standing

Application for Advanced Standing should be submitted by the junior year and fall semester after Decision Point 1. Application for Advanced Standing requires: (1) A successful review of the updated Teaching ePortfolio; (2) Submission of a current DPR form documenting the following: cumulative GPA of 2.5 or better, art course GPA of 2.5 or better, and an education GPA of 3.0 or better; and (3) A passing score on the *Candidate Disposition Assessment Inventory* completed by the Art Education Faculty.

Decision Point 3: Application for Student Teaching

Application for Student Teaching should be completed by week 8 of the semester prior to student teaching. Application for Student Teaching requires: (1) A successful review of the updated Teaching ePortfolio; (2) Submission of a current DPR form documenting the following: cumulative GPA of 2.5 or better, art course GPA of 2.5 or better, and an education GPA of 3.0 or better; (3) A passing score on the *Candidate Disposition Assessment Inventory* completed by the Art Education Faculty; (4) Passing a TB Test; (5) Presentation of documentation of Hepatitis B vaccination; and (6) passing an official criminal background check.

Decision Point 4: Recommendation for Initial Licensure

Application for Initial Licensure happens after successful completion of all degree requirements. Application for Initial Licensure requires: (1) A successful review of the updated Teaching ePortfolio; (2) Submission of a current DPR form documenting the following: cumulative GPA of 2.5 or better, art course GPA of 2.5 or better, and an education GPA of 3.0 or better; and (3) A passing score on the *Candidate Disposition Assessment Inventory* completed by the Art Education Faculty; (4) Achievement of state mandated scores on the two Praxis II national teacher exams; (5) Completion of the *Case Student Teaching Final Assessment* by the Cooperating Teacher and University Supervisor with a grade of B or better; and (6) completion of the *Case Teacher Licensure Exit Interview and Survey*.

Upon successful completion of the four decision points, the student is recommended by the University Director of Teacher Licensure for the Ohio Provisional Art (Pre-K-12) License to teach art in the public schools in Ohio and more than 40 reciprocating states. Completion of the B.S. in Art Education Degree is separate from the assurance that the State of Ohio's Provisional Art Teacher License

will be awarded. Teacher Licensure is also obtainable through the Art Education Graduate Program of Study.

Requirements for Art Education program: Credit Hours:
FSXX 100-First Seminar4

Two selected from:

| | |
|--|-----|
| USNA-Thinking about the Natural World..... | 3 |
| USSO-Thinking about the Social World | 3 |
| USSY-Thinking about the Symbolic World..... | 3 |
| Natural Sciences (see page 11)..... | 3-4 |
| Quantitative Reasoning (MATH or STAT)..... | 3-4 |
| Global & Cultural Diversity (see page 11)..... | 3-4 |
| ARTH 101 and 102 | 6 |
| ARTH electives (one must be at 300 level)..... | 6 |
| ENGL elective (300-level)..... | 3 |
| PHED Physical Education (2 semesters)..... | 0 |

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Professional Education/Art Education (39 total credit hours)

| | |
|--|----|
| ARTS 295, 300, 385, 386, 387, 393, 395, 366A, 366B, 465..... | 27 |
| EDUC 301, PSCL 101 and EDUC 304 | 9 |
| EDJC 255 or COSI 463..... | 3 |

Art Studio courses at The Cleveland Institute of Art (51 total credit hours)

| | |
|--|----|
| Digital Art and Design | 6 |
| Design 2D and 3D..... | 6 |
| Drawing I, II, III..... | 9 |
| Painting, ARTS 216 and CIA Color | 6 |
| 2D Visualization | 3 |
| Studio Project..... | 3 |
| Sculpture..... | 3 |
| 5 Studio Electives | 15 |

ART STUDIO (ARS)

Concentration for the minor Hours: 18

A. Art Studio (ARTS): 18 hours in Art Studio, including ARTS 101 and 106

At least two of the remaining courses should be in one area (i.e. drawing, painting, design, textiles, photography, ceramics, and enameling).

B. Photography (ARTS): 18 hours including ARTS 220, 320, 322, 325, 365, 399, or an approved elective

Independent Study

ARTS 399 is offered in many areas of Art Studio for advanced students who have completed 100, 200 and 300-level courses in consultation.

PRE-ARCHITECTURE (PAR)

Academic Representative and

Contact for First Year Students/Advisors:

Professor Timothy Shuckerow
 2215 Adelbert, 368-2714
 E-mail: txs10@case.edu

Major (for B.A.)* Hours: 30-39

- A. Art History: 12 hours including ARTH 101, 102
- B. Art Studio: 15 hours including ARTS 106, 302, 303
- C. One approved 3 hour elective course selected from American Studies, Anthropology, Civil Engineering, Geological Sciences, History of Technology and Science, or Sociology in consultation with the major advisor.

***NOTE:** *Students who plan to pursue graduate studies in architecture may replace letter C above with 12 hours selected from MATH 125, 126 and PHYS 115, 116 or 121, 122. The 12 hours must include at least one course each in mathematics and physics.*

NOTE: *The Pre-Architecture major is available only as a second major for the B.A. For a student who completes a Bachelor of Science degree (B.S., B.S.E., B.S.N.), Pre-Architecture may serve as the sole major for a B.A. degree.*

Minor Hours: 18

ARTH 101, 102; ARTS 106, 302, 303 and one approved elective

ART HISTORY (ARH)

www.case.edu/artsci/arth/arth.html

Academic Representative and**Contact for First Year Students/Advisors:**

Professor Charles Burroughs
 103 Mather House, 368-6095
 E-mail: ceb33@case.edu

Major (for B.A.)**Hours: 36**

- A. The major requires 36 hours with the following distribution:
 - 1. ARTH 101, 102 (6 hours)
 - 2. ARTH 200-level (3-6 hours recommended)
 - 3. ARTH 396 Majors Seminar (3 hours) to be taken in junior or senior year
 - 4. 15-18 hours of electives in ARTH at the 300-level
- B. Art Studio: 3-6 hours of ARTS courses selected in consultation with advisor

NOTE: *Two years of a foreign language (preferably German) recommended for those who intend to pursue professional interests in art history.*

Minor Hours: 18

18 hours of Art History including ARTH 101,102

Independent Study

ARTH 398

Internship

ARTH 395

ARTIFICIAL INTELLIGENCE (AIN)

www.eecs.cwru.edu/

Academic Representative and**Contact for First Year Students/Advisors:**

Professor Michael Branicky
 517B Glennan Building, 368-6430
 E-mail: msb11@case.edu

Minor Hours: 15

ENGR 131, EECS 391 followed by completion of one of the tracks described below

Track 1 - Technology Track

Three courses selected from the following: BIOL 373, 374; BIOL/EECS 375, 475, 477, 478, 479; EECS 350, 352, 360, 411, 484, 487, 489, 491, 531, 589, 591; PHIL 201, 306

Track 2 - Cognitive Science Track

Three courses selected from the following: BIOL 373, 374; BIOL/EECS 477, 478, 479; ENGL 301; PHIL 201, 306; PSCL 101, 352, 353, 355, 357, 370, 402

ASIAN STUDIES (ASI)

www.case.edu/artsci/asia/asiaprogram/htm

Academic Representative:

Professor Charlotte Ikels
 207 Mather Memorial, 368-5331
 E-mail: cxi@case.edu

Contact for First Year Students/Advisors:

Professor William Deal
 219 Mather House, 368-2205
 E-mail: wed@case.edu

Undergraduate Research Contact:

Professor Kelly McMann
 111 Mather House, 368-9610
 E-mail: kmm39@case.edu

International Study Contact:

Professor Takao Hagiwara
 201 Guilford House, 368-6188
 E-mail: txh13@case.edu

Major (for B.A.)

Students choose either Track 1 or Track 2

Track 1 (first major)**Hours: 37**

ASIAN STUDIES (continued)

- A. ASIA 133 and 134
- B. At least 16 hours in an Asian language
- C. Three hours in Anthropology (Asia-related)
- D. Three hours in Political Science or Economics (Asia-related)
- E. Three hours in religion (Asia-related)
- F. Six additional hours (Asia-related) selected in consultation with the program advisor

Track 2 (can only be taken as a second major) Hours: 36

- A. ASIA 133 and 134
- B. Six hours in Anthropology (Asia-related: ANTH 352 and 353 suggested)
- C. Six hours in Religion (Asia-related: RLG 204 and 217 suggested)
- D. Three hours in World Literature (Asia-related)
- E. Three hours in Political Science or Economics (Asia-related)
- F. 12 additional hours (Asia-related) selected in consultation with the program advisor

Minor Hours: 18

- A. ASIA 133 or 134
- B. 15 additional hours (Asia-related) selected in consultation with the program advisor

Only one year (8 credits) of Asian language study counts toward the minor.

Independent Study

ASIA 399

ASTRONOMY (AST)

astronomy.case.edu

Academic Representative:

Professor R. Earle Luck
560 Sears Bldg., 368-6697
E-mail: rel2@case.edu

Contact for First Year Students/Advisors:

Professor Heather Morrison
558 Sears Bldg., 368-6698
E-mail: hlm5@case.edu

Major (for B.A.) Hours: 63

- A. Core Astronomy courses (17 Hours)
ASTR 221, 222, 306, 309, 310, 311, 328

- B. Additional required courses:
MATH 121 (or 123), 122 (or 124), 223 (or 227), 224 (or 228)
PHYS 121 (or 123), 122 (or 124), 221, 250, 310, 313, 324, 326, 331
ENGR 131

- C. Approved Technical Electives (12 hours)

Major (for B.S.) Hours required for graduation: 122

- A. Core Astronomy courses (20 hours)
ASTR 221, 222, 306, 309, 310, 311, 323, 328
- B. Additional required courses:
MATH 121 (or 123), 122 (or 124), 223 (or 227), 224 (or 228)
PHYS 121 (or 123), 122 (or 124), 203, 204, 221, 250, 310, 313, 324, 325, 326, 331, 332
ENGR 131
- C. Approved Technical Electives (12 hours)

Concentrations for the minor Hours: 15-17

- A. For physical science majors:
ASTR 221, 222, and three of the following:
ASTR 306, 311, 323, 328
- B. For non-physical science majors:
ASTR 221, 222; PHYS 115 (or 121 or 123), 116 (or 122 or 124) and one of the following: ASTR 306, 311, 323, 328

BIOCHEMISTRY (BCH)

www.case.edu/med/biochemistry/home.html

Academic Representatives and

Contacts for First Year Students/Advisors:

Professor David Samols
RT 400-8 Research Tower, School of Medicine,
368-3520
E-mail: drs10@case.edu

Cooperative Education Advisor:

Professor Menachem Shoham
RT500-7, Research Tower, School of Medicine,
368-4665
E-mail: mxs10@case.edu

Major (for B.A.) Hours: 71-73

- A. Biochemistry courses (26 hours)
 1. BIOC 307, 308, 373 (SAGES department seminar)
 2. BIOC elective (312 or 334)
 3. Two approved technical electives (6 hours)
 4. BIOC 391 (Independent Study)
 5. BIOC 393 (SAGES Capstone)

B. Additional required courses

1. BIOL 214, 215
2. CHEM 105, 106 (or CHEM 111, ENGR 145), 113, 223 (or 323), 224 (or 324), 233, 234, 301
3. MATH 125 (or 121), 126 (or 122 or 124)
4. PHYS 115, 116 (or 121, 122)

Major (for B. S.) Hours required for graduation: 125

A. Biochemistry courses (26 hours)

1. BIOC 307, 308, 312, 334, 373 (SAGES Department Seminar)
2. Approved technical elective (3 hours)
3. BIOC 391 (Independent Study)
4. BIOC 393 (SAGES Capstone)

B. Additional required courses:

1. BIOL 214, 215
2. CHEM 105, 106 (or CHEM 111, ENGR 145), 113, 223 (or 323), 224 (or 324), 233, 234, 301 (or 335), 302 (or 336)
3. MATH 121; 122 (or 124); 223 (or 227); 224 (or 228)
4. PHYS 121 (or 123), 122 (or 124), 221
5. Statistics/data analysis elective (PHYS 250, STAT 312, 313 or equivalent)

Minor Hours: 17

BIOC 307, 308; either BIOC 312 or 334; BIOC 373 (SAGES Department Seminar); an approved technical elective (3 credit hours)

Prerequisites for Minor:

BIOL 214, 215; CHEM 105, 106 (or CHEM 111, ENGR 145), 113, 223 (or 323), 224 (or 324), 233, 234

Cooperative Education

Optimal times:

Third Year - Spring/Summer

Fourth Year - Summer

Fifth Year - Fall

BIOLOGY (BIO)

www.case.edu/artsci/biol/biol.htm

Academic Representative and Contact for First Year Students/Advisors:

Professor Richard F. Drushel
Clapp Hall 402, 368-4804
E-mail: rfd@case.edu

Cooperative Education Advisor:

Professor Joseph F. Koonce

203 DeGrace Hall, 368-3557

E-mail: jfk7@case.edu

Major (for B.A.) Hours: 62

A. Biology courses (30 hours, at least 15 of which must be at the 300-level or higher)

1. Core courses: BIOL 214, 215, 216
2. One course from two of the following major areas: cell & molecular biology, organismal biology, population biology & ecology
3. Two additional laboratory courses (excluding BIOL 388, 388S, 390)
4. Biology electives (excluding BIOL 114, 116, 117, 119, 121, 250, 251, 348, 390); BIOL 390 and 395 are Pass/No Pass only

B. Additional required courses (32 hours)

1. Chemistry: CHEM 105, 106, 113, 223 (or 323), 224 (or 324), 233
2. Mathematics: MATH 125 (or 121), 126 (or 122 or 124)
3. Physics: PHYS 115, 116 (preferred) or PHYS 121 (or 123), 122 (or 124)

C. Seniors may elect to use BIOL 377, 388S, or 389S as a SAGES Capstone experience.

Major (for B.S.) Hours required for graduation: 122

A. Biology courses (39 hours, at least 17 of which, (excluding BIOL 388, 388S, 390, and 395) must be at the 300-level or higher)

1. Core courses: BIOL 214, 215, 216
2. One course from two of the following major areas: cell & molecular biology, organismal biology, population biology & ecology
3. A quantitative biology laboratory (BIOL 300, 303, or 315)
4. Genetics (BIOL 301 or 326)
5. Undergraduate Research: BIOL 388 or 388S, 390, and 395 (BIOL 390 and 395 are Pass/No Pass only)
6. One additional laboratory course
7. One additional biology elective (excluding BIOL 114, 116, 117, 119, 121, 250, 251, 348)

B. Additional required courses (41 hours):

1. Chemistry: CHEM 105, 106, 113, 223 (or 323), 224 (or 324), 233, and 301
2. Mathematics: MATH 125, 126 (preferred) (or 121, 122 or 124); 201 or 304 or other approved mathematics or statistics course
3. Physics: PHYS 115, 116 (preferred) or PHYS 121 (or 123), 122 (or 124)

BIOLOGY (continued)

4. Computer Programming: ENGR 131
- C. Seniors may elect to use BIOL 377, 388S, or 389S as a SAGES Capstone experience.

Adolescent to Young Adult Licensure, Life Science:

- A. Completion of required Biology courses. For information, contact Professor Richard F. Drushel, 368-4804, E-mail: rfd@case.edu.
- B. Completion of required Education courses. (see Education-Teacher Licensure Program on page 39)

NOTE: For more information about licensure programs, see Professor Edward Bernetich, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.

Minor Hours: 16

At least two of the three core courses (BIOL 214, 215, 216) plus electives to total 16 hours of biology courses (excluding BIOL 119, 121, 390)

Independent Study

BIOL 388, 388S, 389, 389S, 390 (BIOL 390 can only be taken on a Pass/No Pass basis)

Cooperative Education

Optimal Time:

Third Year - Spring/Summer

Fourth Year - Fall

CHEMISTRY (CHE)

www.case.edu/artsci/chem/

Academic Representative, Cooperative Education Advisor and International Study Contact:

Professor John E. Stuehr
212 Clapp Hall, 368-5099
E-mail: jes6@case.edu

Contact for First Year Students/Advisors:

Professor Michael Kenney
205 Millis Hall, 368-3736
E-mail: mjk56@case.edu

Undergraduate Research Contact:

Zedeara Diaz
204 Clapp Hall, 368-3621
E-mail: zcd@case.edu

Major (for B.A.) Hours: 47-48

- A. Chemistry courses required (31-32 hours):
CHEM 105, 106, 113; CHEM 223 (or 323), 224 (or 324), 233 (or 321), 234 (or 322); CHEM 301, 302 (or

335, 336); 304, 305 (Department Seminar)

- B. Additional required courses (16 hours):
 1. PHYS 115 (or 121 or 123), 116 (or 122 or 124)
 2. MATH 125 (or 121), 126 (or 122 or 124)

Major (for B.S.)

Hours required for graduation: 122-123

- A. Chemistry courses required (53-54 hours):
 1. CHEM 105, 106, 113, 114; CHEM 323, 324, 304, 322; CHEM 311, 331, 332, 335, 336; CHEM 328 or 329 or BIOC 307; CHEM 310
 2. A minimum of 3 credit hours of CHEM 397, Undergraduate Research, or CHEM 398
 3. Six additional hours of Chemistry Electives at the 300-level or above (may include no more than three credit hours of CHEM 397 Research or CHEM 398 SAGES Capstone)
- B. Additional required courses (31 hours):
 1. MATH 121, 122 (or 124), 223 (or 227)
 2. MATH 224 (or 228) or STAT 312
 3. PHYS 121 (or 123), 122 (or 124), 221
 4. Six additional hours of approved Technical Electives, which may include up to six credit hours of CHEM 397 and/or CHEM 398.

Adolescent to Young Adult Licensure, Chemistry:

- A. Completion of required courses in Chemistry. For information, contact Professor John Stuehr, 368-5099, E-mail: jes6@case.edu.
- B. Completion of required Education courses. (see Education-Teacher Licensure Program on page 39)

Adolescent to Young Adult Licensure, Physical Sciences:

- A. Completion of required courses in the physical sciences. For information, contact Professor John Stuehr, 368-5099, E-mail: jes6@case.edu.
- B. Completion of required Education courses. (see Education-Teacher Licensure Program on page 39)

NOTE: For more information about licensure programs, see Professor Edward Bernetich, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.

Minor Hours: 18

CHEM 105, 106, CHEM 113, plus six additional hours of lecture courses in chemistry (usually CHEM 223, 224 or

CHEM 323, 324) and two additional lab courses (usually CHEM 233 and 234)

Independent Study

CHEM 397

Cooperative Education

Optimal Time: Third Year - Summer

Fourth Year - Fall, Spring/Summer

CHILDHOOD STUDIES (CHS)

www.case.edu/artsci/childstudies

Academic Representative, Contact for First Year Students/Advisors and Undergraduate Research Contact:

Professor Jill Korbin

713 Crawford Hall, 368-4413

E-mail: jek7@case.edu

Minor Hours: 15

Requires at least 15 hours of course work in at least two different departments. The following courses are accepted toward the minor:

ANTH 306, 309, ARTH 300/CHST 300, CHST 301, 302, 398, 399, COSI 313, NTRN 328, PSCL 230, 231*, 329, 335A*, 335C*, 339*, 344, 393, SOCI 320, 339*, 361.

Independent Studies or one-time course offerings must be approved by the academic representative. Other courses may be accepted with approval from the Childhood Studies academic representative. *No more than four hours of practicum experience can count toward the minor.

NOTE: *Students may count up to six credit hours toward another major. This is possible for more than one major, but with a maximum of six credit hours per major.*

CHINESE (CHI)

www.case.edu/artsci/modlang/Lab/chinese.html

Academic Representative and Contact for First Year Students/Advisors:

Yuxiu Liang, Instructor

313 Guilford House, 368-2102

E-mail: yxl34@case.edu

Minor Hours: 15-19

- A. For students beginning study in Chinese at an introductory level: CHIN 101, 102, 201, 202 and one 300-level course (19 hours)
- B. For students beginning study in Chinese at the 200-level or higher: Five courses at the 200 and 300-level

approved by the academic representative.

CLASSICS (CLS)

www.case.edu/artsci/clsc/clsc.html

Academic Representative, Contact for First Year Students/Advisors and International Study Contact:

Professor Martin Helzle

404 Mather House, 368-2294

E-mail: mxh13@case.edu

Undergraduate Research Contact:

Professor Paul Iversen

402 Mather House, 368-6062

E-mail: pai2@case.edu

Major (for B.A.) Hours: 36

Courses from Classics Department (36 hours)

1. Eight courses (24 hours) in either Greek or Latin or combination of both, provided that at least three courses are included from the most advanced level in one of the languages.
2. Four Classics courses of which at least two must be at the 300-level.

The department strongly recommends the addition of four to six courses in a closely related field to be selected in consultation with the department advisor. Examples of related fields are Anthropology, Art History, English, History, Philosophy, and World Literature.

Concentrations for the minor Hours: 15-18

- A. Latin concentration:
Nine hours from Latin courses above the 100-level
Six hours from: CLSC 112, 201, 304
- B. Greek concentration:
12 hours in Greek language
Three hours from: CLSC 111, 201, 228, 301, 302
- C. Classics concentration:
Any five Classics courses with at least one at the 300-level

NOTE: *With the approval of the chairperson, any of the above programs may be adapted to meet the needs of the individual student.*

Independent Study

CLSC 382 (SAGES senior capstone course for majors only); CLSC 395; GREK 395; LATN 395

COGNITIVE SCIENCE (COG)

www.case.edu/artsci/dean/cogsci/index.htm

Academic Representatives and

Contacts for First Year Students/Advisors:

Professor Fey Parrill
612B Crawford Hall, 368-2795
E-mail: fpx26@case.edu

Professor Mark Turner
607 Crawford Hall, 368-4413
E-mail: mbt8@case.edu

Major (for B.A.) Hours: 30

- A. COGS 101, 102, 201, 202
- B. PSCL 282 or ANTH 319 or STAT 201
- C. Five elective courses (three must be at the 200-300-level) chosen in consultation with department advisor

Independent Study

COGS 399 (permit required)

NOTE: *Students may enroll in up to six credits of independent study. Only three of these credits may count toward the elective component.*

Minor Hours: 15

- A. COGS 101
- B. One of the following: COGS 102, 201, 202
- C. Three additional COGS courses

COMMUNICATION SCIENCES (COS)

www.case.edu/artsci/cosi

Academic Representative:

Professor Stephen Haynesworth
Hearing and Speech Center, 368-2470
E-mail: seh5@case.edu

Contact for First Year Students/Advisors:

Professor Angela Ciccia
Hearing and Speech Center, 368-5385
E-mail: amh11@case.edu

Major (for B.A.) Hours: 45

COSI 109, 211, 220, 260, 313, 321, 325, 345, 352, 370; ENGL 301; PSCL 101, 230, 282 (or STAT 201) and PSCL 375

Communication Sciences Minor Hours: 15

COSI 109, 313, 325 and two of the following: COSI 211, 321, 345

Health Communication Minor (HCO) Hours: 15

COSI 101, 109, 340 and two of the following: COSI 200, 260, 332, 345

Departmental Honors Program

Students who have a grade point average of 3.25 are

eligible for participation in the Departmental Honors Program. Students choose a faculty mentor to work with and complete an independent project during their senior year under the guidance of the faculty member. Interested students should contact a supervising faculty member during their junior year. Course prerequisites for the Honors program include PSCL 282 (or STAT 201) and PSCL 375.

Independent Study

COSI 353 (Capstone), 390, and 391 (Permission by arrangement with an instructor)

Integrated Graduate Studies (IGS)

Please contact the department at 368-2470 to learn more.

COMPUTER SCIENCE (CMP)

www.eecs.case.edu

Academic Representative, Contact for First Year Students/Advisors, and Undergraduate Research Contact:

Professor Tekin Ozsoyoglu
506 Olin Bldg., 368-5029
E-mail: gxo3@case.edu

Cooperative Education Advisor/International Study Contact:

Professor Jiong Yang
515 Olin Bldg., 368-6197
E-mail: jxy55@case.edu

Major (for B.A.) Hours: 48

- A. ENGR 131
- B. MATH 125 (or 121), 126 (or 122 or 124), 304
- C. EECS 233, 281, 314, 337, 338, 340, 341
- D. Three technical electives; these courses must be EECS, MATH or STAT courses, and at least one must be a Computer Science course.

For B.S. program in Computer Science, see page 48.

Minor (for students pursuing a B.A. degree) Hours: 17

- A. ENGR 131
- B. MATH 125 (or 121)
- C. EECS 233
- D. Two additional Computer Science courses.

ECONOMICS (ECO)

weatherhead.case.edu/econ/

Academic Representative and International Study Contact:

Professor Robin Dubin

264 Peter B. Lewis Building, 368-3981
E-mail: rad4@case.edu

Contact for First Year Students/Advisors:

Professor Gary Murphy
277 Peter B. Lewis Building, 368-3969
E-mail: gvm1@case.edu

Undergraduate Research Contact:

Professor Eric Bettinger
266 Peter B. Lewis Building, 368-2184
E-mail: epb4@case.edu

Major (for B.A.) Hours: 33

A. Required Courses (18 hours)

1. ECON 102, 103, 307, and either 308 or 309
2. One of the following: STAT 207, 243 or ECON 226
3. ECON 326
4. SAGES Senior Capstone Experience * (0-6 hours)
Capstone experiences should be chosen from the following list (these must be taken in the junior or senior year):
 - a. ECON 397/398 (Honors Thesis)
 - b. ECON 395 (Public Policy Case Competition)
 - c. ECON 399 (Independent Study) upon approval of Senior Capstone Coordinator
 - d. Other approved projects in conjunction with capstone requirements in other majors

B. Electives (15 hours):

A minimum of five additional courses in economics at 200-level or 300-level. At least two of these should be in one of the concentrations listed below. *Up to three hours of the student's capstone experience can count toward the 15 hours of electives.

Concentrations:

| | |
|-----------------------|-------------------------|
| Resources and Markets | Industrial Organization |
| ECON 255 | ECON 328 |
| ECON 332 | ECON 329 |
| ECON 341 | ECON 361 |
| ECON 367 | ECON 369 |
| ECON 368 | |

| | |
|------------------|-------------------------|
| Public Economics | International Economics |
| ECON 342 | ECON 372 |
| ECON 343 | ECON 373 |
| ECON 378 | ECON 375 |
| ECON 386 | |

Minor Hours: 15

ECON 102, 103 and three additional ECON courses.

Honors Program Hours: 6

Juniors with a minimum grade point average of 3.30 in economics courses and a 3.00 cumulative grade point average after completion of ECON 307, 308 and an approved statistics course may apply to the honors program. Students admitted to the program will enroll in ECON 397 in the spring semester of their junior year, will enroll in ECON 398 in the fall semester of their senior year, and will present an honors thesis in order to complete the program and qualify for departmental honors in Economics.

Independent Study

ECON 399 Hours: 1-6

ELECTRONICS (ELN)

A minor in electronics is available to B.A. candidates through the Department of Electrical Engineering and Computer Science. See page 49.

