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**Summer 2009 Semester**

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<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>18</td>
<td>Monday First Undergraduate 5 week session begins.</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>Monday Memorial Day – No classes.</td>
</tr>
<tr>
<td>June</td>
<td>18</td>
<td>Thursday First Undergraduate 5 week session ends.</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>Monday Second Undergraduate 5 week session begins.</td>
</tr>
<tr>
<td>July</td>
<td>23</td>
<td>Thursday Second Undergraduate 5 week session ends.</td>
</tr>
</tbody>
</table>

**Fall 2009 Semester**

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>24</td>
<td>Monday Classes begin in all divisions. First day to apply for a course through pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Friday Last day to apply for a course through pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>Saturday Drop/Add period ends.</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>Monday Withdrawal from classes begins. 90% withdrawal refund.</td>
</tr>
<tr>
<td>September</td>
<td>7</td>
<td>Monday Labor Day – No classes.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Tuesday 50% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Monday 50% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Monday 25% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Monday 25% withdrawal refund.</td>
</tr>
<tr>
<td>October</td>
<td>5</td>
<td>Monday 25% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Monday Fall Holiday – No classes. 25% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Tuesday Fall Holiday – No classes.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Friday Spring 2010 schedule and advisement guide available on the web.</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Monday No withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>Saturday Spring 2010 undergraduate registration begins. Students with 84.0 or more credit hours begin to register.</td>
</tr>
<tr>
<td>November</td>
<td>7</td>
<td>Saturday Spring 2010 undergraduate registration. Students with 54.0 – 83.0 credit hours begin to register.</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Wednesday Veteran’s Day – Classes in session.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Friday Last day to withdraw from a course.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Saturday Spring 2010 undergraduate registration. Students with 24.0 – 53.0 credit hours begin to register.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Saturday Spring 2010 undergraduate registration. Students with 0 – 23.0 credit hours begin to register.</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>Wednesday Thanksgiving Recess begins – no classes.</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>Monday Classes resume. First day to withdraw from pass/fail program.</td>
</tr>
<tr>
<td>December</td>
<td>4</td>
<td>Friday Classes end in undergraduate division. Last day to withdraw from pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Monday Final exams begin in all divisions.</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Friday Final exams end in undergraduate divisions.</td>
</tr>
</tbody>
</table>

**Spring 2010 Semester**

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>4</td>
<td>Monday College reopens.</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>Monday Martin Luther King Day – No classes.</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Tuesday Classes begin in all divisions. First day to apply for a course through pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>Monday Drop/Add ends. Last day to apply for a course through pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>Tuesday Withdrawal from classes begins. 90% withdrawal refund.</td>
</tr>
<tr>
<td>February</td>
<td>2</td>
<td>Tuesday 50% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Tuesday 50% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Saturday Graduate Education classes in session.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Monday President’s Day Holiday – No classes.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Tuesday President’s Day Holiday – No classes. 25% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>Tuesday 25% withdrawal refund.</td>
</tr>
<tr>
<td>March</td>
<td>1</td>
<td>Monday Summer 2010 schedule available on the web.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Tuesday 25% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Tuesday 25% withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Friday Fall 2010 schedule and advisement guide available on the web.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Monday Summer 2010 registration begins.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Tuesday No withdrawal refund.</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>Saturday Students with 72.0 or more credit hours begin to register.</td>
</tr>
<tr>
<td>April</td>
<td>1</td>
<td>Thursday Easter recess begins – No classes.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Monday Classes resume. Graduation checkout begins.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Friday Last day to withdraw from a course.</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Saturday Students with 42.0 - 71.0 credit hours begin to register.</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Saturday Students with 0.0 - 41.0 credit hours begin to register.</td>
</tr>
<tr>
<td>May</td>
<td>3</td>
<td>Monday First day to withdraw from pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Friday Classes end in undergraduate division. Last day to withdraw from pass/fail program.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Monday Final exams begin.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Friday Final exams end in undergraduate divisions.</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Wednesday Final grades due at 9:00 am.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Thursday Final Grades available on the web.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Friday Baccalaureate Mass for the undergraduate and graduate Class of 2010.</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>Saturday Undergraduate Commencement Ceremony.</td>
</tr>
</tbody>
</table>
### Summer 2010 Semester

May
- 24 Monday  First Undergraduate 5 week session begins.
- 31 Monday  Memorial Day – No classes.

June
- 24 Thursday  First Undergraduate 5 week session ends.
- 28 Monday  Second Undergraduate 5 week session begins.

July
- 5 Monday  Fourth of July holiday celebrated – No classes.
- 29 Thursday  Second Undergraduate 5 week session ends.

### Fall 2010 Semester

August
- 30 Monday  Classes begin in all divisions. First day to apply for a course through pass/fail program.

September
- 3 Friday  Last day to apply for a course through pass/fail program.
- 4 Saturday  Drop/Add period ends.
- 6 Monday  Labor Day – No classes.
- 7 Tuesday  Withdrawal from classes begins. 90% withdrawal refund.
- 14 Tuesday  50% withdrawal refund.
- 21 Tuesday  25% withdrawal refund.
- 28 Tuesday  25% withdrawal refund.

October
- 5 Tuesday  25% withdrawal refund.
- 11 Monday  Fall Holiday – No classes.
- 12 Tuesday  Fall Holiday – No classes. 25% withdrawal refund.
- 19 Tuesday  25% withdrawal refund.
- 26 Tuesday  No withdrawal refund.
- 30 Saturday  Spring 2011 undergraduate registration begins. Students with 84.0 or more credit hours begin to register.

November
- 6 Saturday  Spring 2011 undergraduate registration. Students with 54.0 – 83.0 credit hours begin to register.
- 11 Thursday  Veteran’s Day – Classes in session.
- 12 Friday  Last day to withdraw from a class.
- 13 Saturday  Spring 2011 undergraduate registration. Students with 24.0 – 53.0 credit hours begin to register.
- 20 Saturday  Spring 2011 undergraduate registration. Students with 0.0 – 23.0 credit hours begin to register.
- 24 Wednesday  Thanksgiving recess begins – No classes.
- 29 Monday  Classes resume.

### Winter Break

December
- 6 Monday  First day to withdraw from pass/fail program. Undergraduate classes end. Last day to withdraw from pass/fail program.
- 13 Monday  Final exams begin.
- 17 Friday  Undergraduate final exams end.
- 22 Wednesday  Final grades due 9:00 am.
- 23 Thursday  Final grades available on the web.
- 24 Friday  College closes for Christmas holiday.

### Spring 2011 Semester

January
- 3 Monday  College reopens.
- 17 Monday  Martin Luther King Day – No classes.
- 18 Tuesday  Classes begin in all divisions. First day to apply for course through pass/fail program.
- 24 Monday  Drop/add period ends.
- 25 Tuesday  Withdrawal from classes begins. 90% withdrawal refund.

February
- 1 Tuesday  50% withdrawal refund.
- 