ENGLISH (EGL)

www.case.edu/artsci/engl/engl.html

Academic Representative:

Professor William Siebenschuh
106 Guilford House, 368-2364
E-mail: wrs2@case.edu

Contact for First Year Students/Advisors:

Professor Mary Grimm
318 Guilford House, 368-2355
E-mail: mcg3@case.edu

Major (for B.A.) Hours: 30 (above 100-level)

- A. ENGL 300 and either ENGL 302 or 308
- B. One course from the following: ENGL 310, 312, 320, 323, 324, 325, 326, 327, 328, 329
- C. ENGL 380 (Department Seminar)
- D. ENGL 395 (Capstone Seminar)
- E. 15 additional hours of ENGL courses, at least 3 of which must be at the 300-level or higher

Adolescent to Young Adult Licensure, Integrated Language Arts:

- A. Completion of required Integrated Language Arts courses. For information, contact Professor Judith Oster, 368-2367, E-mail: jxo4@case.edu.
- B. Completion of required Education courses. (see Education - Teacher Licensure Program on page 39)

NOTE: For more information about licensure programs, see Professor Edward Bernetch, advisor for the Case/

ENGLISH (continued)

John Carroll University Joint Program in Teacher Licensure.

Capstone Minor Hours: 15 (above 100-level)

- A. ENGL 300, 380, 395
- B. Two additional English courses above the 100-level

Minor Hours: 15 (above 100-level)

Consult departmental academic representative.
ENGL 300 strongly advised.

Honors Program Hours: 36-37

To qualify for the B.A. with honors in English, students must achieve a minimum grade point average of 3.50 in courses taken in the honors program. In addition, a student follows a track consisting of at least 36 hours above the 100-level, including:

- A. ENGL 300, 380 (senior seminar/SAGES Capstone), and either ENGL 302 or 308
- B. One 202-level (or equivalent) course in FRCH, GREK, GRMN, JAPN, LATN, SPAN, or the equivalent in a language for which 300-level literature courses are available
- C. 24 hours of approved electives in literary and cultural studies, six must be in literature before the 19th century and three must be in theory or methods of analysis

NOTE: Students may include six hours of Senior Thesis (two semesters of ENGL 399), six hours of creative writing (chosen from among ENGL 203, 213, 214, 303, 304, 305 or 406), and/or six hours of 300-level language courses on literary or cultural topics among the 27 hours of literary studies.

Independent Study

ENGL 390

ENTREPRENEURIAL STUDIES (ENT)

A minor program in Entrepreneurial Studies is offered through the Weatherhead School of Management. See page 60.

ENVIRONMENTAL GEOLOGY (GNV)

See Geological Sciences, page 25.

ENVIRONMENTAL STUDIES (EST)

www.case.edu/artsci/estd/

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor Peter McCall
211C A.W. Smith Building, 368-3676
E-mail: plm4@case.edu

Major (for B.A.) Hours: 30

- A. ESTD 101 and 398
- B. Humanities: RLGN 206 or HSTY 378
- C. Social Policy: ECON 368 or GEOL 303
- D. Science and Engineering: BIOL 350 or EECS 342 or GEOL 202
- E. 15 additional hours selected from a list of approved courses. An approved Washington Semester internship may be used to satisfy part or all of this requirement.

NOTE: The Environmental Studies major is available only as a second major for the B.A. For a student who completes a Bachelor of Science degree (B.S., B.S.E., B.S.N.), Environmental Studies may serve as the sole major for a B.A. degree.

Minor Hours: 15

- A. ESTD 101
- B. One course from each of two of the three disciplinary options listed for the major (see B, C, D above)
- C. Two additional courses selected from the list of courses approved for the major; or one course selected from the remaining disciplinary option and one course selected from the list of approved courses.

ETHNIC STUDIES (ETS)

www.case.edu/artsci/ethnic/

Academic Representative and International Study Contact:

Professor Gilbert Doho
204 Guilford House, 368-4885
E-mail: gxd22@case.edu

Contacts for First Year Students/Advisors:

Professor Alice Bach
105 Mather House, 368-1637
E-mail: ahb5@case.edu

Professor Cheryl Toman
207 Guilford House, 368-2233
E-mail: cat12@case.edu

Contact for First Year Students/Advisors and Undergraduate Research:

Professor Jacqueline Nanfita
308 Guilford House, 368-5264
E-mail: jcn@case.edu

Minor Hours: 15

- A. Required Core Courses (6 hours): Two of the following: ETHS 251, 252A, 252B, 253A, 253B
- B. Additional Required Courses (9 hours) selected from approved list of courses according to area of concentration

Concentration Areas:

African Studies
African American Studies
Latin America & Caribbean Studies
Global Ethnic Studies

NOTE: *Students are encouraged to engage in community projects/field research in their area of concentration.*

EVOLUTIONARY BIOLOGY (EVB)

www.case.edu/artsci/evolutionarybiology/

Academic Representative:

Professor Cynthia M. Beall
238 Mather Memorial, 368-2277
E-mail: cmb2@case.edu

Major (for B.A.) Hours: 30

- A. Required Foundation Courses (9 hours): BIOL 114 or 214, GEOL 210, and ANTH/BIOL/GEOL/HSTY/PHIL 225
- B. Additional Required Courses (6 hours):
One course from: BIOL 216, 336, 337, 370
One course from: HSTY 201, 202, 402; HSTY/PHIL 203, 204, 303, 309
- C. Approved Electives (12 hours)
Four courses from: ANTH 103, 105, 295, 302, 393, 397; ANAT 375, 377, 383; BIOL 223, 305, 307, 326, 343, 358, 362; GEOL 307, 451, 452; PSCL 350; ANTH/BIOL/GEOL/PHIL 367, ANTH/BIOL/GEOL/PHIL 396
- D. Senior seminar (3 hours): HSTY/PHIL 394

NOTE: *The Evolutionary Biology major is available only as a second major for the B.A. Up to 12 credits in courses taken by students in the first major may be applied to the Evolutionary Biology major. For a student who completes a Bachelor of Science degree (B.S., B.S.E., B.S.N.), Evolutionary Biology may serve as the sole major for a B.A. degree.*

Minor Hours: 15

- A. Required Foundation Courses (9 hours): BIOL 114 or 214, GEOL 210, and ANTH/BIOL/GEOL/HSTY/PHIL 225
- B. Two approved electives (6 hours) selected in consultation with the minor advisor.

FRENCH (FRC)

www.case.edu/artsci/dml/

Academic Representative and

Contacts for First Year Students/Advisors:

Professor Christine Cano
205 Guilford House, 368-4888
E-mail: cmc21@case.edu

Academic Representative and International Study

Contact:

Professor Cheryl Toman
207 Guilford House, 368-2233
E-mail: cat12@case.edu

Major (for B.A.) Hours: 30-32

Students who begin the major at the 200-level:

FRCH 201 and 202, and eight 300-level courses taught in French. Two of these may be replaced by approved related courses or FRCH courses taught in English.

Students who begin the major at the 300-level:

Ten 300-level courses taught in French. Two of these may be replaced by approved related courses or FRCH courses taught in English.

NOTES:

- *Only one of FRCH 311 or 312 may count toward the major.*
- *Students are encouraged to take FRCH 310 before or concurrently with higher-level courses. FRCH 320 should be taken before or concurrently with courses numbered above 320.*
- *At least two of the 300-level courses should be numbered above 320.*
- *At least two courses numbered 320 or higher should be taken in residence at Case.*
- *Related courses are offered periodically in Art History, History, Philosophy, World Literature, and other departments. These courses must be approved in advance by the major advisor. Students may also consult the list of approved French and Francophone Studies courses.*
- *Students are encouraged to study abroad as part of the major. FRCH 308 is a study abroad program offered in alternate summers. FRCH 208 offers a spring break service learning trip to Montreal. Information on additional study abroad opportunities may be obtained from the academic representative listed above, from the main office of the Department of Modern Languages and Literatures (201 Guilford House), and from the Office of Undergraduate Studies (357 Sears Bldg.).*

FRENCH (continued)

- French courses taught in English end with -5 (295; 335; 395, etc.)

Teacher Licensure Option - Multi-age Licensure, French

- Completion of required courses in French. For information, contact Marie Lathers, 368-8983, E-mail: mhl5@case.edu.
- Completion of required Education courses. (see Education (EDT)- Teacher Licensure Program on page 39).

NOTE: For more information about licensure programs, see Professor Edward Bernetch, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.

Minor Hours: 15-19

Students who begin French at the introductory level:

FRCH 101, 102, 201, 202 and one 300-level course taught in French

Students who begin French at the 200-level or higher:

Five courses taught in French at the 200 or 300-level, as approved by the advisor

Independent Study

FRCH 399

Honors in French

FRCH 397 and 398

FRENCH AND FRANCOPHONE STUDIES (FFS)

www.case.edu/artsci/fr_studies

Academic Representative, Contact for First Year Students/Advisors, Undergraduate Research Contact and International Study Contact:

Professor Cheryl Toman
207 Guilford House, 368-2233
E-mail: cat12@case.edu

Major (for B.A.) Hours: 30-32

- Foundations in Language (8 Hours)
Students entering at the 200-level of French language: FRCH 201 and 202
Students entering at the 300-level of language: 21 credits in C. below
- Foundations in Culture (9 Hours)
 - FRCH/WLIT 295

2. Two courses selected from the following

four: FRCH 316, 318, 319; HSTY 310

C. Related Courses in French and Other Disciplines (15-21 Hours)

In consultation with an FFS advisor, students select from approved courses in FRCH and other disciplines. For students completing 15 credits of related courses, no more than six credits may be from FRCH; for students completing 21 credits of related courses, no more than nine credits may be from FRCH.

Minor Hours: 15-17

For the minor, students entering at the 200-level of language competence complete 201 and/or 202, and three additional courses in FRCH and from the list of approved courses. At least six credits should be completed in disciplines other than FRCH. Students entering at the 300-level of language competence complete five courses at the 200 and 300 levels in FRCH and from the approved list. At least three credits should be completed in a course from FRCH taught in the French language and at least six credits should be taken in disciplines other than FRCH.

GEOLOGICAL SCIENCES (GEO) AND ENVIRONMENTAL GEOLOGY (GNV)

www.case.edu/artsci/geol/index.html

Academic Representative and Contact for First Year Students/Advisors:

Professor Gerald Matisoff
206 A.W. Smith Bldg., 368-3677
E-mail: gxm4@case.edu

Major in Geological Sciences (for B.A.) Hours: 70

- Core GEOL courses (37 hours):
Any one of GEOL 101, 110, 115; plus GEOL 119, 210, 301, 315, 317, 341, 344, 360, 390 (Department Seminar), 391 and 392 (SAGES Capstone)
- Elective GEOL courses (9 hours):
Three additional GEOL courses, at least two of which must be 200-level or higher, approved by department advisor.
- Other courses required (24 hours):
CHEM 105, 106, 113 or equivalent; MATH 125 (or 121), MATH 126 (or 122 or 124); PHYS 115 (or 121 or 123), 116 (or 122 or 124)

Major in Environmental Geology (for B.A.) Hours: 67

- Core GEOL courses (29 hours):
GEOL 110, 119, 210, 220, 303 or 202, 305, 317, 321, 390 (Department Seminar), 391 and 392 (SAGES

Capstone)

- B. Elective GEOL courses (9 hours):
Three additional courses at the 200-level or higher which relate to the science or societal implications of environmental concerns. Must be approved by department advisor.
- C. Other courses required (29 hours):
CHEM 105, 106, 113 or equivalent; ESTD 101;
MATH 125 (or 121), MATH 126 (or 122 or 124);
PHYS 115 (or 121 or 123); BIOL 114; STAT 201

Major in Geological Sciences (for B.S.)

Hours required for graduation: 133

- A. Core GEOL courses (37 hours):
Any one of GEOL 101, 110, 115; plus GEOL 119, 210, 301, 315, 317, 341, 344, 360, 390 (Department Seminar), 391 and 392 (SAGES Capstone)
- B. Technical elective courses (33 hours):
Two upper level MATH or STAT courses, plus two additional upper level courses in math, engineering, or science other than GEOL, plus 21 hours of technical courses (including GEOL), approved by department advisor.
- C. Other courses required (30 hours):
CHEM 105, 106, 113 or equivalent; MATH 121, 122 (or 124); PHYS 121 (or 123), 122 (or 124), 221;
ENGR 131 or other approved programming course.

Minor in Geological Sciences Hours: 15

Up to three courses from GEOL 101, 110, 115 and 117; plus GEOL 119 and sufficient upper level GEOL courses to total 15 hours.

GERMAN (GEM)

www.case.edu/artsci/dmll/

Academic Representatives and Contacts for First Year Students/Advisors:

Professor Jutta Ittner
208 Guilford House, 368-6202
E-mail: jxi6@case.edu

Professor Margaretmary Daley
303 Guilford House, 368-2303
E-mail: daley@case.edu

Professor Peter Yang
307 Guilford House, 368-2234
E-mail: pjy2@case.edu

Major (for B.A.) Hours: 30-32

Students who begin the major at the 200-level:

- A. GRMN 201 and 202; eight 300-level German courses

OR

- B. GRMN 201 and 202, six 300-level GRMN courses, and two WLIT or other related courses at the 200-level or higher.

Students who begin the major at the 300-level:

- A. Ten GRMN 300-level courses

OR

- B. Eight GRMN 300-level courses and two WLIT or other related courses at the 200-level or higher.

NOTES:

- No more than three courses numbered between 300 to 319 count toward the major.
- At least two of the courses numbered 320 or higher should be taken in residence at Case.
- Related courses are offered periodically in Art History, Classics, History, Music, Philosophy, Religious Studies, Political Science, World Literature, as well as other national literatures and other departments. These courses must be approved in advance by the major advisor.
- Students may also consult the list of approved German Studies courses.

Minor Hours: 15-19

Students who begin German at the introductory level:

GRMN 101, 102, 201, 202 and one 300-level course.

Students who begin German at the 200-level:

Five courses at the 200 and 300-level approved by the advisor. (No more than three courses numbered from 300 to 320 count toward the minor.)

Independent Study

GRMN 398 or 399

Honors

GRMN 397 and 398

GERMAN STUDIES (GES)

www.case.edu/artsci/grmn/

Academic Representative and Contact for First Year Students/Advisors:

Professor Jutta Ittner
208 Guilford House, 368-6202
E-mail: jxi6@case.edu

Major (for B.A.) Hours: 30

Thirty hours from the list of approved German Studies courses, including GRMN 303 and 311, GRST 398 (Senior Colloquium), and twenty-one additional hours

from the approved list, no more than nine of which may be in any one department.

Minor Hours: 15

At least one of GRMN 303 or 311; four additional 300-level courses on the approved list of German Studies courses from any two departments; or a thematic course of study (15 hours) approved in advance by the academic representative.

GERONTOLOGICAL STUDIES (GER)

www.case.edu/artsci/soci/gerontological.html

Academic Representatives and Contacts for First Year Students/Advisors:

Professor Dale Dannefer
223B Mather Memorial, 368-5091
E-mail: dxd79@case.edu

Professor Gary Deimling
231A Mather Memorial, 368-5173
E-mail: gtd@case.edu

Major (for B.A.) Hours: 30

- A. Required Core Courses (15 hrs): ANTH 304; COSI 345; PSCL 369; SOCI 369, 396
- B. At least 15 hours from the following list of approved courses: ANTH 215, 301, 318; ENGL 364; GERO 397, 398, 399; NTRN 201; SOCI 311, 313, 319, 370

NOTE: *Gerontological Studies is available only as a second major for the B.A. To declare the major students should have declared a first major and have sophomore or junior standing. Up to six credits in courses taken by students for the first major may be applied to Gerontological Studies major. For a student who completes a Bachelor of Science degree (B.S., B.S.E., B.S.N.) Gerontological Studies may serve as the sole major for a B.A. degree.*

Minor Hours: 15

At least two of the core courses listed above for the major and three courses chosen from remaining core courses or approved courses (see B above).

HEALTH COMMUNICATION (HCO)

A minor program in Health Communication is offered in the Department of Communication Sciences. See page 20.

HISTORY (HST)

www.case.edu/artsci/hsty/

Academic Representative, Contact for First Year

Students/Advisors and Undergraduate Research Contact:

Professor Renée Sentilles
206 Mather House 368-5413
E-mail: rms30@case.edu

Major (for B.A.) Hours: 30

- A. HSTY 112, 113
- B. HSTY 250 (fall) and 398: Senior Research Seminar (SAGES Senior Capstone - spring)
- C. Six additional courses in history, chosen in consultation with the departmental advisor. The majority of these courses should be in an area of concentration, which may be geographical (for example, European history) or chronological (for example, 20th century history) or thematic (for example, women's history), or some combination. The remaining courses are electives, and with permission, a course outside history, in a closely related discipline, may be accepted as cognate credit towards the completion of the major.

Adolescent to Young Adult Licensure, Integrated Social Studies:

- A. Completion of 1) the same four courses required for the major described above; 2) a minimum of six semester hours in each of three focus areas: United States history, World/European studies, and Asian, African, Latin American studies; and 3) specified courses in economics, political science, and sociology. For information, contact Professor Renée Sentilles, 206 Mather House 368-5413, E-mail: rms30@case.edu.
- B. Completion of required Education courses. (see Education - Teacher Licensure Program on page 39).

NOTE: *For more information about licensure programs, see Professor Edward Bernetich, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.*

Minor Hours: 15

- A. HSTY 112 and 113
- B. Three additional courses chosen in consultation with the departmental advisor in an area of concentration.

Independent Study

HSTY 397

HISTORY AND PHILOSOPHY OF SCIENCE (HSP)

www.case.edu/artsci/hpst/

Academic Representative and

Contact for First Year Students/Advisors:

Professor Colin McLarty
203A Clark Hall, 368-2632
E-mail: cxm7@case.edu

Major (for B.A.) Hours: 30

- A. PHIL 101, HSTY 151, 202, HSTY/PHIL 203, HSTY 207/PHIL 204, PHIL 302
- B. HSTY/PHIL 390
- C. Three additional courses, chosen in consultation with and approved by the major advisor.

Minor Hours: 15

- A. HSTY 202, HSTY/PHIL 203, HSTY 207/PHIL 204
- B. Two additional courses, chosen in consultation with and approved by the program advisor.

HISTORY OF TECHNOLOGY AND SCIENCE (HSS)

www.case.edu/artsci/hsty/

Academic Representative and

Contact for First Year Students/Advisors:

Professor Miriam Levin
213 Mather House, 368-2624
E-mail: miriam.levin@case.edu

Minor Hours: 15

- A. Two of the following courses: HSTY 151, 152, 201, 202
- B. Three additional courses approved by the program advisor.

INTERNATIONAL STUDIES (IST)

www.case.edu/artsci/posc/international/index.html

Academic Representative and

Contact for First Year Students/Advisors:

Professor Vincent E. McHale
222 Mather House, 368-2425
E-mail: vem@case.edu

Major (for B.A.) Hours: 33

- A. Foundations: ANTH 102; ECON 102; HSTY 113; POSC 272
- B. Area Focus: from an approved list of courses, six hours chosen in consultation with the academic advisor.
- B. Topical Focus: from an approved list of courses, six hours chosen in consultation with the academic advisor.

- C. Electives: from an approved list of courses, six hours chosen in consultation with the academic advisor.
- D. Senior Colloquium: INTL 398 (3 hours)
- E. Language Competency: Competency in a non-native language. Courses must be approved by the Department of Modern Languages and Literatures. (0-16 hours)

NOTE: *Normally no more than two courses taken for International Studies credit may count simultaneously toward a minor or another major.*

Honors

INTL 398 (Exceptional papers may be considered for honors.)

Independent Study

INTL 396 (International Studies majors only)

ITALIAN (ITL)

www.case.edu/artsci/dmll/

Academic Representative and

Contact for First Year Students/Advisors:

Denise Caterinacci, Instructor
213 Guilford House, 368-2374
E-mail: dmc7@case.edu

Minor Hours: 15-19

Students who begin Italian at the introductory level:
ITAL 101, 102, 201, 202 and one 300-level course (19 hours)

Students who begin Italian at the 200-level or higher:
Five courses at the 200 and 300-level approved by the chair of the department. 300-level courses must be at least 3 credit hours in order to be applied toward the minor.

JAPANESE (JPN)

www.case.edu/artsci/modlang

Academic Representatives and

Contacts for First Year Students/Advisors:

Professor Linda C. Ehrlich
305 Guilford House, 368-2232
E-mail: lce2@case.edu

Professor Takao Hagiwara
203 Guilford House, 368-6188
E-mail: txh13@case.edu

Minor Hours: 15-19

Students who begin Japanese at the introductory

level: JAPN 101, 102, 201, 202, and one 300-level course.

Students who begin Japanese at the 200-level or higher: Five courses at the 200 and 300-levels approved by the Japanese Studies academic representative.

JAPANESE STUDIES (JPS)

www.case.edu/artsci/modlang

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor Linda C. Ehrlich
305 Guilford House, 368-2232
E-mail: lce2@case.edu

Major (for the B.A.) Hours: 33-36

Students who begin the major at the 200-level:

- A. JAPN 201, 202, 301, 302, 350, 351
- B. Senior Colloquium (6 credits)
- C. Four Asian Studies Courses, WLIT or other related courses as defined below*

Students who begin the major at the 300-level:

- A. JAPN 301, 302, 350, 351
- B. One Directed Reading Course
- C. Senior Colloquium (6 credits)
- D. Four Asian Studies Courses, WLIT or other related courses as defined below*
- "Other related courses" could include courses in Japanese Literature, Film, Theater, Art History, Anthropology, Philosophy, Religious Studies, Sociology, Political Science, and History. Courses in these disciplines form an important component of the program. They provide an international, as well as interdisciplinary, perspective on Japanese culture. The individual program of study is supervised and must be approved by a faculty advisor.

A year or semester of study abroad in Japan is highly recommended, as is additional study in another language.

JUDAIC STUDIES (JDS)

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor Peter Haas
112 Mather House, 368-2741
E-mail: pjh7@case.edu

Minor Hours: 15-20

- A. JDST 201

- B. Nine additional credit hours with at least 1/3 Judaic content. Choose from: JDST 150, 220, 228, 392; RLGN 223, 268, 280, 350; POSC 370K, 379; SOCI 302, 355E; ENGL 365E, 366G; HSTY 254, 257; HBRW 201, 202, 301, 302 or courses approved by the academic representative.

- C. HBRW 101 and 102*

*Students who demonstrate proficiency in Hebrew will take a third course from B.

NOTE: Only one course from B may be taken in the Department of Religious Studies.

MANAGEMENT INFORMATION AND DECISION SYSTEMS (MID)

A minor program in Management Information and Decision Systems is offered through the Weatherhead School of Management. See page 61.

MATHEMATICS (MAT)

www.case.edu/artsci/math/

Academic Representative:

Professor David Singer
307A Yost Hall, 368-2892
E-mail: das5@case.edu

Contact for First Year Students/Advisors:

Professor Chris Butler
317 Yost Hall, 368-2881
E-mail: chris@case.edu

Cooperative Education Advisor:

Professor Marshall Leitman
301 Yost Hall, 368-2890
E-mail: mxl5@case.edu

NOTE: MATH 120 cannot be counted toward the MATH major or minor.

Major (for B.A.) Hours: 38

- A. Required Courses: (32 hours)
 - 1. MATH 121, 122 (or 124), 223 (or 227), and 224 (or 228)
 - 2. The Mathematics Core (15 hours): MATH 307, 308, 321, 322, and 324 or 425
 - 3. ENGR 131 (3 hours)
- B. Approved Electives: (9 hours)

Three electives must be approved by the student's advisor in the Department of Mathematics. If taken in the first year, MATH 150 may count toward this requirement. With the approval of the advisor, one course from outside the department may be counted as one of these electives.

Major (for B.S.)**Hours required for graduation: 126**

- A. MATH 121, 122 (or 124), 223 (or 227), 224 (or 228), 307, 308, 321, 322, and 324 or 425
- B. One of the following sequences:
 ASTR 201, 202; CHEM 105,106; CHEM 111,
 ENGR 145; GEOL 110 and either GEOL 115 or 210
- C. ENGR 131
- D. PHYS 121 (or 123), 122 (or 124), 221
- E. An approved science lab: BIOC 314; CHEM 111,
 113; GEOL 119, and PHYS 203 are appropriate.
- F. 21 hours of approved technical electives, no more
 than nine hours of which can be taken from outside
 the department.

B.S. in Applied Mathematics (APM)**Hours required for graduation: 125**

The requirements of the B.S. in Applied Mathematics include requirements A through E for the B.S. in Mathematics, plus the following:

- A. MATH 304
- B. 18 hours of approved technical electives
- C. A professional core in some field of application
 (12 hours of coursework)

B.S. in Mathematics and Physics (MAP)**Hours required for graduation: 126**

This program offers a single degree in Mathematics and Physics in a program jointly supervised by both departments. See the academic representative from either department for more information.

- A. Mathematics and Physics courses (79 hours)
 - 1. MATH 121, 122 (or 124), 223 (or 227), 224 (or 228), 307, 308, 321, 322, 324
 - 2. PHYS 121 (or 123), 122 (or 124), 221, 310, 313, 331 (or 481), 332 (or 482), 423, 472
 - 3. One of the following: PHYS 315, 316, 326, 327, 328, 336, 365
 - 4. Two physics courses chosen from PHYS 250, 349 and 350 and two math courses subject to approval by the advisory committee
 - 5. Physics Option: PHYS 303, 351, 352 OR Math Option: MATH 351 and SAGES Department Seminar in Mathematics
- B. Additional courses required (11-13 hours)
 CHEM 105 (or 111), 106 (or ENGR 145), 113, and ENGR 131

Adolescent to Young Adult Licensure, Mathematics:

- A. Completion of required Mathematics courses. For information, contact Professor Michael Hurley, 368-2885, E-mail: mgh3@case.edu.
- B. Completion of required Education courses. (see Education Teacher-Licensure Program on page 39).

NOTE: For more information about licensure programs, see Professor Edward Bernetich, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.

Minor Hours: 17

The minor in Mathematics consists of 17 credit hours of approved course work in Mathematics. No more than two courses can be used to satisfy both the minor requirements and the requirements of the student's major field (meaning departmental degree requirements, including departmental technical electives and common course requirements of the student's school).

The 17 hours must be selected from the following courses:

MATH 121 (or 125), 122 (or 124 or 126), 223 (or 227), 224 (or 228), 150*, 201,** 301, 302, 303, 304, 307, 308,** 321, 322, 323, 324, 327, 330, 338, 343, 345, 363, 380, or any 400-level** MATH course.

NOTE: *To count toward a minor in Mathematics, MATH 150 must be taken in the first or second year. **Only one of MATH 201, 308 can be taken for credit.

Independent Study

MATH 301

MUSIC (MUS)

www.music.case.edu

Academic Representative:

Professor Kathleen Horvath
 304 Haydn Hall, 368-1613
 E-mail: kah24@case.edu

Contact for First Year Students/Advisors:

Professor Juanita Karpf
 309 Haydn Hall, 368-1602
 E-mail: jxk178@case.edu

All programs in music are conducted jointly by Case Western Reserve University and The Cleveland Institute of Music. The Bachelor of Arts Music major and the Bachelor of Science in Music Education programs are administered by Case Western Reserve University. University students planning to major in music must be accepted to Case and must be accepted as a music major

through an audition process. Interested students should consult the Music Department academic representative for audition requirements. (Students interested in the B.S. in Music Education program should refer to the pages immediately following.)

Concentrations for the major (B.A.)

1. General Musicianship
2. Performance
3. Music History and Literature
4. Early Music Performance Practices
5. Music Theory
6. Audio Recording

Major (for B.A.) Hours: Variable depending upon concentration

A. Required Music Core Curriculum: (43 hours minimum)

1. Music Theory (19 hours)
Case Music Theory: MUTH 107, 108, 207, 208, 320 [Some students may opt to take CIM Music Theory in place of Case Music Theory. CIM Music Theory: MUTH 101/105, 102/106, 201/205, 202/206, 320]
2. Music History and Literature (9 hours)
MUHI 301, 302, 303
3. Applied Music in principal performance area (15 hours)
4. Participation in assigned musical ensemble every semester of major (0-1 hour per semester)
5. Participation in additional musical ensemble for one year (0-1 hour per semester)
6. Recital Class attendance and performance every year of major (0 hours)
7. Eurhythmics I & II (0 hours)
MUDE 101, 102 (fulfills Physical Education requirement)

B. Additional requirements depending upon concentration:

1. General Musicianship concentration (3 additional hours)
Music History or Literature (3 hours)
2. Performance concentration (18 additional hours)
Applied Music in principal performance area (9 hours)
Music History or Literature (3 hours)
Foreign language (6-8 hours)
3. Music History (18—20 additional hours)
Applied Music in principal performance area (3 hours)
Music History or Literature (6 hours)
Early Music Performance Practices (3 hours)
Foreign language (6-8 hours)

4. Early Music Performance Practices (18—20 additional hours)
Applied Music in principal performance area (3 hours)
Music History or Literature (3 hours)
Early Music Performance Practices (6 hours)
Foreign language (6-8 hours)
5. Music Theory concentration (10 additional hours)
Applied Music in principal performance area (3 hours)
Music History or Literature (3 hours)
Counterpoint (4 hours)
6. Audio Recording concentration (36 additional hours)
Audio Recording courses (26 hours)
Audio Recording internships and theses (10 hours)
(For audio recording concentration, a total of six semesters of ensemble participation is required.)

Minor Hours: 15-18

Five to seven courses including:

- A. Two in Music Theory (generally MUGN 103, 104)
- B. Two in Music History/Appreciation (generally MUGN 201, 202 or 301, 302)
- C. One to three courses as electives (may be Applied Music (MUAP) or Ensembles (MUEN))

Independent Study

MUHI 399

MUSIC EDUCATION (MUE)

<http://music.case.edu/mused/>

Academic Representative and

Contact for First Year Students/Advisors:

Professor Kathleen Horvath
304 Haydn Hall, 368-1613
E-mail: kah24@case.edu

Major for (B.S.)

Hours required for graduation: 129

The mission of the Music Education Program is to prepare Proactive Scholar-Practitioners who will develop into leaders, teachers and talented musicians in the field of music education.

The Bachelor of Science program in Music Education is designed to educate professional teachers of music. There are four Decision Points in the Music Education program. For each of the decision points, there are three possible outcomes: unconditional admission; conditional admission with a prescribed remedial plan which when successfully completed will result in unconditional admission; or denial of admission. Denial of admission at

any decision point means the student is no longer able to pursue a Music Education Degree at Case.

Decision Point 1: Application for Admission to the program

Official admission to the Music Education Program generally happens at the end of the Freshman year. Admission to the program requires: (1) being accepted to Case; (2) being accepted as a music major through an audition process before matriculation; (3) successful completion of MUED 240 Foundations of Music Education, including evaluation of an initial Teaching ePortfolio; (4) cumulative Case GPA of 2.5 or better; (5) submission of a signed *Statement of Assurance of Good Moral Character*, and (6) a satisfactory interview with Music Education Faculty, documented on the *Teacher Licensure Admission Assessment Form*.

Decision Point 2: Application for Advanced Standing
Application for Advanced Standing should be submitted by week 4 of the third semester after Decision Point 1 (usually the Fall of the third year at Case). Application for Advanced Standing requires: (1) A successful review of the updated Teaching ePortfolio; (2) Submission of a current DPR form documenting the following: cumulative GPA of 2.5 or better, music course GPA of 2.5 or better, and an education GPA of 3.0 or better; and (3) A passing score on the *Candidate Disposition Assessment Inventory* completed by the Music Education Faculty.

Decision Point 3: Application for Student Teaching
Application for Student Teaching should be completed by Week 4 of the semester prior to Student Teaching. Application for Student Teaching requires: (1) A successful review of the updated Teaching ePortfolio; (2) Submission of a current DPR form documenting the following: cumulative GPA of 2.5 or better, music course GPA of 2.5 or better, and an education GPA of 3.0 or better; (3) A passing score on the *Candidate Disposition Assessment Inventory* completed by the Music Education Faculty; (4) Passing a TB Test; (5) Presentation of documentation of Hepatitis B vaccination; and (6) passing an official criminal background check.

Decision Point 4: Recommendation for Initial Licensure
Application for Initial Licensure happens after successful completion of all degree requirements. Application for Initial Licensure requires: (1) A successful review of the updated Teaching ePortfolio; (2) Submission of a current DPR form documenting the following: cumulative GPA of 2.5 or better, music course GPA of 2.5 or better, and an education GPA of 3.0 or better; and (3) A passing score on the *Candidate Disposition Assessment Inventory* completed by the Music Education Faculty; (4) Achievement of state mandated scores on the two Praxis II national teacher exams; (5) Completion of the *Case*

Student Teaching Final Assessment by the Cooperating Teacher and University Supervisor with a grade of B or better; and (6) completion of the *Case Teacher Licensure Exit Interview and Survey*.

Upon successful completion of the four decision points, the student is recommended by the University Director of Teacher Licensure for the Ohio Provisional Music (Pre-K-12) License to teach music in the public schools in Ohio and more than 40 reciprocating states. Completion of the B.S. in Music Education Degree is separate from the assurance that the State of Ohio's Provisional Music Teacher License will be awarded.

| Music Education Major Requirements | Hours |
|--|--------------|
| (* Fills SAGES curriculum requirements) | |
| Applied Music Lessons (7 semesters) | 21 |
| Case Music Theory (MUTH 107*, 108*, 207, 208, 320) | 19 |
| Some students may opt to take CIM Music Theory in place of Case Music Theory. CIM Music Theory: MUTH 101/105, 102/106, 201/205, 202/206, 320 | (19) |
| Eurhythmics I & II (MUDE 101*, 102*) (fulfills Physical Education requirement)..... | 0 |
| Foundations of Music Education (MUED 240) | 3 |
| Elements of Conducting (MUED 275)..... | 2 |
| Advanced Conducting (MUED 276)..... | 2 |
| Instrumental and Choral Arranging (MUED 310) | 3 |
| Music History (302*, 303)..... | 9 |
| Technology-Assisted Music Teaching and Learning (MUED 320)..... | 3 |
| General Music Methods (MUED 350)..... | 3 |
| Instrumental Methods and Materials (MUED 352) <u>OR</u> | |
| Choral Methods and Materials (MUED 353) | 3 |
| Electives from various MUED 200 Basic Skill and Pedagogy Courses (1 credit each) | 6 |
| Participation in assigned home ensemble each semester of major (1 credit each) | 7 |
| Participation in one additional ensemble for one year (1 credit each)..... | 2 |
| Recital class attendance and performance every year of major (except during student teaching) (MUAP 011) | 0 |
| Language and Literacy Across Content Areas (COSI 463)..... | 3 |
| Introduction to Psychology (PSCL 101*)..... | 3 |
| Introduction to Education (EDUC 310)..... | 3 |
| Educational Psychology (EDUC 304*)..... | 3 |
| Student Teaching in Music Education (MUED 396A) | 9 |
| Student Teaching Seminar in Music Education (SAGES Capstone Course) (MUED 396B*) | 3 |
| MUED 355*—Instructional Design in Music (SAGES Department Seminar) | 3 |

NATURAL SCIENCES (NAT)

www.case.edu/artsci/natsci/

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor Joanne Westin
214 DeGrace, 368-3566
E-mail: jxw3@case.edu

Major (for B.A.)

Hours: minimum of 50 hours in science and mathematics

- A. 20 hours in one of the following departments:
Astronomy, Biology, Chemistry, Geological Sciences,
or Physics.
- B. Eight hours in each of two other departments listed in
A above.
- C. Three hours in each of the remaining two departments
listed in A above.
- D. MATH 125 (or 121) and 126 (or 122 or 124)

The courses selected in each department must generally
be courses that also satisfy the major or related course
requirements of an existing science major. (However, any
200-level or higher astronomy courses are acceptable for
the Natural Sciences major.)

NOTE: *Natural Sciences is available only as a second
major for the B.A.; the first major for the B.A. must be in
one of the departments within the arts and humanities or
the social sciences, excluding the programs in American
Studies, Asian Studies (Track 2), Environmental Studies,
Gerontological Studies, Pre-Architecture, and Women's
Studies. For a student who completes a B.S. degree in
management or accounting, Natural Sciences may serve
as the sole major for the B.A. degree.*

Minor Hours: Variable

Completion of requirements specified below for any four
of the six departments listed.

- A. Astronomy: either of the following sequences: ASTR
201 and any other 200-level ASTR course; or ASTR
221, 222
- B. Any two of BIOL 214, 215, 216
- C. Chemistry: CHEM 105, 106, 113
- D. Geological Sciences: any one of GEOL 101, 110, 115
or 117; and GEOL 119; and any one additional GEOL
course (can be one of those listed above or any other
course)
- E. Mathematics: MATH 125 (or 121) and 126 (or 122 or
124)
- F. Physics: either of the following sequences:
PHYS 115, 116 or PHYS 121, 122, 221

NUTRITION (NTR)

www.case.edu/med/nutrition/home.html

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor James Swain
WG-48, Medical School, 368-8554
E-mail: james.swain@case.edu

Major (for B.A.) Hours: 50-51

- A. Required Nutrition Courses (17 hours): NTRN 201,
342, 343, 363, 364
- B. Required Nutrition Department Seminar/SAGES
Capstone Courses (6 hours): NTRN 397, 398
- C. Nutrition Electives (6 hours): Two courses from
NTRN 328, 351, 360, 365, 388, 390, 435, 437, 440,
452, 454, 455, 460
- D. Additional Required Courses (21—22 hours):
BIOC 307; BIOL 214; BIOL 216 or 348; CHEM 105,
106, 223

Major (for B.S.)

Hours required for graduation: 120

- A. Required courses in Nutrition (17 hours): NTRN 201,
342, 343, 363, 364
- B. Required Nutrition Department Seminar/SAGES
Capstone Courses (6 hours): NTRN 397, 398
- C. Nutrition Electives (9-10 hours):
Three courses from NTRN 328, 351, 360, 365, 371,
388, 390, 435, 437, 440, 452, 454, 455, 460
- D. Additional Required Courses (25-27 hours):
BIOC 307
BIOL 214
BIOL 216 or BIOL 348
CHEM 105, 106, 113; CHEM 223 (before NTRN 363)
One course from STAT 201, 243, 312, 313, EPBI
431, ANTH 319, PSCL 282

Minor Hours: 15

NTRN 201, 343, and, depending on the student's interest
and preparation, nine hours selected from: NTRN 328,
342, 351, 360, 363, 364, 365, 388, 435, 437, 440, 452,
454, 455, 460

DIDACTIC PROGRAM IN DIETETICS (DPD)

Students interested in a career as a dietetics professional
are required to complete the Didactic Program in
Dietetics, which can be done within any of the
undergraduate degree programs in Nutrition. Completion
of the DPD is a prerequisite to entering a dietetic
internship. For information on the program accreditation
and requirements, see next column.

NUTRITIONAL BIOCHEMISTRY AND METABOLISM (NBM)

www.case.edu/med/nutrition/home.html

Academic Representative and

Contact for First Year Students/Advisors:

Professor Hope Barkoukis
WG-48, Medical School 368-2441
E-mail: hope.barkoukis@case.edu

Major (for B.A.) Hours: 79-80

- A. Nutrition courses (26 hours)
1. NTRN 201, 342, 363, 364, 452
 2. Required Nutrition Department Seminar/SAGES Capstone Courses (6 hours): NTRN 397, 398
 3. Nutrition elective: 3 hours at the 300-level or above
- B. Additional required courses (53-54 hours)
- BIOC 307, 334
BIOL 214, 215; BIOL 216 or 348
CHEM 105, 106, 113; 223 (or 323), 224 (or 324); 233, 234
MATH 125, 126 (or 121, 122)
PHYS 115, 116 or equivalent

Major (for B.S.)

Hours required for graduation: 125

- A. Nutrition courses (26 hours)
1. NTRN 201, 342, 363, 364, 452
 2. Required Nutrition Department Seminar/SAGES Capstone Courses (6 hours): NTRN 397, 398
 3. Nutrition elective: 3 hours at the 300-level or above
- B. Additional required courses (73 hours)
- BIOC 307, 334
BIOL 214, 215; BIOL 216 or 348
CHEM 105, 106, 113, 223 (or 323), 233, 224 (or 324); 234
ENGR 131
MATH 121, 122 (or 124), 223 (or 227), 224 (or 228)
PHYS 121 (or 123) and 122 (or 124); 221 (or 223)

DIDACTIC PROGRAM IN DIETETICS (DPD)

Students interested in a career as a dietetics professional are required to complete the Didactic Program in Dietetics, which may be done along with the undergraduate degree programs in Nutrition: the B.A. or B.S. in Nutrition, or the B.A. or B.S. in Nutritional Biochemistry and Metabolism. Completion of the DPD is a prerequisite to entering a dietetic internship. The Didactic

Program in Dietetics (DPD) at Case Western Reserve University is accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 800/877-1600 (www.eatright.org). Students wishing to meet eligibility for dietetic registration should consult with Professor James Swain, WG-48, Medical School, 368-8554 (E-mail: james.swain@case.edu). The following courses must be included in the program:

BIOC 307
BIOL 216 or 348, 343
CHEM 223
EDUC 304 or PSCL 353 or 357
NTRN 201, 342, 343, 351, 360, 363, 364, 365, and 550A
SOC 112B
SOC 311 or ANTH 215 or 480
STAT 201, 243, 312, or 313 or EPBI 431 or ANTH 319 or PSCL 282

PHILOSOPHY (PHI)

www.case.edu/artsci/phil/

Academic Representative and

Contact for First Year Students/Advisors:

Professor Colin McLarty
203 Clark Hall, 368-2810
E-mail: cxm7@case.edu

Major (for B.A.) Hours: 30

PHIL 101, 201, 301 and 302 and six courses chosen in consultation with a department advisor

Minor Hours: 15

PHIL 101 and four other courses at the 200-300-level (excluding PHIL 390, 398 and 399) chosen in consultation with a department advisor to meet the specific needs of students.

PHYSICS (PHY)

www.phys.case.edu/

Academic Representative, Contact for First Year Students/Advisors and Undergraduate Research

Contact:

Professor Gary S. Chottiner
104D Rockefeller Building, 368-4024
E-mail: gsc2@case.edu

International Studies Contact:

Professor Walter Lambrecht
104B Rockefeller Building, 368-6120

E-mail: wxl2@case.edu

Major (for B.A.) Hours: 60-62

- A. Physics courses (37 hours):
1. PHYS 121 (or 123), 122 (or 124), 221, 250
 2. PHYS 203A, 301B, 303, 313, 331, 351, 352
 3. Two of the following: PHYS 310, 315, 316, 324, 326, 327, 328 (or 336), 365
- B. Additional courses required (23-25 hours):
MATH 121, 122 (or 124), 223 (or 227), 224 (or 228);
ENGR 131 or appropriate alternate
- A two-course science sequence chosen from: CHEM 105, 106; CHEM 111, ENGR 145; BIOL 214, 215; or another two-course sequence totaling six or more credits in a quantitative science (other than physics), with written approval of the Physics Undergraduate Curriculum Committee.

Major (for B.S.)

Hours required for graduation: 127

- A. Physics courses (60 hours)
1. PHYS 121 (or 123), 122 (or 124) and 221, 203, 204, 250
 2. PHYS 301, 302, 303, 330, 310, 313, 324, 325, 331, 332, 351, 352
 3. One of the following: PHYS 315, 326, 327
 4. One of the following: PHYS 316, 328, 336, 365
- B. Additional courses required (25-27 hours):
ENGR 131 or approved alternate
MATH 121, 122 (or 124), 223 (or 227), 224 (or 228)
CHEM 105 (or 111), 106 (or ENGR 145), and 113

Variations on the BS in Physics:

1. **Mathematical Physics Concentration**
The B.S. in Physics, with a mathematical physics concentration, is available for students who are interested in theoretical physics and who have a strong background in mathematics. Details are available from the department's academic representative.
2. **Biophysics Concentration**
The B.S. in Physics, with a biophysics concentration, is available to students who are interested in biological research in physics graduate schools and industry, and is appropriate to other graduate departments such as Biology, Biophysics, and Biomedical Engineering, and as preparation for medical school. Details are available from the department's academic representative.

For B.S.E. program in Engineering Physics, see page 49.

B.S. in Mathematics and Physics
Hours required for graduation: 126

This program offers a single degree in Mathematics and Physics in a program jointly supervised by both departments. See the academic representative from either department for more information.

- A. Mathematics and Physics courses (79 hours)
1. MATH 121, 122 (or 124), 223 (or 227), 224 (or 228), 307, 308, 321, 322, 324
 2. PHYS 121 (or 123), 122 (or 124), 221; PHYS 310, 313, 331 (or 481), 332 (or 482), 423, 472
 3. One of the following: PHYS 315, 316, 326, 327, 328, 336, 365
 4. Two physics courses chosen from PHYS 250, 349 and 350 and two additional math courses subject to approval by the advisory committee
 5. Physics Option: PHYS 303, 351, 352 OR Math Option: MATH 351 and SAGES Department Seminar in Mathematics
- B. Additional courses required (11-13 hours)
CHEM 105 (or 111), 106 (or ENGR 145) and 113
ENGR 131

Adolescent to Young Adult Licensure, Physical Science:

- A. Completion of required courses in the physical sciences in a special B.A. program. For information, contact Professor Gary Chottiner, 368-4024, E-mail: gsc2@case.edu.
- B. Completion of required Education courses (see Education-Teacher Licensure Program on page 39).

Adolescent to Young Adult Licensure, Physics:

- A. Completion of required courses in physics. For information, contact Professor Gary Chottiner, 368-4024, E-mail: gsc2@case.edu.
- B. Completion of required Education courses (see Education-Teacher Licensure Program page 39).

NOTE: For more information about licensure programs, see Professor Edward Bernetich, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.

Minor Hours: 17

PHYS 121 (or 115 or 123) and 122 (or 116 or 124) and 221 plus two of the following courses: PHYS 196, 204 (or 208), 309, 310, 313, 315, 316, 324, 326, 328 (or 336), 331, 332

Cooperative Education

Optimal Times:
Third Year - Spring/Summer
Fourth Year - Summer
Fifth Year - Fall

POLITICAL SCIENCE (POS)

www.case.edu/artsci/posc/

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor Joseph White
113 Mather House, 368-2426
E-mail: jxw87@case.edu

Undergraduate Research Contact:

Professor Kelly M. McMann
218 Mather House, 368-5565
E-mail: kmm39@case.edu

Major (for B.A.) Hours: 30

- A. POSC 109
- B. Two Political Science courses at the 200-level (6 hours)
- C. Six Political Science courses at the 300-level (18 hours)
- D. Senior project, taken as POSC 396 (3 hours)

NOTE: *No more than six hours of independent study (POSC 395 and POSC 396) may be counted toward the major.*

Minor Hours: 15

Five courses, three of which must be at the 300-level.

Honors Program

POSC 397, 398 (limited to Political Science majors)

Independent Study - Special Projects Hours: 1-6

POSC 395 (requires prior faculty approval).

PRE-ARCHITECTURE (PAR)

See page 14.

PSYCHOLOGY (PSY)

www.case.edu/artsci/pscl/

**Academic Representative and
Contact for First Year Students/Advisors and
International Study Contact:**

Professor Robert Greene
124 Mather Memorial, 368-6473
E-mail: rlg2@case.edu

Major (for B.A.) Hours: 30

- A. Required courses
 - 1. PSCL 101, 282 (or STAT 201) (6 hours)
 - 2. Three courses (9 hours) from PSCL 315, 352, 353, 355, 357, 370, 375, 382, 393
- B. Electives: A minimum of 15 credit hours of elective course work chosen by the student in consultation with his/her advisor. No more than nine hours of

practicum courses (PSCL 231, 334, 335, 336, 338, 339, or 340) may be applied to the major.

Minor Hours: 15

- A. Required Course: PSCL 101 (3 hours)
- B. Electives: A minimum of four courses (12 hours) chosen by the student in consultation with his/her advisor. Practica and independent study are available to minors but cannot be used to satisfy the minor requirement.

Independent Study

PSCL 397

PUBLIC POLICY (PPY)

www.case.edu/artsci/public_policy/minor.html

**Academic Representative and
Contact for First Year Students/Advisors:**

Professor Joseph White
113 Mather House, 368-2426
E-mail: jxw87@case.edu

Minor Hours: 15

- A. The policy process: One from POSC 306, 383, or 386
- B. Economic analysis: ECON 102 or ECON 205
- C. Policy making institutions: select one from HSTY 256, 358, 400, POSC 308, 310, 323, 384, 384, 385
- D. Two courses in a subfield of public policy selected with the approval of the academic representative.

RELIGIOUS STUDIES (RLG)

www.case.edu/artsci/rlgn/rlgn.htm

**Academic Representative and
Undergraduate Research Contact:**

Professor Peter Haas
112 Mather House, 368-2741
E-mail: peter.haas@case.edu

Contact for First Year Students/Advisors:

Professor Deepak Sarma
215 Mather House, 368-4790
E-mail: deepak.sarma@case.edu

International Study Contact:

Professor William Deal
219 Mather House, 368-2205
E-mail: william.deal@case.edu

Major (for B.A.) Hours: 30

- A. RLGN 102 and 399
- B. Nine hours in one of the areas of concentration
 - Area 1: Religious Texts and Traditions

Area 2: Religion and Culture
Area 3: Religion in Society

- C. Three hours in each of the two areas outside the area of concentration (six hours total).
- D. Nine elective hours chosen in consultation with the departmental advisor.

A list of courses assigned to each area of concentration is available from the department.

Minor Hours: 15

- A. RLGN 102 and 399
- B. Nine hours that demonstrate diversity in the study of religion (selected in consultation with the department advisor).

Independent Study

RLGN 392

RUSSIAN (RUS)

www.case.edu/artsci/dmll/

Academic Representative and Contact for First Year Students/Advisors:

Tatiana Zilotina, Instructor
302 Guilford House, 368-2230
E-mail: tmz2@case.edu

Minor Hours: 15-19

Students who begin Russian at the introductory level:
RUSN 101, 102, 201, 202, and one 300-level course

Students who begin Russian at the 200-level or higher: Five courses at the 200 and 300-level approved by the academic representative.

SOCIOLOGY (SOC)

www.case.edu/artsci/soci/

Academic Representative, Contact for First Year Students/Advisors and International Study Contact:

Professor Dale Dannefer
226A Mather Memorial, 368-2703
E-mail: dale.dannefer@case.edu

Academic Representative and Undergraduate Research Contact:

Professor Emilia McGucken
223D Mather Memorial, 368-8847
E-mail: emilia.mcgucken@case.edu

Academic Representative:

Professor Sandra Barnes
223B Mather Memorial, 368-5091
E-mail: sandra.barnes@case.edu

Academic Representative:

Professor David Warner

223C Mather Memorial, 368-2697
E-mail: david.warner@case.edu

Major (for B.A.) Hours: 30

- A. SOCI 112B, 300, 303
- B. STAT 201 or PSCL 282
- C. SOCI 392 (Senior Capstone Project)
- D. Any six additional courses in Sociology or six additional courses that include a concentration (4 hrs)

Optional Concentrations in Sociology

Concentrations are intended to guide students in the selection of courses relevant to their interests and future goals, as well as to provide them with a solid grounding in sociology. Students may thus connect their concentration to their interests, to possible employment opportunities, or to specific graduate and professional school programs that they hope to pursue.

The student majoring in sociology has the **option** of choosing one of the four concentration fields taken in conjunction with the sociology major, or he/she may choose to obtain the major in sociology **without** choosing a concentration. The concentration consists of 12 credit hours. Students choosing a concentration must take **four** of the courses listed for the selected concentration.

1. **Crime and Delinquency Concentration**
SOCI 204, 320, 328, 333, 349, 360
2. **Health and Aging Concentration**
SOCI 203, 311, 313, 319, 361, 365, 360
3. **Gender, Work, and Family Concentration**
SOCI 208, 222, 355, 370, 372
4. **Social Inequality Concentration**
SOCI 203, 361, 320, 326, 349, 355, 372

Minor Hours: 15

SOCI 112B, 300 and three electives, two of which must be at the 300-level.

Independent Study

SOCI 375

Honors Study

SOCI 397/398

SPANISH (SPA)

www.case.edu/artsci/dmll/spanish.htm

Academic Representatives, Contacts for First Year Students/Advisors, Undergraduate Research and International Study Contacts:

Professor Antonio Candau
309 Guilford House, 368-8976
E-mail: axc102@case.edu

Professor M. Gabriela Copertari
216 Guilford House, 368-4324
E-mail: mgc6@case.edu

Professor Jacqueline Nanfito
308 Guilford House, 368-5264
E-mail: jcn@case.edu

Major (for B.A.) Hours: 30-32**Students who begin the major at the 200-level:**

SPAN 201 and 202; eight 300-level Spanish courses; two of these may be replaced by related courses as defined below.

Students who begin the major at the 300-level:

Ten 300-level courses taught in Spanish; two of these may be replaced by related courses as defined below.

Related courses are those outside Spanish offerings which are closely related to Spanish or Latin American culture: Art History, Classics, Ethnic Studies, History, Philosophy, Political Science, World Literature, as well as other language and literature courses. Courses other than SPAN must be approved in advance by the major advisor.

Teacher Licensure Option - Multi-age Licensure, Spanish

- A. Completion of required courses in Spanish. For information, contact a department representative.
- B. Completion of required Education courses (see Education - Teacher Licensure Program on page 39)

NOTE: For more information about licensure programs, see Professor Edward Bernetich, advisor for the Case/John Carroll University Joint Program in Teacher Licensure.

NOTE: Study abroad is highly recommended for all majors, as is additional work in world literature and/or in another language. Information on study abroad opportunities may be obtained from the academic representative listed above, from the main office of the Department of Modern Languages and Literatures, 201 Guilford House, and from the Office of Undergraduate Studies, 357 Sears Bldg.

Minor Hours: 15-19**Students who begin Spanish at the introductory level:**

SPAN 101, 102, 201, 202 and one 300-level course

Students who begin Spanish at the 200-level or higher:

Five courses at the 200 and 300-level approved by the advisor.

SPORTS MEDICINE (SPM)

www.case.edu/artsci/sportsmed/index.html

Academic Representative and**Contact for First Year Students/Advisors:**

Carrie Fister
Veale Center, 368-2863

E-mail: clo5@case.edu

Minor Hours: 18

PHED 332, 334, 339, 341, 342, and 350.

STATISTICS (STA)

stat.case.edu

Academic Representative and**Contact for First Year Students/Advisors:**

Professor Paula Fitzgibbon
321 Yost Hall, 368-2306
E-mail: paf3@case.edu

Major (for B.A.) Hours: 56

- A. MATH 121, 122 (or 124), 223 (or 227), 224 (or 228), and 201 or equivalent
- B. ENGR 131 or approved alternate; plus an additional higher numbered course in computation from EECS offerings or EPBI 414 or EPBI 420
- C. STAT 325, 326, 345, and 346
- D. At least 15 hours of courses in statistical methodology to be chosen from statistics courses numbered 300 and higher offered by the Statistics Department, or approved courses in statistical methodology or probability taught in biostatistics, computer science, economics, mathematics, operations research, systems engineering, etc. At least six hours must be in STAT courses; STAT 243 and 244 may be counted.
- E. Two approved courses (or more) numbered 300 or above in an approved discipline outside statistics.

Students are strongly encouraged to include advanced expository or technical writing courses in their programs. Students may pursue a B.A. with double major in statistics and related field from within the College of Arts & Sciences. In this case, the substantive field requirement (E) is waived.

Major (for B.S. in Statistics)**Hours required for graduation: 124**

- A. MATH 121 (or 123), 122 (or 124), 223 (or 227), 224 (or 228), and 201 or equivalent
- B. ENGR 131 or approved alternate; plus an additional higher numbered course in computation from EECS offerings or EPBI 414 or EPBI 420
- C. STAT 325, 326, 345, and 346
- D. At least 15 hours of courses in statistical methodology to be chosen from statistics courses numbered 300 and higher offered by the Statistics Department, or approved courses in statistical

STATISTICS (continued)

methodology or probability taught in biostatistics, computer science, economics, mathematics, operations research, systems engineering, etc. At least six hours must be in STAT courses; STAT 243 and 244 may be counted.

- E. Two approved courses (or more) numbered 300 or above in an approved discipline outside statistics.
- F. A combined total of 12 hours (or more) in ASTR, BIOL, CHEM, GEOL, PHYS which may be counted toward a major in that field including at least one of the following sequences: PHYS 121 and 122; CHEM 105, 106 and 113; CHEM 111 and ENGR 145; BIOL 214 and 216.

Students are strongly encouraged to include advanced expository or technical writing courses in their programs.

Minor Hours: 15

- A. STAT 243 and 244, or 345 and 346, or other approved two-course sequence
- B. STAT 208 or 312 or 313 or 332 or 333 or 325
- C. Two approved elective courses in statistics numbered 300 or above

Option in Actuarial Science

The actuarial program leading to either a B.A. or a B.S. in Statistics requires 30 hours in statistics and actuarial studies and must satisfy the requirements for the appropriate degree program with the following modifications of requirements (D) and (E):

- D. At least 12 hours of courses in statistical methodology to be chosen from statistics courses numbered 300 and higher offered by the department or courses in probability taught in biostatistics, computer science, economics, mathematics, operations research, systems engineering etc. At least six hours must be in STAT courses; STAT 243 and 244 may be counted.
- E. MATH 431; OPRE 201; STAT 317 and 318

NOTE: *Students can ordinarily expect to be prepared to take Actuarial Exams for at least 100 credits in the Society of Actuaries prior to graduation.*

SYSTEMS BIOLOGY (SYB)

www.case.edu/artsci/biol

Academic Representative and Contact for First Year Students/Advisors:

Professor Robin E. Snyder
510 Millis Hall, 368-8838

E-mail: res29@case.edu

Major (for B.S. in Systems Biology) Hours: 120

- A. Biology Courses (30 hours)
 - 1. Core Sequence: BIOL 250, 251, 300, 306
 - 2. Approved subspecialty sequence (one of the following):
 - a. Neuroscience: BIOL 373 and one additional neuroscience course
 - b. Genetics: any two of BIOL 301, 326, 328
 - c. Evolutionary biology: BIOL 225 and one additional evolution/ecology course
 - 3. Approved biology electives: any four of BIOL 301, 325, 326, 328, 362, 388, 388S, 390 (BIOL 390 is Pass/No Pass only)
- B. Additional Required Courses (49 hours)
 - 1. Any two of MATH 304, EECS 216, 246, 313, 324, 340
 - 2. Chemistry: CHEM 105, 106, 113
 - 3. Mathematics and statistics: MATH 121, 122 (or 124), 223 (or 227), 224 (or 228), and STAT 312
 - 4. Physics: PHYS 121 (or 123), 122 (or 124)
 - 5. Computer science and programming: EECS 233, 341 and ENGR 131
- C. Seniors may elect to use BIOL 377, 388S, or 389S as a SAGES Capstone experience.

TEACHER EDUCATION (EDT)

www.case.edu/artsci/teachlic/

Case/John Carroll University Joint Program in Teacher Licensure

Advisor for the Case/John Carroll University Joint Program in Teacher Licensure:

Associate Director of Teacher Licensure
Professor Edward Bernetich
1 Mather House, 368-1505
E-mail: eab50@case.edu

Academic Representative:

Director of Teacher Licensure
Professor William I. Bauer
306 Haydn Hall, 368-0792
E-mail: wib2@case.edu

Ohio Teacher Licensure can be pursued by those undergraduate students who complete the approved curriculum of the Case Western Reserve University/John Carroll University Joint Program in Teacher Licensure.

Adolescence/Young Adult Teacher Licensure (Grades 7-12) is available in Integrated Language Arts (English major), Integrated Social Studies (History major), Integrated Mathematics (Mathematics major), Life Sciences (Biology major), and Physical Sciences

(Chemistry or Physics major), Chemistry (Chemistry Major), and Physics (Physics Major). Multi-age Foreign Language Teacher Licensure is also available (French or Spanish Major).

Multi-age Teacher Licensure is also offered in Art Education (see page 13) and Music Education (see page 31).

Teacher Education Major (for B.A.) Hours: 35

- A. Courses taken at Case Western Reserve University (12 hours): PSCL 101 (prerequisite for EDUC 304), EDUC 301, 304, 338
- B. Courses taken at John Carroll University (23 hours): EDJC 186, 255, 337, 405C/D, 427, 444C/D

NOTE: *The Teacher Education major is available only as a second major and is available only for students pursuing the B.A. who are following the designated teacher licensure program in a first major in one of the fields listed above.*

To be recommended for teacher licensure, a student in the program must maintain a 3.00 grade point average in all professional education courses, a 2.70 grade point average in the teaching content area, and a Case cumulative grade point average of 2.70.

Completion of the University's teacher education major does not ensure that Ohio teacher licensure will be obtained. The Ohio Department of Education also requires that licensure applicants receive passing scores on both the PLT (Principles of Learning and Teaching) and Content Area subtests of the Praxis II and fingerprinting with a criminal background check by the Ohio Bureau of Criminal Identification.

Students having obtained Ohio teacher licensure can transfer their Ohio licensure to over 40 states by contacting individual state departments of education for details.

THEATER AND DANCE (THR)

www.case.edu/artsci/thtr/

www.dance.case.edu

Academic Representatives and

Contacts for First Year Students/Advisors:

Drama:

Professor Catherine L. Albers
Eldred Theater, 368-5926
E-mail: cla2@case.edu

Dance:

Professor Karen Potter

Mather Dance Center, 368-1491

E-mail: klp13@case.edu

NOTE: *Students must take at least 24 but no more than 42 hours in Theater Arts courses above the 100-level and the total number of hours in Theater Arts may not exceed 60.*

Concentrations for the Theater major (for B.A.)

Hours: variable

- A. The following basic courses are REQUIRED for all Theater concentration majors:
 - 1. THTR 101, 102, 201, DANC 103
 - 2. At least four but not more than 8 hours of THTR 385/386 and 6 hours of English above the 300 level. The department strongly recommends ENGL 324 and 325.
- B. Approved theater concentration:
 - 1. General Theater: (27 hours)
THTR 223, 224, 228, 229*, 231 or 232, 329, 330, 375, 312 or 327
 - 2. Acting: (31 hours)
THTR 228, 229*, 231, 232, 306, 311 (1 hour), 330, 375, 376, 327 or 329 and 382 (Senior Capstone).
 - 3. Design/Tech: (30 hours)
THTR 105, 223, 224, 228, 229*, 330, 352, 380, 327 or 329, 424 or 440.
 - 4. Directing: (30 hours)
THTR 223, 224, 228, 229*, 327 or 329, 330, 331 (Senior Capstone), 380, ARTH 272, MUGN 221.
 - 5. Dramatic Writing: (30 hours)
THTR 223, 228, 229*, 312, 314, 316, 327, 329, 330, 399.
 - 6. Theater and Society: (21 hours)
THTR 228, 229*, 312, 327 or 329, 330, 352, 382. An additional 9-10 hours from a variety of course options, to be scheduled with the advisor.

**Approved SAGES Department Seminar.*

Honors Program

All majors are encouraged to apply in their final year for Honors Studies, THTR 397 and 398, adding six hours to the total hours completed for the major.

Concentrations for the Theater minor Hours: 18

- A. General Theater: THTR 101, DANC 103, THTR 223 or 224 or 352, 228, 229 and 327 or 329
- B. Acting: THTR 101, 102, 231, 228, 229 and 375
- C. Design/Tech: THTR 105, 228, 229, two of the following: 223, 224 or 352, and one of the following: 329 or 327
- D. Directing: THTR 228, 229, 223 or 224, 327, 330, 331
- E. Dramatic Writing: THTR 101, 228, 229, 312, 316, 330.
- F. Theater in Society: There is no minor concentration in this area.

THEATER (continued)

Concentration for the Dance major (for B.A.)

Hours: variable

- A. The following basic courses are REQUIRED for the Dance Concentration:
1. THTR 101, DANC 203, 204, 121 or 122
 2. At least four but not more than eight hours of DANC 385/386 and six hours of English above the 300-level. The department strongly recommends ENGL 324 and 325.
- B. Additional required courses:
1. DANC 303, 304, 403, 404, 413, 423, 451, 455 (SAGES Department Seminar), 460 or 461 (Students may elect to substitute THTR 224 or 352 for DANC 423 and 451)
 2. One of the following: 414, 415, 416, or 445

All majors are encouraged to apply for Honors Studies, DANC 397 and 398, in their final year. This adds six hours to the total. Substitutions made at the discretion of the academic representative.

Dance Minor Hours: 18

DANC 103, 104, 203, 204 (or 460 or 461), 303, 304
Substitutions made at the discretion of the academic representative.

WOMEN'S STUDIES (WM)

www.case.edu/artsci/womn/

Academic Representative and

Contact for First Year Students/Advisors:

Professor Margaretmary Daley
303 Guilford House, 368-2303
E-mail: mxd43@case.edu

Major Hours: 30

- A. Required Courses (6 hours)
1. WMST 201
 2. ANTH 365 or ENGL 371 or HSTY 400
- B. Elective courses (24 hours)

Students must take at least two courses from two of the three areas listed below, and at least one course in the third area. The remaining courses may be selected from any of the three areas listed below. Other courses may be substituted with permission of the major advisor.

1. The Arts: ARTH 383, THTR 338
2. Humanities: ENGL 353, 368C, 370; FRCH 376; GRMN 315; HSTY 240, 313, 318, 320, 350, 353, 354; JAPN 341; LAWS 356; PHIL 325, 334; RLGN 207, 366; SPAN 342
3. Social Sciences: ANTH 306, 309, 345, 354, 356, 505, 508, 542; ECON 333; NURS 454; POSC 346; PSCL 390; SOCI 222, 326, 372

NOTE: *Women's Studies is available only as a second*

major for the B.A. To declare the major students should have declared a first major. Up to six credits in courses taken by students for the first major may be applied to the Women's Studies major. For a student who completes a Bachelor of Science degree (B.S., B.S.E., or B.S.N.), Women's Studies may serve as the sole major for a B.A. degree.

Minor Hours: 18

WMST 201 plus five additional courses, selected in consultation with the advisor.

WORLD LITERATURE (WLT)

www.case.edu/artsci/worldlit/

Academic Representative and

Contact for First Year Students/Advisors:

Professor Antonio Candau
309 Guilford House, 368-8976
E-mail: axc102@case.edu

Professor Martin Helzle
404 Guilford House, 368-2294
E-mail: [mxh13@case.edu](mailto:mhx13@case.edu)

Major (for B.A.) Hours: 33

Foundation sequence:

- A. WLIT 211, 212 and one of the following:
WLIT/ENGL 290, WLIT/ENGL 291, WLIT/CLSC 203, or WLIT/CLSC 204
- B. Translation or Literary Theory:
WLIT 388 or WLIT/ENGL 387
- C. Foreign Language Literature Courses:
Two courses in literature in a foreign language at the 300-level, chosen from Modern Languages and Literatures courses and Classics (may be from two different languages).
- D. Electives (12 hrs):
In consultation with the faculty advisor, students select four courses from a list of designated World Literature offerings.
- E. SAGES Senior Capstone: WLIT 390

Minor Hours: 15

- A. WLIT 211 and 212
- B. Electives (9 hours): Choose three courses from the list of designated World Literature offerings (includes any Modern Languages, English, or Classics literature courses at the 300 level). At least one of these courses must be a course in a literature originally written in a language other than English.

Independent Study

WLIT 399

Honors Program

WLIT 397, 398 (majors only)

THE CASE SCHOOL OF ENGINEERING

Office of the Dean

500 Nord Hall, 368-4436

E-mail: cseinfo@case.edu

www.engineering.case.edu/

Degrees and Degree Requirements

Bachelor of Science in Engineering (B.S.E.)

Degree

The Case School of Engineering offers programs leading to the Bachelor of Science in Engineering degree in the following areas: aerospace engineering, biomedical engineering, chemical engineering, civil engineering, computer engineering, electrical engineering, engineering physics, materials science and engineering, mechanical engineering, polymer science and engineering, systems and control engineering, and undesignated engineering. Candidates for the Bachelor of Science in Engineering (B.S.E.), in addition to meeting the general requirements for bachelor's degrees as described on page 1, must also complete the following requirements:

- A. A minimum of 128-133 hours as specified by the requirements for each B.S.E. program.
- B. The SAGES Engineering Core Curriculum.
- C. The requirements for the specific engineering major as presented in this Handbook.

Bachelor of Science (B.S.) - Computer Science

The Case School of Engineering offers a program leading to the Bachelor of Science degree in Computer Science. The program is based on the SAGES Engineering Core Curriculum, with modifications. Candidates for the Bachelor of Science degree in computer science, in addition to meeting the general requirements for bachelor's degrees as described on page 1, must also complete the following requirements:

- A. A minimum of 127 hours.
- B. The SAGES Engineering Core Curriculum*
*Candidates for the B.S. in Computer Science are exempt from ENGR 200, ENGR 210, and ENGR 225.
- C. The requirements for the Computer Science major as presented in this Handbook.

**Engineering Core Curriculum
SAGES (Seminar Approach to General Education and Scholarship)
Effective Fall, 2007**

SAGES is an innovative undergraduate experience designed to establish foundations for academic inquiry. Students fulfill their Case School of Engineering General Education Requirements with a sequence of specially developed seminars and selected courses. Course credit earned by Advanced Placement, International Baccalaureate, proficiency examinations, and transfer may be used to satisfy general education requirements.

SAGES Program Seminars (13 semester hours)

The First Seminar* (4 semester hours, to be taken in the first semester of enrollment)

The First Seminar focuses on the development of critical thinking and communication skills through the use of a variety of approaches, media, and perspectives to explore the human mind and the nature of inquiry. This course is designed to strengthen writing and analytical skills while building a foundation in ethics, information literacy, and cultural diversity. **Select from:**

First Seminar: The Life of the Mind (FSCC 100) or

First Seminar: Natural World (FSNA 1xx) or

First Seminar: Social World (FSSO 1xx) or

First Seminar: Symbolic World (FSSY 1xx)

Term _____ Course _____ Grade _____

**Transfer Students only: Transfer students who have completed the English composition/expository writing requirement with a grade of C or higher at the college/university at which they previously matriculated will receive transfer credit for FSCC T100 (3 – 6 semester hours) and will be required to complete a supplemental 1-semester hour SAGES introductory seminar – FSTS 100.*

***English as a Second Language Students only: On the basis of a writing diagnostic that demonstrates need for additional writing support, students for whom English is a second language will be placed into an English as a Second Language First Seminar (4 semester hours). Most students in this seminar will continue their First Seminar experience into their second semester by enrolling in and completing FSCS 150 – First Seminar: Continuing Semester (3 semester hours).*

University Seminars (6 semester hours, minimum of two seminars, to be completed in the first two years of enrollment as specified below)

After completion of the First Seminar, students must complete two University Seminars, with each seminar selected from a different thematic group and from a thematic group different from that of the student's First Seminar. Each University Seminar explores one of three themes, with the content determined according to the interests of the faculty. University Seminars provide continued experience in critical reading, writing, and oral communication as well as information literacy, ethics, and cultural diversity. **Select from:**

University Seminar: Thinking About the Natural World (USNA 2xx)

University Seminar: Thinking About the Social World (USSO 2xx)

University Seminar: Thinking About the Symbolic World (USSY 2xx)

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Department Seminar (3 semester hours)

The Department Seminar includes seminar-based discussion as well as instruction and experience in the kinds of writing characteristic of the Department Seminar's discipline. The Department Seminar may be taken in the department of the student's major or in another department. It is taken after the completion of the University Seminars, ordinarily in the fourth – sixth semester of study. **NOTE: Most students pursuing an Engineering degree will take ENGR 398 and ENGL 398 concurrently to complete the Department Seminar requirement.**

Term _____ Course _____ Grade _____

University Composition Requirement

Students develop a Writing Portfolio comprising final graded writing assignments from the First Seminar and University Seminars. The Writing Portfolio is submitted for evaluation after completing the final University seminar. Writing competence must be established in order to fulfill the University's English Composition requirement for graduation.

Writing Portfolio Term _____ Grade _____

Physical Education (Must total 2 full semesters at zero credits): Students choose from half-semester and full-semester course offerings to be completed in the first year.

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____
Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Mathematics, Sciences, and Engineering Requirements

Mathematics (14 semester hours)

| | | | |
|-----------------|------------|--------------|-------------|
| MATH 121 or 123 | Term _____ | Course _____ | Grade _____ |
| MATH 122 or 124 | Term _____ | Course _____ | Grade _____ |
| MATH 223 or 227 | Term _____ | Course _____ | Grade _____ |
| MATH 224 or 228 | Term _____ | Course _____ | Grade _____ |

Engineering Core Curriculum – SAGES (continued)

Mathematics, Sciences, and Engineering Requirements (continued)

Chemistry (4 semester hours)

CHEM 111* Term _____ Grade _____

Physics (8 semester hours)

PHYS 121 or 123 Term _____ Course _____ Grade _____
 PHYS 122 or 124 Term _____ Course _____ Grade _____

Engineering (18 semester hours)

ENGR 131 Term _____ Grade _____
 ENGR 145* Term _____ Grade _____
 ENGR 200 Term _____ Grade _____
 ENGR 210 Term _____ Grade _____
 ENGR 225 Term _____ Grade _____

***NOTE:** The Chemistry-Materials course sequences CHEM 105-106-ENGR 145, CHEM 105-106-EMSE 201, or CHEM 105-106-EMAC 276 may substitute for the sequence CHEM 111-ENGR 145.

Natural Sciences, Mathematics, or Statistics Requirement (3 semester hours)

Course designated by major department Term _____ Course _____ Grade _____

Breadth Requirements – Humanities and Social Sciences (15 semester hours)

ENGL 398 Term _____ Course _____ Grade _____
 (2 semester hours; also fulfills the Department Seminar Requirement)

and

ENGR 398 Term _____ Course _____ Grade _____
 (1 semester hours; also fulfills the Department Seminar Requirement)

and

At least 12 semester hours comprised of four 3-semester hour courses or three four-semester hour courses selected from:

Humanities: Arabic (ARAB), Art History (ARTH), Art Studio (ARTS), Chinese (CHIN), Classics (CLSC), Dance (DANC), English (ENGL), French (FRCH), German (GRMN), Greek (GREK), Hebrew (HBRW), History (HSTY), Italian (ITAL), Japanese (JAPN), Latin (LATN), Music - General (MUGN), Music - History (MUHI), Music - Theory (MUTH), Philosophy (PHIL), Religion (RLGN), Russian (RUSN), Spanish (SPAN), Theater (THTR), World Literature (WLIT)

and/or

Social Sciences: Anthropology (ANTH), Cognitive Science (COGS), Communication Sciences (COSI), Economics (ECON), Political Science (POSC), Psychology (PSCL), Sociology (SOCL)

| | | | | | |
|------------|--------------|-------------|------------|--------------|-------------|
| Term _____ | Course _____ | Grade _____ | Term _____ | Course _____ | Grade _____ |
| Term _____ | Course _____ | Grade _____ | Term _____ | Course _____ | Grade _____ |

SAGES Senior Capstone (3 – 6 semester hours)

The Senior Capstone assimilates the knowledge and skills gained throughout the educational process. Students engage in a unique one or two semester experience designed in consultation with a faculty member. Each Capstone Experience must include key elements:

- a) Demonstration of critical thinking and writing skills;
- b) Regular oversight by the Capstone advisor;
- c) Periodic reporting of progress;
- d) regular writing (e.g. drafts, progress reports, critiques) throughout the project including a final written report which may be a thesis or equivalent document associated with the project or activity (e.g., such pursuits as performance, experiment, live case analysis, or creative writing), as approved by the department of capstone origin;
- e) Oral reports including a final public presentation at the Senior Capstone Fair, a conference, a performance, a public lecture, a teaching presentation, or other, as approved by the department of capstone origin.

Courses meeting this requirement include the designation “Approved SAGES Capstone” in their course descriptions. Some majors include and specify a senior capstone. Please review the specific requirements of your major(s) in your *Handbook for Undergraduate Students*. **NOTE:** Most Engineering students will complete an engineering senior project within their major that will satisfy the SAGES Senior Capstone requirement.

SAGES Senior Capstone Term _____ Course _____ Grade _____

Undergraduate Programs of The Case School of Engineering

All major programs described in this section require completion of the SAGES Engineering Core (see page 44). For all engineering programs, please see the Case General Bulletin and the individual departments for full details concerning technical electives, hours required and recommendations regarding the appropriate semester/year in which students should enroll in specific courses.

AEROSPACE ENGINEERING (EAR)

www.mae.case.edu/

Academic Representative, Contact for First Year Students/Advisors, Cooperative Education Advisor and Undergraduate Research Contact:

Professor Chih-Jen Sung
415 Glennan Bldg., 368-2942
E-mail: cjs15@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 129

- A. SAGES Engineering Core, with PHYS 221 satisfying the "natural sciences, mathematics or statistics" requirement.
- B. Major Courses:
EMAE 172, 181, 250, 282, 283, 325, 350, 355, 356, 359, 360, 376, 381, 382, 398
- C. Related Required Courses:
ECIV 310; EECS 212/214
- D. Technical Elective (3 hours)

Cooperative Education:

Third Year - Spring/Summer
Fifth Year - Summer/Fall

BIOMEDICAL ENGINEERING (EBI)

bme.case.edu/

Academic Representative:

Professor David L. Wilson
426 Wickenden, 368-4099
E-mail: david.wilson@case.edu

Contact for First Year Students/Advisors:

Professor Dustin Tyler
319 Wickenden, 368-0319
E-mail: dxt23@case.edu

Cooperative Education Advisor:

Professor Marty Pagel
411 Wickenden, 368-8519
E-mail: mpagel@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 128-132

So as to provide depth in a particular area, Biomedical Engineering majors choose one of several sequences. Requirements for the different sequences are most clearly seen on the Biomedical Engineering Department website at <http://bme.case.edu/>.

- A. SAGES Engineering Core, with one course chosen from BIOL 214, 215; CHEM 223, 224; PHYS 221; BIOC 307, 308, and BIOL/EBME 300 to satisfy the "natural sciences, mathematics, or statistics" requirement. Consult <http://bme.case.edu/> for more information concerning sequences.
- B. Major Courses:
EBME 201, 202, 306, 308, 309, 310, 318, 319, 359, 360, 370 and 380 or 398
- C. EBME Specialty Sequence: 5-7 courses in a biomedical engineering specialty selected from Bioelectric Engineering, Orthopedic Biomaterials, Polymeric Biomaterials, Tissue Engineering, Biomechanics, Biomedical Imaging and Computing, Biomedical Instrumentation, Biomedical Systems and Control
- D. Sequence-specific statistics course (STAT 312, 313, 332 or 333)

Minor (based on SAGES Engineering Core)

Hours: 15

- A. EBME 201, 202
- B. Two from the following: EBME 306, 309, 310
- C. One from the following: EBME 303, 307, 320, 322, 324, 350

NOTE: *EBME 105 is recommended and available only to first year undergraduates.*

CHEMICAL ENGINEERING (ECE)

www.case.edu/cse/eche

Academic Representative, Contact for First Year Students/Advisors and Undergraduate Research

Contact:

Professor Peter N. Pintauro
116 Smith Bldg., 368-4150
E-mail: pnp3@case.edu

Contact for First Year Students/Advisors:

Professor J. Adin Mann
129 Smith Bldg., 368-4122
E-mail: jam12@case.edu

Cooperative Education Advisor:

Professor Uziel Landau
123 Smith Bldg., 368-4132
E-mail: uxl@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 131-133

- A. SAGES Engineering Core, with one course chosen from BIOL 300, 303, CHEM 224 (or 324), 311 or PHYS 221 to satisfy the "natural sciences, mathematics or statistics" requirement.
- B. Major Courses: ECHE 151, 260, 360, 361, 362, 363, 364, 365, 367, 398, 399
- C. Related Required Courses: CHEM 223 (or 323), 290, 336; STAT 313
- D. Approved Breadth Elective Sequence: 9-11 hours selected from Biochemical Engineering, Biomedical Engineering, Computing, Electrochemical Engineering, Environmental Engineering, Electronic Materials, Management/Entrepreneurship, Research, Polymer Science, Systems and Control, Advanced Study
- E. Materials Elective (any one of the following): EMAC 270, 276; EMSE 201, 314, 316; or other approved course.

Biochemical Engineering Concentration (*incorporated into the ECE B.S. major curriculum*) Hours: 26

- A. Science Elective and Natural Science Requirement: BIOL 300 and 303
- B. Technical Electives: BIOC 307; BIOL 343; ECHE 340
- C. BIOL 301 (replaces ECHE 367)
- D. Advanced Biology Elective I (replaces Materials Elective)
- E. Advanced Biology Elective II (replaces CHEM 336)

Advanced Biology Electives include BIOC 308; BIOL 334, 382; EVHS 401B/402B

Minor (*based on the SAGES Engineering Core*)

Hours: 17-18

ENGR 225
ECHE 260, 360 plus two of the following: ECHE 340, 361, 363, 364, 365, 367

Cooperative Education

Optimal times:
Third Year - Summer/Fall
Fourth Year - Spring/Summer

CIVIL ENGINEERING (ECI)

civil.case.edu/

Academic Representative, Contact for First Year Students/Advisors and Cooperative Education Advisor:

Professor Robert Mullen
206 Bingham Building, 368-2423
E-mail: rlm@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 129

- A. SAGES Engineering Core, with PHYS 221 (or approved alternative) satisfying the "natural sciences, mathematics, or statistics" requirement.
- B. Major Courses: ECIV 160, 211, 310, 320, 322, 330, 340, 351, 360, 368, 398
- C. Related Required Courses: EMAE 181, 250
- D. Approved Technical Electives: 12-15 hours selected from Environmental Engineering, Structural Engineering, Geotechnical Engineering, Construction Engineering and Management, Engineering Mechanics

Minor (*based on SAGES Engineering Core*)

A minimum of 15 credit hours from one of the following areas approved by the department: Environmental Engineering, Engineering Mechanics, Structural or Geotechnical Engineering, Construction Engineering and Management.

Cooperative Education

Optimal Times:
Second Year - Spring/Summer
Third Year - Summer
Fourth Year - Fall

COMPUTER ENGINEERING (ECM)

www.eecs.case.edu

Academic Representative and Contact for First Year Students/Advisors:

Professor Swarup Bhunia
514A Olin Bldg., 368-5550
E-mail: skb21@case.edu

Contact for First Year Students/Advisors:

Professor Tekin Ozsoyoglu
506 Olin Bldg., 368-5029
E-mail: gxo3@case.edu

International Study Contact and Cooperative Education Advisor:

Professor Frank Merat
518 Glennan Bldg., 368-4572
E-mail: flm@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 129

- A. SAGES Engineering Core, with an approved statistics course satisfying the “natural sciences, mathematics, or statistics” requirement.
- B. Major Courses: EECS 233, 281, 301, 314, 315, 318 or 338, 337, 398 (SAGES Capstone)
- C. Related Required Courses: MATH 304
- D. Approved technical electives (15 hours)

Minor: (based on the SAGES Engineering Core)

- A. EECS 233, 281 plus one of the following tracks:
 - 1. Hardware sequence: EECS 314, 315
 - 2. Software sequence: EECS 337, 338
- B. In addition to these two tracks, the student may design his/her own track with the approval of the minor advisor.

Cooperative Education

Optimal Times:
Third Year-Spring/Summer
Fourth Year-Summer
Fifth Year-Fall

NOTE: Because of the large overlap in courses, a student is not permitted to have a major and a minor or two minors in both Computer Science and Computer Engineering.

COMPUTER SCIENCE (CMP)

www.eecs.case.edu

Academic Representative, Contact for First Year Students/Advisors and Undergraduate Research Contact:

Professor Tekin Ozsoyoglu
506 Olin Bldg., 368-5029
E-mail: gxo3@case.edu

International Study Contact and Cooperative Education Advisor:

Professor Jiong Yang
515 Olin Bldg., 368-6197
E-mail: jxy55@case.edu

Major: (for B.S.)

Hours required for graduation: 127

- A. SAGES Engineering Core* with an approved statistics course satisfying the “natural sciences, mathematics or statistics” requirement.
 - B. EECS 233, 281, 314, 337, 338, 340, 341, 343, 345, 391, 394
 - C. MATH 304
 - D. PHIL 304
 - E. Approved technical electives (14 hours)
- *Candidates for the B.S. in Computer Science are exempt from the following SAGES Engineering Core courses: ENGR 200, ENGR 210, and ENGR 225.

For B.A. program in Computer Science, see page 20.

Minor: (based on the SAGES Engineering Core)

Hours: 15

- A. EECS 233, 338, 340
- B. A student must take an additional four credit hours of Computer Science courses. MATH 304 can be used for three of these credits because it is a prerequisite for EECS 340.

Cooperative Education

Optimal Times:
Third Year-Spring/Summer
Fourth Year-Summer
Fifth Year-Fall

NOTE: Because of the large overlap in courses, a student is not permitted to have a major and a minor or two minors in both Computer Science and Computer Engineering.

ELECTRICAL ENGINEERING (EAP)

www.eecs.case.edu

Academic Representative, Contact for First Year Students/Advisors, Cooperative Education Liaison and International Study Contact:

Professor Wyatt Newman
516A Glennan Bldg., 368-6432
E-mail: wsn@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 128

- A. SAGES Engineering Core, with STAT 332 satisfying the “natural sciences, mathematics, or statistics” requirement.
- B. Major Courses: EECS 245, 246, 281, 309, 321, 398 (SAGES Capstone), 399
- C. Applied Statistics Elective (3 hours): EECS 313, 351, 354, or 355
- D. Approved Technical Electives (18 hours), including approved courses to constitute a depth of study (9 hours)

Minor (based on SAGES Engineering Core)

EECS 245, 246, 281, 309
One approved technical elective

Electronics Minor (ELN) (available to B.A. students only)

ENGR 131
MATH 125 (or MATH 121), 126 (or 122 or 124)
PHYS 115 (or 121 or 123), 116 (or 122 or 124)
ENGR 210
EECS 246, 281

Cooperative Education

Optimal Times:
Second Year-Summer
Third Year-Fall
Fourth Year-Spring/Summer

ENGINEERING - UNDESIGNATED (EGR)

Academic Representative and Contact for First Year Students/Advisors:

Professor Patrick Crago
500B Nord Hall, 368-4436
E-mail: pec3@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 128

- A. SAGES Engineering Core, with PHYS 221 or approved alternative satisfying the “natural sciences,

mathematics, or statistics” requirement.

- B. An engineering major concentration (minimum of 24 hours) approved by the major department
- C. An engineering minor (minimum of 15 hours) approved by the minor department
- D. EMAE 250 or approved equivalent course
- E. Technical electives

The major should be declared in the first year and the program approved by the academic representative after major and minor approvals are obtained. An important aspect of this degree program is that it is not an ABET accredited degree.

NOTE: *This major is not intended for undecided students. It is a self-designed major for students wishing to pursue a well-defined plan of study that does not fall within the specific disciplines of the departments.*

ENGINEERING PHYSICS (EPH)

www.phys.case.edu

Academic Representative, Cooperative Education Advisor, Contact for First Year Students/Advisors, Undergraduate Research and International Study Contact:

Professor Kenneth D. Singer
225D Rockefeller Bldg., 368-4017
E-mail: kds4@case.edu

Major (for B.S. in Engineering)

Hours required for graduation: 128

- A. SAGES Engineering Core, with PHYS 221 satisfying the “natural sciences, mathematics, or statistics” requirement.
- B. Major courses: PHYS 208, 250, 303, 310, 313, 315, 317, 318, 324, 325, 331, 352, 353
- C. Related required courses: CHEM 113 and one course from EECS 321, 420; EMSE 314, 405 or PHYS 327 or 332
- D. Engineering Physics concentration (12 hours): An approved sequence of four courses in an engineering discipline.

MATERIALS SCIENCE AND ENGINEERING (EMS)

dmseq5.case.edu/

Academic Representative, Contact for First Year Students/Advisors and Minor Advisor:

Professor Mark R. DeGuire
506 White Bldg., 368-4221
E-mail: mrd2@case.edu

Cooperative Education Advisor and Undergraduate Research Contact:

Professor David H. Matthiesen
402 White Bldg., 368-1366
E-mail: dhm5@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 129

- SAGES Engineering Core, with CHEM 301 satisfying the “natural sciences, mathematics, or statistics” requirement.
- Major Courses: EMSE 102, 201, 202, 203, 270, 280, 290, 301, 302, 303, 310, 312, 313, 314, 398, 399
- PHYS 250 or EMAE 250
- Technical electives (9 hours)

Minor (based on SAGES Engineering Core)

Hours: 15

EMSE 201 plus four of the following courses selected in consultation with the department minor advisor: EMSE 202, 203, 301, 303, 307, 312, 313, 314, 316

Cooperative Education

Optimal Times:

Second Year - Summer

Third Year - Fall

Fourth Year - Spring/Summer

MECHANICAL ENGINEERING (EMC)

mae1.cwru.edu/mae/

Academic Representative, Contact for First Year Students/Advisors, Cooperative Education Advisor and Undergraduate Research Contact:

Professor Joseph M. Prael
418 Glennan Bldg., 368-2941
E-mail: jmp@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 129

- SAGES Engineering Core, with PHYS 221 (or approved alternative) satisfying the “natural sciences, mathematics, or statistics” requirement.
- Major Courses: EMAE 172, 181, 250, 271, 282, 283, 325, 350, 355, 360, 370, 398

C. Related Required Courses: ECIV 310; EECS 212, 214; EECS 352 or OPRE 345

D. Technical Electives (9 hours)

Cooperative Education

Optimal Times:

Third Year - Spring/Summer

Fifth Year - Summer/Fall

POLYMER SCIENCE AND ENGINEERING (POL)

polymers.case.edu

Academic Representative, Contact for First Year Students/Advisors and Cooperative Education Advisor:

Professor David Schiraldi
538 Kent Smith, 368-4243
E-mail: das44@case.edu

Major: (for Standard Track B.S. in Engineering)

Hours required for graduation: 129

- SAGES Engineering Core, with an approved natural sciences course selected from BIOC 307; BIOL 215; PHYS 221, 223, 349, or STAT 312 satisfying the “natural sciences, mathematics, or statistics” requirement.
- Major Courses: EMAC 270, 276, 351, 355, 370, 372, 376, 377, 378, 398.
- Related Required Courses: CHEM 223, 224; and CHEM 290 or 321.
- Technical Electives (12 hours): a 12-hour sequence of approved courses selected in consultation with the student’s academic advisor.

Major: (for Biomaterials Track B.S. in Engineering)

Hours required for graduation: 129

- SAGES Engineering Core, with an approved natural sciences course selected from BIOL 214, 215, 307, or 362; PHYS 221, 223, 349, or STAT 312 satisfying the “natural sciences, mathematics, or statistics” requirement.
- Major Courses: EMAC 270, 276, 303, 351, 370, 376, 377, 378, 398.
- Related Required Courses: CHEM 223, 224; and CHEM 290 or 321.
- Technical Electives (12 hours): at least three of four courses must be taken from EBME 315, 316, 325, 350, 405, 408, 416 or 471.

Minor: (based on the SAGES Engineering Core)

EMAC 270, plus four courses from the department listings, subject to approval by minor advisor.

Cooperative Education

Optimal Times:

Third Year - Spring/Summer

Fifth Year - Summer/Fall

**SYSTEMS AND CONTROL
ENGINEERING (ESY)**

www.eecs.case.edu

Academic Representative and

Contact for First Year Students/Advisors:

Professor Marc Buchner

707 Olin Bldg., 368-4096

E-mail: mxb11@case.edu

Cooperative Education Liaison:

Professor Kenneth Loparo

705 Olin Bldg., 368-4115

E-mail: kal4@case.edu

International Research Contact:

Professor Frank Merat

518 Glennan Bldg., 368-4572

E-mail: fm@case.edu

Major: (for B.S. in Engineering)

Hours required for graduation: 128

- A. SAGES Engineering Core, with one course chosen from STAT 312, 332 or 333 to satisfy the "natural sciences, mathematics, or statistics" requirement.
- B. Major Courses: EECS 246, 304, 305, 324, 342, 346, 352, 398 (SAGES Capstone), 399
- C. Related Required Courses: EECS 281
- D. One communications/signal processing course selected from EECS 313, 351, or 354
- E. Approved Technical Electives (15 hours)

Minor: (based on SAGES Engineering Core)

EECS 246 plus four of the following courses selected in consultation with the department minor advisor: EECS 304/305, 324, 342, 346, or 352, and one of 313, 351, or 354.

Cooperative Education

Optimal Times:

Third Year - Spring/Summer

Fourth Year - Summer

Fifth Year – Fall

FRANCES PAYNE BOLTON SCHOOL OF NURSING

Office of the Dean
2121 Abington Road, 368-4700
fpb.case.edu/BSN/index.shtm

Bachelor of Science in Nursing (B.S.N.) Degree Requirements

The Frances Payne Bolton School of Nursing offers a program leading to the Bachelor of Science in Nursing (B.S.N.) degree. Candidates for the Bachelor of Science in Nursing (B.S.N.) degree must complete the general requirements for bachelor's degrees (page 1) and also complete the following requirements:

- A. A minimum of 125 hours.
- B. The School of Nursing SAGES General Education Requirements.
- C. The requirements for the major in nursing as presented in this Handbook.
- D. For all courses taken in nursing and the basic sciences, a minimum grade of C.

NURSING (NUR)

fpb.case.edu/BSN/index.shtm

Academic Representative, Undergraduate Research, and International Study Contact:

Professor Lynn Lotas, Director of the BSN Program
1610 School of Nursing 368-5129
E-mail: mjl25@case.edu

Contact for First Year Students/Advisors:

Professor Marcella Hovancsek
1550 School of Nursing 368-5985
E-mail: mth7@case.edu

Major (for B.S.N.)

Hours required for graduation: 125

- A. School of Nursing SAGES General Education Requirements (40 Hours)
- B. Required Courses in Nursing (85 Hours)
NURS 110, 111, 120, 122, 160, 201, 210, 211, 230, 240, 250, 260, 310, 315, 316, 317, 320, 341, 342, 343, 345, 351, 353, 360
NURS 350 or 352 or 354 or 356
NURS 370, 371, 372, 373

NOTE: *Curriculum is subject to change; see department for latest information.*

**Frances Payne Bolton School of Nursing General Education Requirements
SAGES (Seminar Approach to General Education and Scholarship)
Effective Fall, 2007**

SAGES is an innovative undergraduate experience designed to establish foundations for academic inquiry. Students fulfill their Frances Payne Bolton School of Nursing General Education Requirements with a sequence of specially developed seminars and selected courses. Course credit earned by Advanced Placement, International Baccalaureate, proficiency examinations, and transfer may be used to satisfy general education requirements.

SAGES Program Seminars (13 semester hours)

The First Seminar* (4 semester hours, to be taken in the first semester of enrollment)

The First Seminar focuses on the development of critical thinking and communication skills through the use of a variety of approaches, media, and perspectives to explore the human mind and the nature of inquiry. This course is designed to strengthen writing and analytical skills while building a foundation in ethics, information literacy, and cultural diversity. **Select from:**

First Seminar: The Life of the Mind (FSCC 100) or

First Seminar: Natural World (FSNA 1xx) or

First Seminar: Social World (FSSO 1xx) or

First Seminar: Symbolic World (FSSY 1xx)

Term _____ Course _____ Grade _____

***Transfer Students only:** Transfer students who have completed the English composition/expository writing requirement with a grade of C or higher at the college/university at which they previously matriculated will receive transfer credit for FSCC T100 (3 – 6 semester hours) and will be required to complete a supplemental 1-semester hour SAGES introductory seminar – FSTS 100.

****English as a Second Language Students only:** On the basis of a writing diagnostic that demonstrates need for additional writing support, students for whom English is a second language will be placed into an English as a Second Language First Seminar (4 semester hours). Most students in this seminar will continue their First Seminar experience into their second semester by enrolling in and completing FSCS 150 – First Seminar: Continuing Semester (3 semester hours).

University Seminars (6 semester hours, minimum of two seminars, to be completed in the first two years of enrollment as specified below)

After completion of the First Seminar, students must complete two University Seminars, with each seminar selected from a different thematic group and from a thematic group different from that of the student's First Seminar. Each University Seminar explores one of three themes, with the content determined according to the interests of the faculty. University Seminars provide continued experience in critical reading, writing, and oral communication as well as information literacy, ethics, and cultural diversity. **Select from:**

University Seminar: Thinking About the Natural World (USNA 2xx)

University Seminar: Thinking About the Social World (USSO 2xx)

University Seminar: Thinking About the Symbolic World (USSY 2xx)

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Department Seminar (3 semester hours)

The Department Seminar includes seminar-based discussion as well as instruction and experience in the kinds of writing characteristic of the Department Seminar's discipline. The Department Seminar may be taken in the department of the student's major or in another department. It is taken after the completion of the University Seminars, ordinarily in the fourth – sixth semester of study. **NOTE:** Most students pursuing a nursing degree will take NURS 320 to complete the Department Seminar requirement..

Term _____ Course _____ Grade _____

University Composition Requirement

Students develop a Writing Portfolio comprising final graded writing assignments from the First Seminar and University Seminars. The Writing Portfolio is submitted for evaluation after completing the final University seminar. Writing competence must be established in order to fulfill the University's English Composition requirement for graduation.

Writing Portfolio Term _____ Grade _____

Physical Education (Must total 2 full semesters at zero credits): Students choose from half-semester and full-semester course offerings to be completed in the first year.

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____
Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Frances Payne Bolton School of Nursing General Education Requirements – SAGES (continued)

Breadth Requirements (at least 30 semester hours – minimum of ten 3 or 4-semester hour courses)

NOTE: Two courses used to fulfill requirements for the major also may be used to fulfill the breadth requirements.

Arts and Humanities (6 – 8 semester hours)

Two 3 or 4-semester hour Arts and Humanities courses

Select from:

Arabic (ARAB), Art History (ARTH), Art Studio (ARTS), Chinese (CHIN), Classics (CLSC), Dance (DANC), English (ENGL), French (FRCH), German (GRMN), Greek (GREK), Hebrew (HBRW), History (HSTY), Italian (ITAL), Japanese (JAPN), Latin (LATN), Music - General (MUGN), Music - History (MUHI), Music - Theory (MUTH), Philosophy (PHIL), Religion (RLGN), Russian (RUSN), Spanish (SPAN), Theater (THTR), World Literature (WLIT)

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Natural and Mathematical Sciences (18 semester hours)

(a) Mathematical Reasoning and Analysis (3 semester hours)

ANTH 319*** or PSCL 282*** or STAT 201***

Term _____ Course _____ Grade _____

***A student who successfully completes any one of these courses is not eligible to enroll in or receive credit for either of the other two.

(b) Natural Sciences (15 semester hours)

BIOL 114

Term _____ Grade _____

BIOL 116

Term _____ Grade _____

BIOL 117

Term _____ Grade _____

BIOL 119

Term _____ Grade _____

BIOL 121

Term _____ Grade _____

Social Sciences (6 semester hours)

Any 3-semester hour Social Science courses

Select from:

Anthropology (ANTH), Communication Sciences (COSI), Economics (ECON), Political Science (POSC), Psychology (PSCL), Sociology (SOCL)

Term _____ Course _____ Grade _____

SOCI 203 or approved course in human growth and development

Term _____ Course _____ Grade _____

SAGES Senior Capstone (3 – 6 semester hours)

The Senior Capstone assimilates the knowledge and skills gained throughout the educational process. Students engage in a unique one or two semester experience designed in consultation with a faculty member. Each Capstone Experience must include key elements:

- a) Demonstration of critical thinking and writing skills;
- b) Regular oversight by the Capstone advisor;
- c) Periodic reporting of progress;
- d) regular writing (e.g. drafts, progress reports, critiques) throughout the project including a final written report which may be a thesis or equivalent document associated with the project or activity (e.g., such pursuits as performance, experiment, live case analysis, or creative writing), as approved by the department of capstone origin;
- e) Oral reports including a final public presentation at the Senior Capstone Fair, a conference, a performance, a public lecture, a teaching presentation, or other, as approved by the department of capstone origin.

Courses meeting this requirement include the designation "Approved SAGES Capstone" in their course descriptions. Some majors include and specify a senior capstone. Please review the specific requirements of your major(s) in your *Handbook for Undergraduate Students*. **NOTE:** Most Nursing students will complete NURS 373 to fulfill the SAGES Senior Capstone requirement.

SAGES Senior Capstone

Term _____ Course _____ Grade _____

WEATHERHEAD SCHOOL OF MANAGEMENT

Office of the Dean
350 Peter B. Lewis Bldg., 368-1156
weatherhead.case.edu/undergraduate/

Degrees and Degree Requirements

Bachelor of Science (B.S.) Degree Weatherhead School of Management

The Weatherhead School of Management offers programs leading to the Bachelor of Science degree in Accounting or in Management. Candidates for the Bachelor of Science in Accounting and the Bachelor of Science in Management degrees, in addition to meeting the general requirements for bachelor's degrees as described on page 1, must also complete the following requirements:

- A. A minimum of 122 hours.
- B. The Weatherhead School of Management SAGES General Education Requirements
- C. A minimum of 30 semester hours of courses at the 300-400 level.
- D. The requirements for a major field as presented in this Handbook. For all courses taken in the major department and for which grades are averaged, and for all courses taken to satisfy major requirements and for which grades are averaged, a candidate for a B.S. from the Weatherhead School of Management must earn a minimum cumulative average of 2.00. Major requirements include all required and elective work completed in the major department combined with required courses completed in related fields. Transfer students must complete at Case Western Reserve University at least half the hours required for the major.

**Weatherhead School of Management General Education Requirements
SAGES (Seminar Approach to General Education and Scholarship)
Effective Fall, 2007**

SAGES is an innovative undergraduate experience designed to establish foundations for academic inquiry. Students fulfill their Weatherhead School of Management General Education Requirements with a sequence of specially developed seminars and selected courses. Course credit earned by Advanced Placement, International Baccalaureate, proficiency examinations, and transfer may be used to satisfy general education requirements.

SAGES Program Seminars (13 semester hours)

The First Seminar* (4 semester hours, to be taken in the first semester of enrollment)

The First Seminar focuses on the development of critical thinking and communication skills through the use of a variety of approaches, media, and perspectives to explore the human mind and the nature of inquiry. This course is designed to strengthen writing and analytical skills while building a foundation in ethics, information literacy, and cultural diversity. **Select from:**

- First Seminar: The Life of the Mind (FSCC 100) or**
- First Seminar: Natural World (FSNA 1xx) or**
- First Seminar: Social World (FSSO 1xx) or**
- First Seminar: Symbolic World (FSSY 1xx)**

Term _____ Course _____ Grade _____

**Transfer Students only. Transfer students who have completed the English composition/expository writing requirement with a grade of C or higher at the college/university at which they previously matriculated will receive transfer credit for FSCC T100 (3 – 6 semester hours) and will be required to complete a supplemental 1-semester hour SAGES introductory seminar – FSTS 100.*

***English as a Second Language Students only: On the basis of a writing diagnostic that demonstrates need for additional writing support, students for whom English is a second language will be placed into an English as a Second Language First Seminar (4 semester hours). Most students in this seminar will continue their First Seminar experience into their second semester by enrolling in and completing FSCS 150 – First Seminar: Continuing Semester (3 semester hours).*

University Seminars (6 semester hours, minimum of two seminars, to be completed in the first two years of enrollment as specified below)

After completion of the First Seminar, students must complete two University Seminars, with each seminar selected from a different thematic group and from a thematic group different from that of the student's First Seminar. Each University Seminar explores one of three themes, with the content determined according to the interests of the faculty. University Seminars provide continued experience in critical reading, writing, and oral communication as well as information literacy, ethics, and cultural diversity. **Select from:**

- University Seminar: Thinking About the Natural World (USNA 2xx)**
- University Seminar: Thinking About the Social World (USSO 2xx)**
- University Seminar: Thinking About the Symbolic World (USSY 2xx)**

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Department Seminar (3 semester hours)

The Department Seminar includes seminar-based discussion as well as instruction and experience in the kinds of writing characteristic of the Department Seminar's discipline. The Department Seminar may be taken in the department of the student's major or in another department. A course used to fulfill the Department Seminar Requirement may not also be used to fulfill a Breadth Requirement. It is taken after the completion of the University Seminars, ordinarily in the fourth – sixth semester of study. **NOTE: Most students pursuing a degree from the Weatherhead School of Management will take three one-credit MGMT 395 seminars to complete the Department Seminar requirement.**

Term _____ Course _____ Grade _____

University Composition Requirement

Students develop a Writing Portfolio comprising final graded writing assignments from the First Seminar and University Seminars. The Writing Portfolio is submitted for evaluation after completing the final University seminar. Writing competence must be established in order to fulfill the University's English Composition requirement for graduation.

Writing Portfolio Term _____ Grade _____

Physical Education (Must total 2 full semesters at zero credits): Students choose from half-semester and full-semester course offerings to be completed in the first year.

Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____
Term _____ Course _____ Grade _____ Term _____ Course _____ Grade _____

Undergraduate Programs of The Weatherhead School of Management

ACCOUNTING (ACC)

weatherhead.case.edu/undergraduate/

Academic Representative, Professional Practicum Advisor, Contact for First Year Students/Advisors and Undergraduate Research Contact:

Professor Larry Parker
459 Peter B. Lewis Building, 368-2065
E-mail: lp3@case.edu

Contact for First Year Students/Advisors and International Study Contact:

Mr. Kevin Carduff
206 Wolstein Hall, 368-1093
E-mail: kcc@case.edu

Contact for First Year Students/Advisors:

Ms. Tiffany Welch
111 Wolstein Hall, 368-2058
E-mail: tjw5@case.edu

NOTE: Accounting majors may not use the Pass/No Pass option for any Weatherhead School of Management course (ACCT, BAFI, BLAW, ENTP, LHRP, MGMT, MIDS, MKMR, OPMT, ORBH, OPRE, PLCY).

Major (for B.S. in Accounting)

Hours required for graduation: 122

- A. WSOM SAGES General Education Requirements (see page 58)
 - B. Principles Core
 - ACCT 101, 202 6
 - ECON 102, 103 6
 - C. Requirements in Accounting and Management:
 - ACCT 300, 301, 304, 305, 314 15
 - BAFI 355 3
 - BLAW 331 3
 - MIDS 301 3
 - MGMT 250 and 251* 6
 - MKMR 301 3
 - OPRE 301 3
- *The MGMT 250 and 251 sequence is recommended to be taken in the second year.*
- D. SAGES Department Seminar Requirement:
 - Research and Communication Seminars (3 hours)
 - Three one-credit Weatherhead research seminars to be taken in the junior and senior year
 - MGMT 395a, 395b, 395c 3
 - E. Senior Strategy Course
 - PLCY 399 3

F. Non-WSOM Electives (must be from outside WSOM, or from economics) 15

Students pursuing the B.S. in Accounting are advised to take the Principles Core as early as possible.

Minor Hours: 15

ACCT 101, 202, 300, and two additional 300-level accounting courses.

NOTE: ACCT 303 credit will not be applied toward the Accounting minor.

Professional Practicum

Optimal Time:
Third Year - Spring Semester

BANKING AND FINANCE (BAF)

Academic Representative and Contact for First Year Students/Advisors:

Professor Ajai Singh
361 Peter B. Lewis Building, 368-0802
E-mail: aks8@case.edu

Professional Practicum Advisor:

Professor Scott Fine
366 Peter B. Lewis Building, 368-0909
E-mail: sxf59@case.edu

Minor Hours: 15

- A. ACCT 101* or ACCT 303
- B. BAFI 355 and 356
- C. Two of the following three: BAFI 341, 357 or 359

NOTE: *It is expected that Accounting and Management majors will take ACCT 101 and all other majors will take ACCT 303.

ECONOMICS (ECO)

Economics is offered as a major for the B.A. degree awarded by the College of Arts and Sciences. See page 21 for descriptions of major and minor programs.

ENTREPRENEURIAL STUDIES (ENT)

Academic Representatives and Contacts for First Year Students/Advisors:

Professor Leonard Lynn
227 Peter B. Lewis Building, 368-6048
E-mail: lhl@case.edu

Mr. Kevin Carduff
 206 Wolstein Hall, 368-7093
 E-mail: kcc@case.edu

Minor Hours: 15

- A. ACCT 202 or ACCT 303
- B. MKMR 301
- C. ENTP 301, 310, and 311

MANAGEMENT (MGT)

<http://weatherhead.case.edu/undergraduate/>

Academic Representative, Professional Practicum Advisor and Contact for First Year Students/Advisors:

Professor Tim Fogarty
 350 Peter B. Lewis Bldg., 368-3938
 E-mail: tjf@case.edu

Academic Representative and Contact for First Year Students/Advisors:

Mr. Kevin Carduff
 206 Wolstein Hall, 368-1093
 E-mail: kcc@case.edu

Mr. Jim Hurley
 208 Wolstein Hall 368-3856
 E-mail: jxh12@case.edu

Academic Representative and Contact for First Year Students/Advisors and International Study Contact:

Ms. Tiffany Welch
 111 Wolstein Hall 368-2058
 E-mail: tjw5@case.edu

Management majors may not use the Pass/No Pass option for any Weatherhead School of Management course (ACCT, BAFI, BLAW, ENTP, LHRP, MGMT, MIDS, MKMR, OPMT, ORBH, OPRE, PLCY).

Major (for B.S. in Management)

Hours required for graduation: 122

- A. WSOM SAGES General Education Requirements (see page 58)
- B. Principles Core
 - ACCT 101, 202 6
 - ECON 102, 103, 326 9
- C. Requirements in Management
 - BAFI 355 3
 - ENTP 301 3
 - MGMT 250 and 251* 6
 - MIDS 301 3
 - MKMR 301 3
 - OPRE 301 3
- D. Management Concentration Sequence of five approved courses, selected from one of the areas

shown below:

Required courses for concentration:

| Finance | Information Systems | Marketing |
|----------------|----------------------------|------------------|
| BAFI 356 | MIDS 326 | MKMR310 |
| BAFI 359 | MIDS 327 | MKMR311 |
| BAFI 372 | MIDS 385 | MKMR312 |

Choose two (2) elective courses from:

| Finance | Information Systems | Marketing |
|----------------|----------------------------|------------------|
| BAFI 357 | MIDS 307 or ENGR 131 | ANTH 102, 314 |
| ACCT 300 | MIDS 310, 315, 329 | ECON 328, 373 |
| | | PSCL 315 or 357 |

- E. SAGES Department Seminar Requirement: Research and Communication Seminars (3 hours)
 Three one-credit Weatherhead research seminars to be taken in the junior and senior year
 MGMT 395a, 395b, 395c 3
- F. Senior Strategy Course
 PLCY 399 3
- G. Non-WSOM Electives (must be from outside WSOM, or from economics) 12

**The MGMT 250 and 251 sequence is recommended to be taken in the second year.*

Professional Practicum

Optimal Times:
 Third Year - Spring
 Fourth Year - Fall

MANAGEMENT INFORMATION & DECISION SYSTEMS (MID)

Academic Representative and Contact for First Year Students/Advisors:

Professor Fred Collopy
 527 Peter B. Lewis Building, 368-2048
 E-mail: flc2@case.edu

Minor Hours: 15

- ENGR 131 or MIDS 307
- MIDS 301 and three additional MIDS courses or other courses approved by the minor advisor.

MARKETING (MKR)

Academic Representative and Contact for First Year Students/Advisors:

Professor Stan Cort
 336 Peter B. Lewis Building, 368-2064
 E-mail: sgc3@case.edu

Minor Hours: 15

- A. MKMR 301 and two of: MKMR 310, 311, or 312
- B. Two of: ANTH 102, 314; ECON 326, 328, 373; ENTP 301; PSCL 315, 357

PRE-PROFESSIONAL CURRICULA

In order to meet the admission requirements of most schools of law, management, medicine and dentistry, nursing and social work, students complete an appropriate pre-professional curriculum that can be integrated into the other requirements for the baccalaureate they are pursuing.

BUSINESS ADMINISTRATION

Students interested in entering a program leading to the Master in Business Administration (M.B.A.) degree may complete any course of study leading to a B.A. or B.S. degree. Two semesters of calculus are strongly recommended. By including appropriate courses in their undergraduate work, students may qualify to apply for an accelerated M.B.A. program at the Weatherhead School of Management at Case Western Reserve University. For additional information, contact Dean James Hurley, 208 Wolstein Hall, 368-3856 E-mail: jxh12@case.edu.

LAW

Pre-law students may major in any area in the humanities, natural sciences, social sciences, engineering or management. In fulfilling the requirements of their programs, they should select courses that place an emphasis on writing skills, logical analysis and analytical methods. In addition to core or SAGES General Education Requirements, it is strongly recommended that students take at least one course in accounting. For additional information, contact Professor JoAnne Jackson, 357 Sears Bldg., 368-2928, E-mail: prelaw@case.edu.

MEDICINE AND DENTISTRY

Students planning careers in medicine or dentistry may pursue any of the degree and/or major programs offered at the University. They can satisfy the admission requirements of virtually all U.S. medical or dental schools and be well prepared for the MCAT and/or DAT by incorporating into their studies two semesters of Principles of Chemistry with laboratory; two semesters of Organic Chemistry with laboratory; and two semesters of Biology (three semesters recommended) including Genes and Evolution (BIOL 214), Cells and Proteins (BIOL 215) and Organisms and Ecosystems (BIOL 216); two semesters of Physics with laboratory; two semesters of calculus, and two semesters of English. Normally the required courses are completed by the end of the student's junior year. Individual medical or dental schools may impose additional admission requirements. Students desiring information regarding the requirements of specific schools can obtain it in 357 Sears Bldg. For additional information, go to www.case.edu/provost/ugstudies/prehlth.htm or contact a Health Professions Advisor, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu.

NURSING

Students interested in entering professional studies at a graduate level should plan a program that includes the following courses: General Biology with laboratory (8 hours); General Chemistry with laboratory (8 hours); Statistics (3 hours); English composition (3 hours); Humanities and Literature (6 hours); Psychology (6 hours); Sociology and/or Anthropology (6 hours). For additional information, contact Professor Lynn Lotas, 1610 School of Nursing, 368-5129, E-mail: mjl25@case.edu.

SOCIAL WORK

Students interested in pursuing professional studies in social work must complete a minimum of 24 hours in the social and behavioral sciences. For additional information, contact Joan Horinka, Director, Admissions & Communication, 121 MSASS Bldg., 368-2280, E-mail: jsh19@case.edu.

INTEGRATED UNDERGRADUATE AND GRADUATE/PROFESSIONAL SCHOOL PROGRAMS

B.S./M.ACC.

Joint B.S. in Accounting/Master of Accountancy (M.Acc.)

Students who are candidates for the B.S. in accountancy and who wish to earn a master's degree in accountancy may apply to the B.S./M.Acc. program. Students in the program enroll during the senior year in six hours of M.Acc. courses that will serve toward satisfaction of both the B.S. and M.Acc. degree requirements. Before taking graduate coursework, the student must have completed all prerequisites for the course on the undergraduate level and have a "B" average in those prerequisites. Following completion of the B.S., students in the program will enroll in the Weatherhead School of Management to complete an additional 30 hours of courses to satisfy M.Acc. degree requirements. For information, see Professor Larry Parker, 459 Peter B. Lewis Building, 368-2065, E-mail: Imp3@case.edu.

Accelerated B.S. in Accounting/Master of Accountancy (M.Acc.) program

This program allows motivated students to accelerate their pursuit of both the B.S. and M.Acc. degrees. In addition to applying six credit hours of Weatherhead graduate coursework towards their undergraduate degree program, students in this program may begin taking more graduate coursework before completing all of their undergraduate degree requirements. To enroll in this program, students must have:

- A. Completed 90 hours of undergraduate coursework
- B. Completed all of the undergraduate Weatherhead SAGES General Education Requirements
- C. Completed 36 hours of the Weatherhead Management requirements (including 18 hours of the required Accountancy coursework)
- D. Achieved at least a 3.0 overall grade point average. Students in this program will receive both the B.S. and the Master's degree at the end of the program. For the first eight semesters of study, the student will register as an undergraduate in Case Western Reserve University; thereafter, students will register in the graduate professional degree program in the Weatherhead School of Management. For information, see Professor Larry Parker, 459 Peter

B. Lewis Building, 368-2065, E-mail:
Imp3@case.edu.

B.S./M.S.

The Integrated B.S./M.S. Program is intended for highly motivated candidates for the B.S. in engineering, computer science, mathematics, natural sciences or statistics whose objective is a degree at the master's or doctor's level. Application to the B.S./M.S. program must be made after completion of 75 semester hours of coursework and prior to attaining senior status (completion of 90 semester hours). Generally, this means that a student will submit the application during his/her sixth semester of undergraduate course enrollment and will have no more than two semesters of remaining B.S. requirements to complete. A student admitted to the program may, after admission to the program, take up to nine hours of graduate courses that will count towards both B.S. and M.S. requirements. Courses taken prior to admission to the program cannot count towards the M.S. unless they are in excess of B.S. degree requirements and permission to use them towards the M.S. has been requested and granted by the Dean of Graduate Studies and the Dean of Undergraduate Studies.

To be considered for the B.S./M.S. Program, a student must:

- Submit to the School of Graduate Studies an application for admission to the program
- Submit to the Office of Undergraduate Studies an M.S. Planned Program of Study Form, showing the courses to be double-counted

Students for whom the master's project or thesis is a continuation and development of the senior project should register for Exxx 651 Thesis (or the appropriate project course) during the senior year and are expected to complete all other courses for the B.S. before enrolling in further M.S. coursework and thesis (continuing the senior project). Students for whom the master's thesis or project is distinct from the senior project will be expected to complete the B.S. degree before taking further graduate courses for the master's degree. Students wishing to pursue the M.S. in engineering or in computer science through the B.S./M.S. Program should consult their departmental B.S./M.S. advisor in the Case School of Engineering.

Students wishing to pursue the M.S. in mathematics, a science, or statistics through the B.S./M.S. Program may obtain information from the Office of Undergraduate Studies, Sears 357, 368-2928, E-mail: ug-studies@case.edu.

EARLY DECISION FOR ADMISSION TO SCHOOL OF LAW

This program is open to outstanding students who have completed two years of undergraduate study in the colleges and have taken the Law School Admission Test (LSAT). Up to four students per year will be granted a conditional commitment of admission to the Case School of Law. The commitment will be honored upon successful completion of a program planned individually with the Pre-Law Advisor. For additional information, contact Professor JoAnne Jackson, Pre-Law Advisor, 357 Sears Bldg., 368-2928, E-mail: prelaw@case.edu

INTEGRATED GRADUATE STUDIES (B.A./M.A. OR B.A./M.S.)

The Integrated Graduate Studies Program (IGS) is intended for highly motivated undergraduate students who are candidates for the B.A. and whose objective is a degree at the Master's or Doctor's level. Qualified students may be admitted to graduate study for their senior year and pursue the simultaneous completion of requirements for both the Master's and Bachelor's degrees. The baccalaureate will normally be awarded upon completion of the requirements for both degrees, unless a student satisfies all B.A. requirements prior to completing the master's degree requirements. Students in the IGS Program are exempted from the 42-hour restriction imposed on B.A. candidates for work above the 100-level in a single department. However, the exemption is granted only upon completion of the Master's degree requirements.

Eligibility requirements for participation in the Integrated Graduate Studies Program are:

1. 90 semester hours earned of which the last 60 hours must have been in residence at Case Western Reserve University
2. Completion of the SAGES General Education Requirements of the College of Arts and Sciences and two semesters of physical education; students who have fulfilled all SAGES General Education Requirements except the Senior Capstone will be required to complete the capstone during their first year in the IGS program
3. Completion of three quarters of the requirements for the major concentration, including three quarters of

the courses required in the major department

4. Admission to a master's or Ph.D. program offered through the School of Graduate Studies

Upon admission to the program, IGS students register as students in the School of Graduate Studies and are subject to the policies, rules and regulations of the School of Graduate Studies. They may, however, continue to receive merit-based undergraduate scholarships and may continue to reside in undergraduate housing during what would normally be their senior year of undergraduate work.

For information, contact the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu

PRE-PROFESSIONAL SCHOLARS PROGRAMS AND THE 6-YEAR DENTAL PROGRAM

These programs grant to a few outstanding first year student applicants to Case conditional commitments of admission to the appropriate professional school at Case. These commitments are honored upon successful completion of the requirements established by each professional school. For additional information, contact the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu.

SENIOR YEAR *IN ABSENTIA*

Students of superior ability and attainment who are candidates for the B.A. and are offered admission to a medical or dental school other than those at Case Western Reserve University at the end of the junior year are eligible for an opportunity to shorten their entire course of studies by one year through the Senior Year *in absentia* privilege. Application for this privilege should be made during the second semester of the junior year through the Dean of Undergraduate Studies.

A student granted the Senior Year *in absentia* privilege is permitted to substitute the work of the first year in a professional school for that required during the last year in the undergraduate college. Upon the satisfactory completion of the first year's work in the professional school, the student will be granted the B.A. from the College of Arts and Sciences. The privilege is extended to qualified students who attend medical schools in the United States or Canada approved by the Association of American Medical Colleges or dental schools in the United States approved by the American Association of Dental Schools.

To be eligible for the Senior Year *in absentia* privilege, a student must:

1. Attain a cumulative grade point average of at least 3.20 in all courses attempted from the date of admission as an undergraduate.
2. Meet the following degree requirements:
 - a. Completion of the Arts and Sciences SAGES General Education Requirements and two semesters of physical education, unless excused from the latter.
 - b. Completion of three-fourths of the requirements for the major, including three-fourths of the courses required in the major department.
 - c. Completion of 84 hours of arts and sciences courses. These credits may be drawn from those offered by the College of Arts and Sciences as well as those in economics, biochemistry, nutrition or computer science.

In addition to meeting all requirements listed above, students qualifying for the Senior Year *in absentia* privilege must have completed at least 90 semester hours of academic credit, of which the final 60 hours must have been in residence. A student may include in that final 60 hours no more than six semester hours earned in courses completed in other institutions, either by cross registration in regular sessions or by approved transient registration in summer sessions.

For information, contact the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu.

SENIOR YEAR IN PROFESSIONAL STUDIES AT CASE

Students of superior ability and attainment who are candidates for the B.A. and who are admitted to professional studies in Case by the end of the junior year are offered an opportunity to shorten their entire course of studies by one year through the Senior Year in Professional Studies privilege. Application should be made during the second semester of the junior year through the Dean of Undergraduate Studies. This privilege is extended to students who are candidates for the B.A. and who attend the School of Dentistry, the School of Medicine, the Frances Payne Bolton School of Nursing, or the Mandel School of Applied Social Sciences of Case.

A student granted the senior year in professional studies privilege is permitted to substitute the work of the first

year in a professional school for that required during the last year in the undergraduate college. Upon the satisfactory completion of the first year's work in the professional school, the student will be granted the bachelor's degree from the College of Arts and Sciences. To be eligible for the senior year in professional studies privilege, a student must:

1. Be accepted for admission to professional studies in Case Western Reserve University.
2. Meet the following degree requirements:
 - a. Completion of the SAGES General Education Requirements of the College of Arts and Sciences and two semesters of physical education, unless excused from the latter.
 - b. Completion of three-fourths of the courses required for the major, including three-fourths of the courses required in the major department.
 - c. Completion of 84 hours of arts and sciences courses. These credits may be drawn from those offered by the College of Arts and Sciences as well as those in economics, biochemistry, nutrition or computer science.
 - d. Completion of at least 90 semester hours of academic credit, of which the final 60 hours must have been in residence. A student may include in that final 60 hours no more than six semester hours earned in courses completed in other institutions, either by cross registration in regular sessions or by approved transient registration in summer sessions. (Note: Students applying for the Senior Year in Professional Studies in the School of Medicine will generally be expected to have completed at least 117 hours towards the B.A. degree.)

Upon admission to the program, students register in the professional school to which they have been admitted and are subject to the policies, rules and regulations of the professional school. They may, however, continue to receive merit-based undergraduate scholarships and may continue to reside in undergraduate housing during what would normally be their senior year of undergraduate work.

For information, contact the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu.

EXPERIENTIAL LEARNING

Inside and outside the classroom, Case offers undergraduates a variety of experiences that are an integral part of a Case education, and that are built on a process of guided inquiry, preparation, action and reflection. Many research, internship, and employment opportunities are aligned with academic programs. Linguistic and cultural immersion characterize the study abroad experience. Courses that incorporate community service or internships into the curriculum forge links between Case undergraduates and schools, neighborhoods, business, governmental and health care institutions in Cleveland and elsewhere.

COURSE-BASED EXPERIENTIAL LEARNING

In disciplines as diverse as psychology, journalism, engineering, Spanish, Russian, nursing, anthropology, history, and biology, Case students engage in experiential learning beyond the on-campus classrooms and laboratories. Experiences that form the basis for reflection and synthesis under the guidance of faculty include working with hospitalized children, designing engineering solutions for a problem presented by a municipality, interning at a local media outlet, tutoring in Cleveland's Hispanic community, gaining experience in public health clinics, studying history with "the city as classroom," or collecting aquatic specimens from the ponds at the university's 389-acre farm.

College Scholars Program

The College Scholars Program is a two-year honors program that emphasizes and explores the connections between interdisciplinary learning and leadership both on the Case campus and in the larger community. Students apply for the program in the spring of their first (or possibly second) year. Students selected for the program enroll in a special College Scholars Program course each semester for two years, and complete a (minimum) one-semester capstone final project that utilizes resources of the university and of the larger community. The program sponsors visits to Case by national and international leaders in a variety of areas, including public service, the arts, science, and journalism. For additional information, contact the College Scholars Program Director, Professor Peter Whitehouse, Center for Memory & Aging, 844-6448, E-mail: pjw3@case.edu.

INTERNATIONAL EXPERIENCE

Qualified students may participate in programs of study or practical experience that immerse them in the culture and language of another country. Up to 36 semester hours of credit may be granted for international study at an established foreign university. All students on Junior Year Abroad or Exchange programs pay tuition to Case Western Reserve University and maintain their student status during the period of study abroad. Scholarships and financial aid from Case may be applied to these programs. For additional information, contact the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu.

Global Engineering Education Exchange Program (GE3)

The Global Engineering Education Exchange (GE3) program enables qualified engineering and computer science students to receive up to 36 semester hours of academic credit for courses taken at selected engineering institutions and universities in Europe, Asia, Mexico, and Australia. The program is administered by the Institute for International Education in collaboration with an international consortium of engineering schools that includes Case. Information about the GE3 program is available in the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu or www.iie.org.

Bilateral Exchange Programs

Case Western Reserve University has bilateral exchange agreements enabling students from overseas institutions to attend Case as visiting students and permitting Case students to receive academic credit for study at the following institutions:

University of Lancaster, UK (all majors)

Bilkent University, Turkey (all majors)

ESC de Montpellier, France (management, accounting)

University of Frankfurt, Germany (management, accounting)

University of Manchester, UK (humanities, social sciences, management)

University of Sheffield, UK (all majors)

University of Sydney, Australia (management, economics, international studies, sociology, political science)

Carlos III University, Spain (management)

National University of Singapore (engineering, computer science)

Information about bilateral exchange programs with other overseas universities is available in the Office of Undergraduate Studies.

Junior Year Abroad

Full-time students who have earned a 3.00 grade point average at the University are eligible to apply for Junior Year Abroad. Up to 36 hours of credit may be granted for study at an established foreign university or for approved foreign study programs offered through accredited American universities. The selection of location and institution for study abroad is made in consultation with the Assistant Dean in the Office of Undergraduate Studies. Participation in study abroad is contingent upon approval by the Office of Undergraduate Studies and the student's major advisor.

In recent years, Case Western Reserve University undergraduates have studied in Australia, Austria, Chile, Denmark, England, France, Germany, Israel, Italy, Japan, Kenya, New Zealand, Russia, Scotland, South Africa, and Spain.

Case Courses

Some Case courses incorporate short-term overseas experience into the curriculum. For example, summer courses take language students to France and Germany; a summer chemical engineering laboratory course is based at University College London; and the nursing senior capstone experience includes overseas options for clinical placement. The summer engineering exchange program of the School of Engineering and Waseda University, Japan, pairs Case and Waseda stu-

dents in study and work environments.

RESEARCH EXPERIENCE

Independent Study And Honors

Most departments offer courses in independent study to their qualified majors. These are advanced level courses and require departmental approval. Students pursuing research under the guidance of a faculty member may register for "Undergraduate Research" and receive degree credit. A number of departments offer outstanding upperclassmen the opportunity to follow an honors program by pursuing independent research and special study in seminars. Those who qualify receive the bachelor's degree "with departmental honors."

Research and Creative Projects at Case and in University Circle

Research experience enables students to start from a base of established knowledge to formulate research questions, acquire skills in information collection and analysis, develop hypotheses and conclusions from the information gathered, share ideas with research colleagues, and experience both the exhilaration and frustration that accompany intellectual exploration and persistence. The departments and schools of Case and many of its neighboring University Circle institutions provide numerous and diverse opportunities for undergraduates to work on research or creative projects either independently or as a member of a team. To identify opportunities appropriate to their skills and abilities, undergraduates should contact the SOURCE office (Support of Undergraduate Research & Creative Endeavors). The SOURCE office sponsors the Symposium and Poster Session in the spring and also provides funding for some summer research and creative projects. For more information contact the director, Dr. Sheila Pedigo, Sears 451, 368-8508, E-mail: sheila.pedigo@case.edu.

In University Circle, the Cleveland Museum of Art, and the Cleveland Museum of Natural History, the Western Reserve Historical Society are rich in resources for undergraduate research.

Research Beyond Case and University Circle

Collaborative research efforts of Case faculty with researchers at other institutions such as NASA or the Cleveland Clinic often include Case undergraduates in the research teams. Case students are encouraged to pursue summer research opportunities at national laboratories, on other university campuses, in independent research organizations, and in national and international organizations.

WORK EXPERIENCE IN THE PUBLIC AND PRIVATE SECTOR

Community Service

Learning through community service, an important component of the University's educational programs, is facilitated by the Center for Civic Engagement and Learning. The Center promotes, provides and supports learning opportunities for Case Western Reserve University students in the form of service that is beneficial to the community. Community service is incorporated into selected courses that engage students in tutoring and helping relationships with children, adolescents, and older adults in Cleveland's diverse ethnic communities, schools, and health-care settings. A first year engineering design class engages students in various projects that benefit community agencies. Volunteer service in social service and health care agencies in Montreal during spring break is the focus of a service learning course in French.

CWRUCorps, and AmeriCorps National Service Program, is the University's most comprehensive service opportunity. This full-time summer program calls for a strong commitment to meeting critical community needs in five areas: health, literacy, environment, arts, and technology. CWRUCorps members acquire valuable experience in leadership and collaboration as they work in teams with various community partner organizations. While education is the underlying component of all CWRUCorps projects, the program involves an intense and diverse range of activities and learning opportunities. A work-study option for stipend distribution is available to eligible students.

Through Project STEP-UP (Student Tutoring Effort to Promote Utilization of Potential), AmericaReads, AmericaCounts, and the Ohio Reads programs, Case students provide tutoring and mentoring services to at-risk youth who attend Cleveland public schools. Students may utilize a work-study award toward participation in these programs, which also provides service-learning opportunities for some undergraduate courses.

For more information on community service, contact Mayo Bulloch, Thwing Center, 368-6960, E-mail: mxb14@case.edu.

Cooperative Education

Cooperative Education is an academic program that enables students to alternate classroom studies with career based experiences in industry. It is a learning experience designed to integrate classroom theory with practical experience and professional development. Co-op is full-time, paid work, designed to maximize the student's education. Case co-op assignments are typically for two seven-month periods, each period consisting of a summer and a contiguous spring or fall semester. This program is available to students pursuing degrees in engineering, accounting, management and all science departments except astronomy.

For additional information, contact Mary Rose Tichar, 304B Nord Hall, 368-4447, E-mail: mrt2@case.edu.

Practicum Programs/Internships

The Professional Practicum Program offers the opportunity for students to participate in a full-time internship during the academic year consistent with their major fields of study. This program is available to students pursuing undergraduate degrees within the Weatherhead School of Management and College of Arts & Sciences.

Students are strongly encouraged to seek out internship opportunities consistent with their major fields of study. The Career Center provides students with many resources and assistance in preparing for full-time or part-time internships. This program is open to all undergraduate students. For more information contact the Career Center, 206 Sears Bldg., 368-4446, E-mail: careers@case.edu.

Washington Center Program

Qualified students may earn a semester's credit through their satisfactory completion of work with source materials and at federal government institutions. Students make application through the Department of Political Science. Applications must have the approval of the Dean of Undergraduate Studies and the major advisor. Please see the Bulletin for further information on specific requirements for the program described above.

For additional information, contact the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu and Professor Alexander Lamis, 111 Mather House, 368-2696, E-mail: alp2@case.edu.

COLLABORATIVE PROGRAMS WITH OTHER COLLEGES

THE BINARY (3-2) PROGRAM IN ENGINEERING

Students of superior scholarship, who have attended one of a group of select liberal arts colleges with whom Case has a 3-2 agreement, are eligible to participate in the Binary Engineering Program at Case. Once requirements at both institutions are completed, students will receive a degree from the liberal arts college and a degree from Case in a designated engineering discipline.

For additional information, contact Debbie Fatica, 304 Nord Hall, 368-4449, E-mail: dx3@case.edu.

CROSS REGISTRATION IN NORTHEAST OHIO

If approved by the Office of Undergraduate Studies, full-time undergraduates in good academic standing may cross-register through the Northeast Ohio Council on Higher Education (NEOCHE) program at Baldwin-Wallace College, the Cleveland Institute of Art, the Cleveland Institute of Music, Cleveland State University, Cuyahoga Community College, David Myers College, Hiram College, John Carroll University, Lake Erie College, Lakeland Community College, Lorain County Community College, Notre Dame College of Ohio, and Ursuline College for one course per semester. Approval is normally limited to courses that are not offered at Case Western Reserve University. To cross-register at the Cleveland Institute of Art, a student must have permission from the University's Director of Art Studios.

FISK UNIVERSITY EXCHANGE PROGRAM

An exchange program between Fisk University and Case Western Reserve University enables up to four Case students to spend a semester as visiting students at Fisk each year. Up to four Fisk students may spend a semester at Case each year. Fisk University was founded in 1866 as the first integrated, coeducational school in the United States, and at its founding focused on providing a quality liberal arts education to the children of former slaves. Fisk University has a distinguished history as a liberal arts institution. Fisk University was the first historically black college to have chapters of the national honorary societies of Phi Beta Kappa and Mortar Board.

Case students who participate in the Case-Fisk Exchange pay tuition to Case, pay the Fisk room and board fees, and maintain their student status during the period of the exchange. Information about the exchange program is available from the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu.

JOINT PROGRAM IN ART EDUCATION

The Joint Program in Art Education of Case Western Reserve University and the Cleveland Institute of Art (CIA) enrolls students pursuing the B.S. in Art Education in a program that combines studio art courses at the Cleveland Institute of Art with liberal arts and education courses at Case. Admission to the program requires application to Case and presentation of an art portfolio to the Cleveland Institute of Art; credentials must be acceptable to both institutions. For program details, see the section on Art Education in this Handbook.

JOINT PROGRAM IN MUSIC

All programs in music are conducted jointly by Case Western Reserve University and The Cleveland Institute of Music, and provide the intimacy and specialization of a professional conservatory, together with the resources of a comprehensive university. Students pursuing a major in music or music education take music theory and lessons at The Cleveland Institute of Music, and take music history and other liberal arts and music education courses at Case. Students pursuing the B.A. with a major in music, or the B.S. in Music Education apply to and enroll in Case Western Reserve University, while students seeking the B.M. degree apply to and enroll in The Cleveland Institute of Music. For program details, see the Department of Music section in this Handbook.

JOINT PROGRAM IN TEACHER LICENSURE

Ohio teacher licensure may be attained by those undergraduate students who complete the approved curriculum of the Case Western Reserve University/John Carroll University Joint Program in Teacher Licensure. Adolescence/Young Adult Teacher Licensure is available in Chemistry, Physics, Integrated Language Arts (English major), Integrated Social Studies (history major), Inte-

Joint Program in Teacher Licensure (continued)

grated Mathematics (mathematics major), Life Sciences (biology major), and Physical Sciences (chemistry or physics major). Multi-age licensure is available in French and Spanish. The program requires 35 credit hours in professional education: 12 taken at Case Western Reserve University and 23 taken at John Carroll University.

The undergraduate programs in art education and music education meet the requirements for teacher licensure, grades pre-K-12. For further information, see departmental information in this Handbook.

RESERVE OFFICER TRAINING CORPS (ROTC)

Reserve Officer Training Corps (ROTC) programs are available to Case Western Reserve University students through cooperative arrangements with the Kent State University, for Air Force ROTC, and with John Carroll University, for Army ROTC. Each of these universities offers military studies, leadership and training courses. Participating students may seek transfer credit at Case Western Reserve for some of these courses, but may be exempted from the undergraduate physical education requirement. Students who are not recipients of ROTC scholarships may enroll in the first and second year ROTC courses without incurring any military obligation. University students enrolling in ROTC programs are eligible to compete for ROTC scholarships awarded by the Air Force or the Army.

Air Force ROTC

The Air Force Reserve Officer Training Corps (AFROTC) program provided at Kent State University prepares students for service as officers in the United States Air Force. Through courses in history, management, and leadership, and through practical training, students acquire leadership and management skills and learn about Air Force career opportunities, the role of the military in American society, the history of air power, and national defense policy.

An agreement between Case Western Reserve University and Kent State University allows full-time Case Western Reserve students to complete aerospace studies courses. The courses are held at Kent State University (KSU), which is approximately 30 miles from Case, and are usually scheduled on one or two afternoons during the week. This arrangement allows Case Western Reserve students to participate in either the four-year or two-year AFROTC program. Students wanting to enter the two-year program in the junior year must contact the professor of aerospace studies before March of the year before their planned entry.

Air Force ROTC scholarships are available on a competitive basis. Information about courses and scholarships may be obtained from the Department of Aerospace Studies, AFROTC DET 630, 104 Terrace Hall, Kent State University, Kent, Ohio 44242; telephone: (330) 672-2182; E-mail: det360@kent.edu.

Case students planning to register for AFROTC courses at KSU should see Dean Lynmarie Hamel in the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, for information regarding registration procedures.

Army ROTC

The Army ROTC program is designed to prepare young college men and women for service as a commissioned Army officer in either the active duty U.S. Army or the reserve components of the Army Reserve or National Guard. Classes and practical training focus on military skills, officer professionalism, leadership training, and the development of military-related officer and management techniques and procedures.

Students may enroll in Army ROTC classes through cross-registration in the Department of Military Science at John Carroll University, which is approximately five miles from Case. Military science classes are taught at John Carroll University, with some activities also taking place at Cleveland State University or at Case. See page 77 of this Handbook for information about the Cross-Registration Program.

Army ROTC scholarships are available on a competitive basis. Information about courses, registration, and scholarships may be obtained from the Department of Military Science (ARMY-ROTC), John Carroll University, University Heights, OH 44118-4581; telephone: (216) 397-4421.

ACADEMIC POLICIES AND PROCEDURES

ACADEMIC ADVISING

Academic advising is an important component of the educational program at Case Western Reserve University. Academic advisors assist students in the exploration of academic opportunities at the University and in the selection of courses. Advisors may refer students to other sources of information and assistance at the University. Students are expected to initiate and maintain regular contact with their advisors to address the student's curricular and career concerns, and to review progress towards graduation. Students are expected to meet with advisors when declaring a major or minor, before registering for classes, and when making corrections to their degree progress reports.

First Year Advisors

During a student's first year at Case, the faculty member instructing the student's SAGES First Seminar serves as the student's academic advisor. Students and their advisors are expected to explore the students' academic interests or concerns, as well as educational and career goals, and to seek expert information and advice about academic policies and procedures and about specific academic programs from the Handbook for Undergraduates, from newsletters and web sites, from the academic department representatives designated as first year resources, and from other sources of advice and counseling on campus. Staff in the Career Center, the Office of Undergraduate Studies, Educational Services for Students, the Office of Multicultural Affairs, the University Counseling Service, and in specialized programs such as CO-OP (co-operative education), SOURCE (research and creative projects), Center for Civic Engagement and Learning (community service) and WISER (women in science/engineering) are available to support first year students and their advisors with publications, workshops, web sites, experiential learning opportunities, and individual communications.

Selection of Majors and Minors; Departmental Advisors

Although some first year undergraduates enter with definite goals, they are not assigned to departmental advisors until they have declared their major. Opportunities for exploration of majors and minors during the first and second semesters include a Choices Fair, departmental information sessions, and individual conversations with faculty and academic advisors. First year students who are ready to declare in their first year may do so beginning in November.

Students engaging in further exploration of majors are expected to declare a major no later than the end of the second year. When a student selects a specific major or minor, the department representative assigns a faculty advisor. A choice or change of major or minor is not recorded for any student until the major or minor declaration form, bearing the signature of the student, the name of the advisor, and the signature of the department representative, has been completed and returned to the Office of Undergraduate Studies, 357 Sears Bldg.

After the first year, students who have not declared a major should consult their assigned advisor (noted in their on-line student information) or the academic representative of an academic department of interest for advice and schedule approval.

ACADEMIC GRIEVANCE POLICY

A student who wants to register a complaint about course instruction or evaluation should first bring the matter to the direct attention of the professor or instructor involved. If the matter is not satisfactorily resolved, the student should go to the chairman of the academic department in question to seek departmental review. If neither step resolves the complaint, the student may take the matter to the faculty member's college or school dean for final review and decision.

ACADEMIC INTEGRITY POLICY

Students, faculty, and administrators share responsibility for the determination and preservation of standards of academic integrity. They must not only adhere to their own personal codes of integrity but also be prepared to educate others about the importance of academic integrity, to take reasonable precaution to discourage violations of academic integrity, and to adjudicate violations.

For students, education about the importance of academic integrity begins during the admissions process. The centrality of integrity to the academic enterprise is reinforced during new student orientation when students engage in discussion about academic integrity. Specific mention of academic integrity and course-specific guidelines should be presented in all classes. Programs and instruction about academic integrity guidelines also should be offered throughout the students' undergraduate career.

ACADEMIC INTEGRITY POLICY (continued)

Faculty and students are expected to uphold standards of academic integrity by taking reasonable precaution in the academic arena.

Reasonable precaution involves implementing measures that reduce the opportunities for academic misconduct but do not inhibit inquiry, create disruption or distraction in the testing environment, or create an atmosphere of mistrust. The vitality of academic integrity is dependent upon the willingness of community members to confront instances of suspected wrongdoing. Faculty have specific responsibility to address suspected or reported violations as indicated below. All other members of the academic community are expected to report directly and confidentially their suspicion of violation to a faculty member or a dean or to approach suspected violators and to remind them of their obligation to uphold standards of academic integrity.

Definition of Violations

All forms of academic dishonesty including cheating, plagiarism, misrepresentation, and obstruction are violations of academic integrity standards. Cheating includes copying from another's work, falsifying problem solutions or laboratory reports, or using unauthorized sources, notes or computer programs. Plagiarism includes the presentation, without proper attribution, of another's words or ideas from printed or electronic sources. It is also plagiarism to submit, without the instructor's consent, an assignment in one class previously submitted in another. Misrepresentation includes forgery of official academic documents, the presentation of altered or falsified documents or testimony to a university office or official, taking an exam for another student, or lying about personal circumstances to postpone tests or assignments. Obstruction occurs when a student engages in unreasonable conduct that interferes with another's ability to conduct scholarly activity. Destroying a student's computer file, stealing a student's notebook, or stealing a book on reserve in the library are examples of obstruction.

Discussing, Reporting, and Adjudicating Violations

If a faculty member suspects that an undergraduate student has violated academic integrity standards, the faculty member shall advise the student and the departmental chair and consult with an Undergraduate Studies Dean about the appropriate course of action. Before speaking with the student, the faculty member also may choose to consult with the Chair or Dean about academic integrity standards. If the faculty member, in consultation with the Dean, determines that the evidence

is not adequate to charge the student with a violation, the matter will be dropped. Otherwise, the following procedures will be followed:

First Violations

If the faculty member and the student agree that a violation has occurred and the violation is determined to be a first violation (the university has no record of previous violations by the student of the university's Standards of Conduct), the faculty member shall choose either to sanction the student or to refer the case to the academic integrity board. If the faculty member chooses to sanction the student, the minimum sanction is failure in the work in question and the maximum sanction is failure in the course. The faculty member will be provided with a standard reporting form to be signed by both the student and faculty member.

However, the case will be referred to the Assistant Vice President for Student Affairs for integrity board action if:

1. the student claims not to have violated academic integrity standards or the student disagrees with the sanction imposed by the professor;
2. the faculty member feels that the seriousness of the first offense warrants presentation to the academic integrity board; or
3. the faculty member, after consultation with the dean, prefers to have the academic integrity board investigate or adjudicate the alleged violation, or prefers that the board sanction the student.

The signed report form from a faculty member or the finding of responsibility by the academic integrity board will become part of the student's university judicial file. Students found responsible for a first violation will be required, in addition to any other sanctions imposed, to attend an ethics education program or to complete an ethics exercise as assigned by the dean of undergraduate studies or the Assistant Vice President for Student Affairs.

Subsequent Violations

If the university judicial file indicates that the student suspected of a violation has been responsible for one or more previous violations of the university's Standards of Conduct, the case will be referred to the Assistant Vice President for Student Affairs for Academic Integrity Board Action.

Misrepresentation and Obstruction

Reports of suspected academic misrepresentation or obstruction occurring in settings other than the classroom will be referred to the Assistant Vice President for Student Affairs for Academic Integrity Board Action.

Academic Integrity Board

If a suspected or known violation of academic integrity standards warrants consideration by the Academic Integrity Board, the Assistant Vice President for Student Affairs (or his or her designee) will convene the board. The board will be composed of three students (voting members) appointed by the Undergraduate Student Government, two faculty (voting members) appointed from a list of faculty members annually identified by the Office of Student Affairs as willing to serve and approved by the Executive Committee of the Faculty Senate and two administrators (non-voting members). One administrator will be a dean from the Office of Undergraduate Studies. The other administrator, the Assistant Vice President for Student Affairs or his or her designee, will chair the board. All members of the board may question witnesses. Academic Integrity Board Procedure, the vote required for the determination of responsibility, and the evidence standard will be the same as those for the University Judicial Board.

Should the board find the student not responsible for a suspected violation, the faculty member and the student will be so informed. The faculty member will be asked to evaluate the student's performance in the assignment in question and to issue a grade based on his or her normal grading practices.

If the board finds a student responsible for a violation of academic integrity standards, the board will notify the student and the faculty member. The board can sanction violations by issuing failure in the work in question, failure in the course, university disciplinary warning, university disciplinary probation, university disciplinary suspension, or expulsion.

In cases in which the Academic Integrity Board finds a student responsible for a second or subsequent violation, the minimum sanction will be failure in the course; the maximum penalty will be expulsion.

If the Academic Integrity Board finds a student responsible for misrepresentation or obstruction, the minimum sanction will be university disciplinary probation; the maximum penalty will be expulsion.

Violations Reported after Voluntary Withdrawal or Academic Separation

Suspected violations of academic integrity standards reported after a student voluntarily withdraws or is academically separated will be investigated and adjudicated. A student who withdraws or is academically separated during the investigation and adjudication of a

suspected violation may be asked to appear at a hearing or, if the student fails to appear, have his or her case heard in absentia. If the student is found responsible for a violation, sanctions can be imposed.

Violations Reported after Graduation

In the event that a suspected violation of academic integrity standards is reported after graduation, the Assistant Vice President for Student Affairs will make a determination as to the feasibility of investigation and adjudication. Graduation will not preempt investigation or adjudication of a suspected violation when those processes are feasible. If a student is found responsible for a violation and the sanction imposed makes the student ineligible to earn his or her degree, the degree may be revoked.

Maintenance of Records

Violations of academic integrity standards are considered violations of the university's Standards of Conduct and will be recorded in the student's judicial record. University judicial files are maintained by the Assistant Vice President for Student Affairs in the Office of Student Affairs.

ADVANCED PLACEMENT, INTERNATIONAL BACCALAUREATE EXAMINATIONS AND CREDIT

Students may earn degree credit on the basis of advanced examinations taken while in secondary school; examinations eligible for credit and/or advanced placement include, but are not limited to College Board Advanced Placement Examinations and International Baccalaureate Higher Level Examinations. Determination of the criteria for granting credit and/or placement is made by the appropriate department. In assigning credit or granting advanced placement for credentials from outside the United States, the University is guided by the placement recommendations and grade equivalencies approved by the National Council on the Evaluation of Foreign Educational Credentials. (For details, see Appendix)

APPLIED ART AND MUSIC COURSES

Art: Students may take studio courses for credit at The Cleveland Institute of Art only with authorization from Mr. Timothy Shuckerow, Case Director of Art Studios, 2215 Adelbert Road, 368-2714, E-mail: txs10@case.edu.

Music: Permits may be obtained at the Music Department in Haydn Hall to enroll for credit in Applied Music. Charges for private lessons will be covered by the full tuition rate for music and music education majors only. All

other students will pay an additional fee.

ATTENDANCE

Students are expected to attend classes regularly. Each instructor is free to determine the extent to which absences affect the final grades of students but should make the policy regarding attendance known at the start of the course. Instructors should report excessive absences to the Office of Undergraduate Studies. Instructors who judge a student's absences from class to be excessive may drop the student from the course with a grade of F. Instructors taking such action must notify the student's dean in writing.

Students unable to attend classes because of illness should notify their instructors and make the appropriate arrangements directly with the instructor. The University Health Service and the Office of Undergraduate Studies do not provide medical excuses for class absence. Information concerning the policy of the Health Service and the Office of Undergraduate Studies is available in both the Office of Undergraduate Studies and the University Health Service.

COURSE CHANGES (DROP/ADD)

Changes in course schedules must be submitted to the Registrar's Office using the drop/add form or SOLAR before the end of the second week of classes during the fall and spring semesters and on or before the second day of classes during the summer session.

COURSE PLACEMENT

No credit will be granted for completion of any course in foreign language or mathematics that repeats the course level completed in high school. First year undergraduates who have questions regarding their eligibility to receive credit for foreign language or mathematics courses should see Dean Julie Amon, 357 Sears Bldg., 368-2928, E-mail: jxa65@case.edu.

ENROLLMENT STATUS

Classification as a full-time student requires enrollment for 12 or more semester hours. Eligibility for campus housing, many forms of financial aid, and for participation on intercollegiate, varsity sports teams requires full-time status. Students registering for fewer than 12 semester hours are classified as part-time and charged tuition on the basis of the number of semester hours being taken.

FINAL EXAMINATIONS

Final examinations normally are required in all courses and must be given during the final examination period at the time assigned by the Registrar; they may not be given during the final week of classes or on Reading Days. Any exception must be approved by the Dean of Undergraduate Studies.

No student will be required to take more than two final examinations on a single day. A student who has three final examinations scheduled for a single day should go to the Office of Undergraduate Studies and obtain the assistance of the Dean in arranging to take one of those examinations on an alternative day during the final examination period. Similarly, a student with conflicting examinations should seek the assistance of the Dean of Undergraduate Studies in arranging to have the time of one examination changed.

A student must explain immediately and in writing to the Dean of Undergraduate Studies an absence from a final examination. If the explanation is acceptable, the Dean will authorize the assignment of the grade Incomplete and the administration of a make-up examination by the instructor. In the event of an unexcused absence from a final examination, the instructor should assign the student a final grade that assumes a grade of zero on the final examination and is consistent with the grading policy established for the course.

FOREIGN LANGUAGE

Credit earned for the first semester (101) of a beginning foreign language will appear on the transcript and will be included in the student's grade point average but will not count towards the total hours required for the degree unless the second semester of the same language is completed as well.

OVERLOADS

The normal full-time load is 12-19 semester hours. Continuing students may carry 20-21 hours if they have a cumulative average of 3.20 or better. To register for 22 or 23 hours, a minimum average of 3.50 is required. Any schedule of more than 19 hours requires a dean's approval. Graduating seniors may be approved for overloads if they need such a schedule in order to graduate at the end of the semester in question.

PETITIONS

Students may request exceptions to university rules and curricular requirements by petition to the Office of Undergraduate Studies. Please be reminded that a lack of knowledge of regulations that are published in the University General Bulletin, the Schedule of Courses, or this Handbook is not justification for an exception. Petition forms are available in the Office of Undergraduate Studies, 357 Sears Bldg. Petitions are referred to the appropriate committee of the University Undergraduate Faculty.

PROFICIENCY EXAMINATIONS AND CREDIT

Departments within each academic unit offering undergraduate programs may choose to offer students the opportunity to earn course credit in specific courses by proficiency examination. To qualify for proficiency examination credit for a course, the student's examination performance must demonstrate knowledge and skills at a level no lower than that of an average student who successfully completes the course. Upon notification from the academic department, the Office of Undergraduate Studies will post credit for the course on the transcript. The grade will be recorded as PR, and will not be included in a student's grade point average. Note: Any student who receives proficiency credit for a course through a proficiency examination administered during a semester when the student is not registered for a full-time schedule (12 or more semester hours) at Case Western Reserve University is charged a fee equal to one-third of the present tuition charge for the course. No fee is charged if the student does not receive credit from the examination.

RE-ENROLLMENT AFTER VOLUNTARY WITHDRAWAL

Students who have voluntarily withdrawn from the University and have not taken courses elsewhere following their withdrawal may reenroll in any semester. Students who have taken courses elsewhere following withdrawal must provide official transcripts of their work with their request for re-enrollment. Upon re-enrollment following a voluntary withdrawal, students retain the hours earned and quality points for courses completed prior to withdrawal. In the first semester of re-enrollment, their academic status is the status in effect at the time of withdrawal, unless that status is changed by action of the Committee on Academic Standing.

REGISTRATION

For continuing students, registration for the fall semester begins in April, and registration for the spring semester begins in November. Students registered before the billing cutoff dates (generally mid-July for fall registration, and early December for spring registration) will be billed by e-mail for tuition and fees. After the cutoff dates, students must be cleared through the Office of Student Accounts Receivable prior to registration. Complete registration instructions and regulations appear in the official Schedule of Classes, published by the University Registrar, and on-line on the web site of the University Registrar at www.cwru.edu/provost/registrar/registrar.html.

STANDARDS OF PROMOTION

To sophomore status.....27 hours completed
To junior status.....60 hours completed
To senior status.....90 hours completed

STUDENT ACCESS TO RECORDS

The records of all students are in the Office of Undergraduate Studies, 357 Sears Bldg. Students may review their files in that office by appointment. A student must sign a request and present his/her I.D. card at the time of the appointment.

STUDY AT OTHER COLLEGES

After matriculation in Case Western Reserve University, students are permitted to earn at other accredited colleges or universities no more than a total of 15 semester hours, including courses taken through the cross registration program. Permission of a dean in the Office of Undergraduate Studies must be obtained in advance if the student wishes to enroll elsewhere. Further, if a student wishes to take elsewhere a course that will serve toward satisfaction of major or minor requirements it must also be approved by the departmental chair or representative. Credit earned elsewhere after matriculation in the colleges is not applied toward the residence requirement of a minimum of 60 hours earned in the colleges. The Off-Campus Study Request Forms are available in the Office of Undergraduate Studies, 357 Sears Bldg and online at www.case.edu/provost/ugstudies/forms.htm.

SUMMER SCHOOL

After matriculation at Case Western Reserve University, students are permitted to apply for permission to take courses off campus during the summer. The following conditions apply:

1. Academic work may be taken at another institution only with permission obtained in advance from the Office of Undergraduate Studies. Course descriptions must be provided with the request for permission.
2. Institutions must be accredited.
3. Students will not normally be permitted to take elsewhere in Cuyahoga County courses offered at Case Western Reserve University. Exceptions to this policy will be permitted only in the event of significant extenuating considerations. Students who desire the opportunity to take elsewhere in Cuyahoga County a course being offered at Case must petition the Office of Undergraduate Studies in advance for permission to do so.
4. Students must be in good standing. If a student is placed on probation between receiving permission and the start of off-campus enrollment, the student is no longer eligible to enroll for and receive transfer credit for this work. Students on probation require special approval and should contact a Dean in the Office of Undergraduate Studies.
5. Students may register for no more than 12 semester hours of credit. One quarter hour equals two-thirds of one semester hour.
6. Students may transfer credit only for courses completed in which a semester's work is completed in a minimum of four weeks. Credit will be awarded for courses equivalent or comparable to those offered by the University and completed with a grade of C or better.
7. Grades earned elsewhere for transferable work will not be recorded on the transcript or included in the Case Western Reserve University grade point average.
8. Credit earned elsewhere after matriculation is not applied toward the minimum of 60 hours required in residence at Case Western Reserve University.
9. Courses which do not have comparable or equivalent counterparts offered for credit at Case Western Reserve University require approval of the Dean. Acceptability of courses required for satisfaction of major or minor requirements must be determined by the faculty adviser from the department in question.
10. Students who have not declared a major should consult their first year advisor or dean about the choice of courses applicable to the degree.

TRANSFER CREDIT

Students may receive credit by transfer from another accredited college, university, or technological institute in the United States or from institutions of higher education outside the United States.

1. At the time of admission to Case and upon presentation of an official transcript from each institution previously attended, credit will be awarded for courses equivalent or comparable to those offered by the University and completed with a grade of C or better. Any such courses taken prior to the student's graduation from high school must be listed in the college's catalog among courses offered for degree credit to the college's undergraduates, taken in the company of matriculated college students, and organized and taught by college faculty. In addition, to be considered for transfer credit, such courses must not have been used to fulfill high school graduation requirements. The allocation of transfer credit is determined by the Office of Undergraduate Studies in consultation with the appropriate department.
2. After matriculation in the University, undergraduates are permitted to earn a maximum of 15 semester hours as transient students at other accredited institutions during the summer. Advance approval from the Office of Undergraduate Studies is required. Credit earned elsewhere after matriculation is not applied toward the 60 hour minimum required in residence.

Credit is not awarded for work done at an unaccredited institution in the United States except by proficiency examination in those departments of Case Western Reserve University offering that opportunity. The award of transfer credit for work done at institutions outside the United States is subject to departmental evaluation and to the recommendations of the National Council on the Evaluation of Foreign Credentials.

A student dismissed for poor scholarship from any institution cannot receive credit for courses taken in the first two sessions after that dismissal without permission of the Dean of Undergraduate Studies.

Grades for courses taken at other institutions will not be entered on the student's record nor will they be computed in the student's grade point average.

WITHDRAWAL FROM A COURSE

The First Undergraduate Year:

For the first two semesters of enrollment and after consultation with a dean in the Office of Undergraduate Studies, matriculated students who are beginning their college studies may withdraw from a course at any time during the semester, but no later than the last day of classes. Any course for which a grade of W is assigned will not be posted on the official transcript. This policy is not available for transfer students and does not apply to the summer session.

After the First Undergraduate Year:

After consultation with a dean in the Office of Undergraduate Studies, a student may withdraw from a course no later than the end of the 11th week of the semester and receive a grade of W. In extenuating circumstances, the dean may permit a student to withdraw from a course after the final date and receive a W. The grade of W will be posted on the student's transcript.

For all course withdrawals:

Notice of a withdrawal from a course must be transmitted by the student to the Registrar on the appropriate form, signed by the student's advisor and dean. Failure to attend class, or providing notice only to the instructor, does not constitute an official withdrawal from a course. Such an unofficial withdrawal normally will result in the student's being assigned the grade of F. A student who withdraws from the University (see below) or is dismissed during a semester will receive the grade of WD for each course for which he or she is registered at the time of withdrawal.

WITHDRAWAL FROM THE UNIVERSITY

To withdraw from the University during a semester or session, a student must complete an official withdrawal form in the Office of Undergraduate Studies. If unable to complete the withdrawal in person, the student must send written notification to the Office of Undergraduate Studies. If the withdrawal is necessary for reasons of health, a statement from the student's physician to the University Health Service may be required as a condition of readmission. Grades of WD will be assigned in all courses in which a student is registered at the time of withdrawal, provided that a student follows the procedures stated above. Failure to attend classes or notification of instructors only, does not constitute withdrawal from the University.

A student who ceases to attend or otherwise participate in courses without officially withdrawing will be assigned the grade F for each course in which he or she is enrolled.

Students who do not plan to return for the following semester must notify the Office of Undergraduate Studies, 357 Sears Bldg., 368-2928, E-mail: ug-studies@case.edu, in person or in writing.

GRADES

Grades at Case Western Reserve University are issued on the following scale with good standing based on the requirement of a 2.00 average for graduation. Academic averages are computed by dividing the number of quality points earned by the number of hours attempted, excluding transfer credit and courses graded P.

| Grade | Quality points per hour |
|--|--|
| A | (Excellent) 4 |
| B | (Good) 3 |
| C | (Fair) 2 |
| D | (Passing) 1 |
| F | Failure) 0 |
| (This grade will be given for academic failure as well as failure to attend class without formally withdrawing.) | |
| I..... | Incomplete |
| W | Withdrawal from a class |
| WD..... | Withdrawal from all classes during a given semester |
| P | Passing in a Pass/No Pass course |
| NP..... | Not passing in a Pass/No Pass course |
| R..... | For courses which extend over more than one semester |
| AD..... | Audit |
| RPT..... | Repeated in later semester for evaluative grade |

Grades in the First Undergraduate Year:

For the first two semesters of enrollment, matriculated students who are beginning their college studies may withdraw from a course at any time during the semester, but no later than the last day of classes. Any course for which a grade of W is assigned will not be posted on the official transcript. (Grades of W will, however, appear on the student's grade report and advising transcript as WW.) This policy is not available for transfer students and does not apply to the summer session.

GRADE OF INCOMPLETE

Assignment of the Incomplete Grade:

The Incomplete grade (I) is assigned by and at the discretion of the instructor when a) there are extenuating circumstances, explained to the instructor before the assignment of the grade, which clearly justify an extension of time beyond the requirements established for and met by other students in the class and b) the student has been passing the course and only a small segment of the course, such as a term paper, remains to be completed. It is the student's responsibility to notify the instructor of the circumstances preventing completion of all assigned work. In the absence of notification or adequate justification, the instructor has the authority to

assign the student a final grade that assumes a failing grade for the missing work. An Incomplete grade should not be assigned

- when a student has been absent for much of the semester and/or has done little of the work required for a course, or
- because a student is absent from a final examination, unless the dean has authorized the grade.

Changing the Incomplete Grade:

The instructor shall submit to the Registrar a final evaluative grade to replace the Incomplete upon completion of the work outstanding by a date established for the student by the instructor. The amount of additional time allowed the student should serve to accommodate the student while being fair to other students in the course. It may be no more than a few days or weeks and, at the extreme, it should not extend past the eleventh week of the session following the one in which the Incomplete grade was received. In certain cases (such as students on probation) the Dean may establish an earlier date for completion of courses with Incomplete grades. When a student fails to submit the work required for removing the Incomplete by the date established, the instructor shall transmit to the Registrar a final grade that assumes a failing performance for the missing work. In the absence of the assignment of a grade by the instructor, the Registrar will convert the I to F when the deadline for making up Incomplete grades from a previous semester has passed.

AUDIT

A student may audit a course with the Dean's or advisor's approval and the consent of the instructor of the course. An auditor receives no credit for the course. Registration in a course cannot be changed from audit to credit or the reverse after the end of the drop/add period. However, a student may take for credit a course he or she audited in an earlier semester. At the beginning of the course, the student and instructor should reach agreement regarding the requirements to be met for a grade of AD. The grade of AD is entered on the student's transcript if approved by the instructor of the course. If the instructor does not approve the grade AD, the enrollment is not posted on the transcript.

PASS/NO PASS

Courses elected on a Pass/No Pass basis and completed with a grade of D or higher will be entered with the grade P on the student's transcript. Courses taken Pass/No Pass for which a grade of F is earned will have NP entered on the transcript. Courses completed with a letter grade P under this option will be counted for credit toward the baccalaureate. Courses completed with the grades P and NP are not included in computing the grade point average. The Pass/No Pass option is subject to the following regulations:

1. Students may submit a Pass/No Pass Option form at any time in the fall or spring semester after the end of the drop/add period and before 5:00 p.m. on the last day of classes. Once the Pass/No Pass Option form is submitted, it may not be retracted or changed.
2. The Pass/No Pass Option is available only during regular fall and spring semesters to students who are in good academic standing and who are currently enrolled in 12 or more hours.
3. The Pass/No Pass Option can be exercised for only one course during any semester.
4. The Pass/No Pass Option cannot be used for courses being taken for satisfaction of Engineering core or General Education Requirements.
5. The Pass/No Pass Option cannot be used for courses taken for the satisfaction of requirements of a major or minor concentration.
6. Courses which are graded on a Pass/No Pass basis (e.g. PHED 055A) do not preclude the student's use of the Pass/No Pass Option in another course taken that same term.
7. Instructors are not notified of a student's use of this option. They are required to submit evaluative grades for all students and these are converted to Pass/No Pass in the Registrar's Office. The meaning of the P and NP will be noted on the transcript.

NOTE: A student may not use the Pass/No Pass option in a course to which the Course Repeat Option is being applied. Once a course is completed under the Pass/No Pass Option, the student CANNOT reverse the Pass/No Pass grade in order to reveal and have posted the actual letter grade earned, or use the course for a purpose for which the use of a Pass/No Pass is prohibited.

Students majoring in any Weatherhead School of Management major may not use the P/NP option for any Weatherhead School of Management courses, either required or elective. (ACCT, BAFI, BLAW, ENTP, LHRP, MGMT, MIDS, MKMR, OPMT, ORBH, OPRE, PLCY).

MIDTERM GRADES

Midterm grades are assigned in undergraduate courses at the end of the eighth week of each semester. At midterm, an instructor may assign to undergraduates evaluative letter grades (A, B, C, D, or F) or grades to indicate satisfactory progress (S) or unsatisfactory progress (U). S and U may not be assigned as final course grades in undergraduate courses. An asterisk (*) on a midterm grade report indicates that the instructor failed to submit midterm grades.

Students may view their midterm grades by going to my.case.edu. The purpose of midterm grades is advisory; the grades are not part of a student's official academic record or transcript. Students who have any low or unreported midterm grades should discuss their progress with their instructors and with their advisors.

COURSE REPETITION

Students have the opportunity to retake a course in which they have received an evaluative grade (A, B, C, D, or F) in order to improve their performance. Those interested in this opportunity must inform the Office of Undergraduate Studies of his/her intention to use the Course Repeat Option Policy. Upon application of the Course Repeat Option, the first grade will remain visible on the transcript, but will be removed from the calculation of the cumulative grade point average and the original semester in which the grade was earned. The second grade will then be used for calculation into the cumulative grade point average (and the semester in which it was earned), even if it is not the better grade. However, if the first attempt of the course resulted in a passing grade, but the second attempt results in a failing grade, then the original grade will remain and the Course Repeat Option will not be applied. Similarly, if a student withdraws from a course that is being repeated, the Course Repeat Option will not be applied and the original grade will stand. If the Course Repeat Option is applied, the student's transcript will show the comment "GRADE NOT COUNTED. COURSE REPEATED." directly below the course. This option may be exercised according to the following conditions:

1. A student may not use the Pass/No Pass Option on a course to which the Course Repeat Option is being applied.
2. Students wishing to use the Course Repeat Option Policy must submit the Course Repeat Option Form by 5:00 p.m. on the last day of classes in the term in which the course is being repeated. Late Course Repeat Options forms will not be accepted.
3. An academic action that occurred under the earlier

grade is neither reversed nor removed from the record as a result of a change in the semester or cumulative averages that results from the repetition of one or more courses.

4. All grades earned at Case Western Reserve University, including those grades removed as a result of the application of the Course Repeat Option Policy, will be applied to the Scholarship GPA that is reviewed in order to determine Case Western Reserve University merit-based scholarship retention.
5. The course repeat option may not be exercised after a degree has been awarded.

CAUTION: Students who are the recipients of any form of federal financial aid (grants, loans, work study, etc.) and use the RPT Option in order to repeat a course that previously earned a passing grade must enroll for a minimum of 12 credits for which credit had not been earned previously.

GRADE REPORTS AND TRANSCRIPTS

Students may view an on-line copy of their grade report by choosing the student tab on the Case Portal at my.case.edu. Students requiring copies of their official transcript should review the transcript request information posted at: www.case.edu/provost/registrar/transcri.htm. The University considers the grades earned by a student and other information about the student's performance at the University confidential and will release such information only upon written request by the student. Transcripts will not be issued to or on behalf of students who have not discharged all obligations to the University.

ACADEMIC STANDING REGULATIONS

GOOD STANDING (EFFECTIVE FALL 2006)

The First Year: For the first two semesters of enrollment, matriculated students who are beginning their college studies may withdraw from a course at any time during the semester, but no later than the last day of classes. Any course for which a grade of W is assigned will not be posted on the official transcript. This policy is not available for transfer students and does not apply to the summer session. In order to maintain good standing a first year undergraduate must earn at Case a minimum of 9 hours and an average of 1.70 or higher in the first semester and a total of 21 hours with a cumulative average of 1.75 or higher by the end of the second semester of full-time enrollment.

Thereafter: Following the first year, the requirements for good standing for full-time students* are:

1. a semester grade point average of 2.00 or higher *and*
2. a cumulative grade point average of 2.00 or higher *and*
3. a minimum of nine credit hours earned each semester *and*
4. an average of 12 credit hours earned each semester during two consecutive semesters of full time enrollment

*For the purposes of academic standing, a student is full-time if he/she was enrolled for 12 or more hours at the end of the semester drop/add period. Semester and cumulative credit hour expectations for good standing will be adjusted and prorated for a matriculated student who enrolls as a part-time student. For example, a half-time student must have completed successfully one-half of the minimum number of required semester hours.

Students with incomplete grades may be placed on "probation (incomplete)" as described below.

PROBATION

Students who, at the end of any semester, fail to maintain the standard of performance required for good standing as specified above will be placed on probation. Students placed on probation are ineligible to represent the University in intercollegiate activities and may not hold an elective or appointed office or committee chairmanship in any campus organization. There are two categories of probation:

1. **Academic Probation:** Students will be placed on academic probation for failure to achieve the standards of performance specified above. When placed on academic probation students will be required to meet a standard of improvement established for individual students by the colleges. They are normally eligible for a maximum of two consecutive semesters of probation for the purpose of restoring themselves to good standing. However, the second semester of probation will be granted only in those cases where during a first semester of probation progress has been made toward achieving good standing.

2. **Probation (incomplete):** A student will be placed on Probation (Incomplete) if he/she has incomplete grades which if converted to F's would result in the student's being placed on academic probation. Once the incompletes are converted to grades, the student shall be restored to good standing or placed on academic probation as determined by the semester and/or cumulative grade point average that results.

SEPARATION

Students on academic probation who fail to meet the standard of improvement established by the colleges will be eligible to be separated from the colleges for at least two academic sessions, including the summer session.

A student is eligible for separation without a semester of probation for either of the following reasons:

1. the student's semester grade point average is less than 1.00.
2. the student has not earned at least 19 credit hours in two consecutive semesters of full-time enrollment.

INELIGIBLE TO REGISTER

Students will be declared "ineligible to register" when they have Incomplete grades which if averaged as F make them eligible for separation. Such students will be required to finish the incomplete courses with grades that justify their retention before they will be allowed to continue in the colleges.

RESTORATION TO GOOD STANDING

Students will be restored to Good Standing at the end of their semester of academic probation if they have earned a semester grade point average of 2.00 or higher and have attained the 2.00 cumulative grade point average and cumulative hours that are required for good standing (see above).

READMISSION

Students separated for reasons of scholarship may petition for readmission after two regular sessions have elapsed. In determining the period of separation, summer session is considered a regular session. Students readmitted after being separated for reasons of academic performance will retain earned credit only for those courses passed with a grade of C or better. Readmitted students do not retain quality points earned before separation, and the cumulative grade point average subsequent to readmission will be computed solely on the basis of work completed following readmission. Students readmitted after being separated must thereafter maintain good academic standing. A readmitted student who performs below the level required for good standing will be eligible for permanent separation from the University. Students separated for reasons of academic performance may not offer for transfer credit work taken elsewhere during the two sessions after their dismissal unless such work has been specifically approved in advance by the Office of Undergraduate Studies.

CRITERIA FOR SCHOLARSHIP RETENTION

FULL-TUITION, TRUSTEES', PRESIDENT'S AND PROVOST'S SCHOLARSHIPS

The academic records of scholarship recipients are ordinarily reviewed at the end of the spring semester. To have a scholarship renewed for the following academic year, a recipient is expected to satisfy two requirements: a minimum number of hours earned after enrolling at Case and a minimum cumulative scholarship grade point average**. The cumulative scholarship gpa requirement is 2.50 at the end of the first year and 3.00 at the end of each succeeding year. Scholarship recipients will be required to have earned at Case at least 24 semester hours in the first year, 54 semester hours by the end of the second year, and 84 semester hours by the end of the third year.

Students participating in the co-op program or taking a leave of absence or who completely withdraw from a semester will have their scholarship reviewed based on an adjusted credit hour standard: first-year students will be expected to earn at least 12 semester hours and a 2.50 cumulative scholarship g.p.a., while upperclass students will be expected to earn 15 semester hours fewer than the expected credit hour criteria and a 3.00 cumulative g.p.a. (e.g., a second-year student will be expected to earn 39 hours as opposed to 54 hours)

Students who study abroad and for whom official overseas transcripts have not been received at the time of scholarship review will retain their scholarships provided that they meet the overall semester hours required when their records are complete or that they successfully complete a full courseload during study abroad as defined by the host institution.

****Scholarship Grade Point Average:** *All courses completed for an evaluative grade at Case are included in the computation of the "scholarship g.p.a." The "scholarship g.p.a." matches the student's cumulative g.p.a., unless the student has repeated a course. If a scholarship recipient has repeated a course, both the original grade and the subsequent grade will be included in the computation of the cumulative average for the purpose of determining eligibility for scholarship continuation.*

PROVOST'S SPECIAL SCHOLARSHIPS

Recipients of Provost's Special Scholarships must maintain academic good standing to be eligible for continuation of their scholarships. Students who do a complete withdrawal for a semester will still have their scholarships reviewed on the basis of good academic standing. Please see good standing requirements on page 81.

DURATION

A student who meets the standards for scholarship retention may receive scholarship assistance for no more than eight semesters of full-time undergraduate study. The scholarship is awarded for full-time enrollment in regular (fall and spring) semesters. If a scholarship recipient completes a bachelor's degree in fewer than eight semesters of full-time study at Case, the scholarship will be terminated upon completion of the degree. In the eighth semester (or in the final semester for a student completing the bachelor's degree in fewer than eight semesters), a recipient may request permission for part-time enrollment with pro-rated scholarship support if completion of the degree does not require full-time enrollment in that final semester.

LEAVE OF ABSENCE POLICY

A scholarship recipient may take a one-semester leave of absence during the student's undergraduate career and put his/her scholarship "on hold" for reactivation upon the student's return to Case. Requests for a one semester leave of absence must be submitted in advance to the Office of Undergraduate Studies. Requests for leaves of absence longer than one semester must be submitted to the Committee on Academic Standing and will be reviewed on an individual basis. The leave of absence policy does not apply to a student who transfers to another institution and subsequently returns to Case.

SCHOLARSHIP TERMINATION

Once a scholarship has been terminated for failure to meet the retention standard, it cannot be reinstated unless reinstatement has been granted by the Committee on Academic Standing after review of an appeal. A scholarship is automatically terminated upon a student's transfer to another institution.

APPEAL PROCESS

Evaluation of student records for scholarship renewal will take place at the end of each academic year, in June. In exceptional circumstances, the Committee on Academic Standing will continue a scholarship for a student whose achievement or whose attendance does not meet the standards outlined above. It is the student's responsibility to write to the Committee on Academic Standing, c/o the Office of Undergraduate Studies, before June 1, to inform the committee of any special circumstances which may have affected performance and/or attendance during the preceding academic year, and to request special consideration for continuation of a scholarship.

ACADEMIC HONORS

DEAN'S HONOR LISTS

The Dean's Honor Lists consist of the names of those undergraduate students who have distinguished themselves by achieving during the previous semester the grade point averages required with a minimum of 12 hours earned and who have no Fs or NPs during the same period. Students with a grade point average of 3.75 or higher will be placed on the Dean's High Honors List. Students with a grade point average of at least 3.50 but less than 3.75 will be placed on the Dean's Honors List. Students whose records include Incompletes become eligible for the Dean's Honor Lists once all Incompletes have been converted to final grades.

COMMENCEMENT HONORS

Commencement Honors are awarded to the top 35 per cent of the graduating class.

Top 10 per cent *summa cum laude*

Next 10 per cent *magna cum laude*

Next 15 per cent *cum laude*

To be eligible for commencement honors, candidates must have:

1. Earned a minimum of 54 hours for evaluative grades (A,B,C,D) in residence at the University.
2. Attained the required percentile ranking on the basis of all work for which grades are averaged at the University.

DEPARTMENTAL HONORS

A number of departments offer outstanding students the opportunity to complete the major concentration with departmental honors. See the departmental representative for information regarding a department's requirements for graduation with honors.

PHI BETA KAPPA

Phi Beta Kappa, a national honor society, recognizes outstanding scholarship in the liberal arts and sciences. The Alpha Chapter of Ohio was established at Western Reserve College in 1847. Students may qualify for election to membership in the second semester of the senior year. A few outstanding students may be elected to membership as juniors.

TAU BETA PI

Tau Beta Pi is a national honor society which recognizes full-time engineering students for outstanding scholarship, leadership, and service.

MORTAR BOARD

Mortar Board is a national honor society which recognizes full-time senior students for outstanding scholarship, leadership, and service.

DEPARTMENTAL AND COLLEGIATE AWARDS

At Honors Assemblies at the end of each spring semester, the University presents awards recognizing the outstanding achievement of individual students. The departmental awards are based on achievement in specific academic disciplines. Some of the departmental and collegiate awards are based on a combination of leadership, scholarship, and service. The collegiate awards for students with the best academic records take into account credit load, grades, and the proportion of courses taken for evaluative grades (i.e., not taken P/NP).

FELLOWSHIPS AND SCHOLARSHIPS

Outstanding students may obtain information about national competitive scholarships (Goldwater, Truman, Rhodes, etc.) in the Office of Undergraduate Studies, 357 Sears Bldg.

Advanced Placement (AP) Course Equivalencies 2007 – 2008*

Except as noted, Advanced Placement credit may be used to replace specific courses for purposes of General Education/Core curriculum, major, or minor requirements. Credit and exemption will be given only for AP examinations taken prior to matriculation. Credit will be posted on a student's record during the first semester of enrollment unless credit is designated as provisional. Please refer to individual department policies below for information about provisional credit. If, after matriculation at Case, a student completes a course for which s/he received credit/exemption on the basis of AP, the AP credit/exemption for that course will be forfeited and will not count towards graduation requirements.

In preparation for your academic advising appointment, please make arrangements for all AP score reports to be sent to Dean Amon in the Office of Undergraduate Studies at Case Western Reserve University. Also, plan to bring any score reports that you might have with you to summer orientation so that you can share that information with the First Year Advisor and make any necessary adjustments based on credit earned. **Generally, AP scores are available in early July.**

**The policies regarding the awarding of credit for Advanced Placement Examinations of The College Board are reviewed annually by departments and may be subject to change.*

| Subject/Exam | Score | Credit Earned | Case Equivalent/Exempt | Placement/Comment |
|-------------------------|--------|---------------|---|--|
| ART HISTORY | 4 or 5 | 6 hours | ARTH 101, 102 | |
| ART STUDIO | | | | |
| Drawing Portfolio | 4 or 5 | 3 hours | ARTS 106 or ARTS 216* * Final credit awarded to be determined after individual portfolio review by Art Studio Program Director. | |
| 2-D Design Portfolio | 4 or 5 | 3 hours | ARTS 101 or ARTS 216* * Final credit awarded to be determined after individual portfolio review by Art Studio Program Director. | |
| 3-D Design Portfolio | 4 or 5 | 3 hours | ARTS T100 or ARTS 201, 210 or 214* * Final credit awarded to be determined after individual portfolio review by Art Studio Program Director. | |
| BIOLOGY | | | | |
| | 4 | 3 hours | BIOL 114 | |
| | 5 | 4 hours | BIOL 214* *Students whose AP Biology course had limited laboratory instruction may accept credit for BIOL 114 and enroll in BIOL 214. | BIOL 215, provided student also has AP Credit in Chemistry. |
| CHEMISTRY | 4 or 5 | 8 hours | CHEM 105, 106, 113 (Students pursuing an Engineering discipline will receive 8 credit hours of chemistry credit and will satisfy the CHEM 111 requirement, but must register for ENGR 145.) | Students who took AP Chemistry in the 11 th grade, and who plan to take organic chemistry may wish to accept partial credit (for CHEM 105 & 113) and enroll in CHEM 106 in the spring. |
| COMPUTER SCIENCE | | | | |
| Computer Science A | 4 or 5 | 3 hours | ENGR 131 | Students wanting to enroll in EECS 233 or 281 either need to learn Java on their own, or need to forfeit their AP credit and take ENGR 131 to learn Java programming. |
| Computer Science AB | 4 or 5 | 7 hours | ENGR 131, EECS 233 | Maximum of 7 hours for students with both exams. Students interested in continuing with coursework in computer science/engineering will be expected to know Java and may wish to forfeit AP credit and enroll in ENGR 131. |
| ECONOMICS | | | | |
| Microeconomics | 4 or 5 | 3 hours | ECON 102 | |
| Macroeconomics | 4 or 5 | 3 hours | ECON 103 | |

Advanced Placement (AP) Course Equivalencies (continued)

| Subject/Exam | Score | Credit Earned | Case Equivalent/Exempt | Placement/Comment |
|--|--------------------------------|---------------|----------------------------|--|
| ENGLISH | | | | |
| Language/Composition | 4 or 5 | 3 hours | ENGL 150 | |
| Literature/Composition | 4 or 5 | 3 hours | ENGL 200 | |
| ENVIRONMENTAL SCIENCE | | | | |
| | 4 or 5 | 3 hours | GEOL 202 | |
| FRENCH | | | | |
| French Language | 3 | 3 hours | FRCH 201 | FRCH 202 |
| | 4 or 5 | 6 hours | FRCH 201, 202 | 300-level FRCH |
| French Literature | 3 | 3 hours | FRCH 201 | FRCH 202 |
| | 4 or 5 | 6 hours | FRCH 201, 320 | FRCH 202 or 300-level FRCH |
| GERMAN | | | | |
| | 3 | 3 hours | GRMN 201 | GRMN 202 |
| | 4 or 5 | 6 hours | GRMN 201, 202 | 300-level GRMN |
| GOVERNMENT & POLITICS | | | | |
| American Government | 4 or 5 | 3 hours | POSC 109 | |
| Comparative Politics | 4 or 5 | 3 hours | POSC 260 | |
| HISTORY | | | | |
| American History | 4 or 5 | 3 hours | HSTY 256 | |
| European History | 4 or 5 | 3 hours | HSTY 212 | |
| World History | 4 or 5 | 3 hours | HSTY T100* (HSTY elective) | *Credit for this course not applicable to History major or minor. |
| <i>A maximum of six AP History semester hours can be awarded.</i> | | | | |
| HUMAN GEOGRAPHY | 4 or 5 | 3 hours | ANTH T100* (ANTH elective) | *Credit for this course not applicable to Anthropology major or minor. |
| LATIN | | | | |
| Virgil | 4 or 5 | 3 hours | LATN 202 | 300-level LATN |
| Latin Literature | 4 or 5 | 3 hours | LATN 201 | 300-level LATN |
| MATHEMATICS | | | | |
| Calculus AB | 4 or 5 | 4 hours | MATH 121/125 | MATH 122/126 |
| Calculus BC | 3-with an AB sub-score= 4 or 5 | 4 hours | MATH 121/125 | MATH 122/126 |
| Calculus BC | 4 or 5 | 8 hours | MATH 121/125, 122/126 | MATH 223 |
| MUSIC | | | | |
| Music Theory | 4 or 5 | 3 hours | MUTH 103* | |
| Music Listening/Literature | 4 or 5 | 3 hours | MUGN 201* | *Credit for these courses not applicable to any music major program. |
| PHYSICS | | | | |
| Physics B | 4 or 5 | 4 hours | PHYS 115 | PHYS 116 |
| Physics C-Mech* | 4 or 5 | 4 hours | PHYS 121 | PHYS 122 |
| Physics C-E & M* | 4 or 5 | 3 hours | PHYS T100** | |
| <i>A maximum of seven AP Physics credit hours can be awarded. Students planning to major in Physics are strongly advised to take a Case mechanics course (PHYS 121 or 123). Students who elect to take PHYS 123 forfeit the AP credit. **PHYS T100 offers 3 hours of physics general transfer credit, but no exact Case course equivalency. Students who earned a 4 or 5 on their AP Physics exam but who had little or no high school physics laboratory experience should consult with the department about taking PHYS 113A to build their laboratory skills before moving on to PHYS 116 or 122.</i> | | | | |
| PSYCHOLOGY | 4 or 5 | 3 hours | PSCL 101 | |
| SPANISH | | | | |
| Spanish Language | 3 | 3 hours | SPAN 201 | SPAN 202 |
| | 4 or 5 | 6 hours | SPAN 201, 202 | 300-level SPAN |
| Spanish Literature | 3 | 3 hours | SPAN 201 | SPAN 202 |
| | 4 or 5 | 6 hours | SPAN 201, 313 | SPAN 202 or 300-level SPAN |
| STATISTICS | 5 | 3 hours | STAT 201 | |

International Baccalaureate (IB) Course Equivalencies 2007 – 2008*

International Baccalaureate (IB) credit may be used to replace specific courses for purposes of SAGES General Education/Core curriculum, major, or minor requirements. Credit and exemption will be given only for IB examinations taken prior to matriculation. Case Western Reserve University offers course credit for scores of 5, 6 and 7 for most Higher Level (HL) examinations. Subsidiary Level (SL) is only accepted in the area of foreign language. Credit will be posted on a student's record during the first semester of enrollment. If, after matriculation at Case, a student completes a course for which s/he received credit/exemption on the basis of IB, the IB credit/exemption for that course will be forfeited and will not count towards graduation requirements.

In preparation for your academic advising appointment, please make arrangements for all IB score reports to be sent to Dean Amon in the Office of Undergraduate Studies at Case Western Reserve University. Also, plan to bring any score reports that you might have with you to summer orientation so that you can share that information with the First Year Advisor and make any necessary adjustments based on credit earned. Because examination results are usually not available until late summer or early fall, you should plan your schedule on your own estimate of your results. If your actual scores turn out to be different, adjustments can be made to your schedule after you arrive at the University.

If you have taken an examination that is not listed below, please contact Dean Julie Amon, Office of Undergraduate Studies, (216) 368-2928.

**The policies regarding the awarding of credit for International Baccalaureate Examinations are reviewed annually by departments and may be subject to change.*

| Subject/Exam | Score | Credit Earned | Case Equivalent/Exempt | Placement/Comment |
|--|--------------|--------------------|---|---|
| Biology | HL 5, 6 or 7 | 8 hours | BIOL 214, 216 | BIOL 215 |
| Chemistry | HL 5, 6 or 7 | 8 hours | CHEM 105, 106, 113 | CHEM 223 |
| Economics | HL 5, 6 or 7 | 6 hours | ECON 102, 103 | 200 or 300-level Economics course |
| English Language A | HL 5, 6 or 7 | 3 hours | WLIT 290 | |
| Foreign Language | | | | |
| French B | SL 6 SL 7 | 3 hours 6 hours | FRCH 201 FRCH 201, 202 | FRCH 202 300-level FRCH |
| German B | SL 6 SL 7 | 3 hours 6 hours | GRMN 201 GRMN 201, 202 | GRMN 202 300-level GRMN |
| Spanish B | SL 6 SL 7 | 3 hours 6 hours | SPAN 201 SPAN 201, 202 | SPAN 202 300-level SPAN |
| History of the Americas | HL 5, 6 or 7 | 3 hours | HSTY T100* (HSTY elective) | *Credit for this course not applicable to History major or minor. |
| History of Europe | HL 5, 6 or 7 | 3 hours | HSTY 212 | |
| Mathematics | HL 5,6 or 7 | 7 hours | MATH 121 and MATH T100 (MATH elective) | MATH 122/126 |
| Physics | HL 5, 6 or 7 | 7 hours | PHYS 121, PHYS T100 (PHYS elective) | PHYS 122 |
| Students who earned a 5, 6, or 7 on their IB Physics exam but who had little or no high school physics laboratory experience should consult with the department about taking PHYS 113A to build their laboratory skills before moving on to PHYS 116 or 122. | | | | |
| Psychology | HL 5, 6 or 7 | 3 hours | PSCL 101 | 200 or 300-level Psychology course |
| Theatre Studies | HL 5, 6 or 7 | 6 hours | THTR 101, 123 | THTR 102, 124 |

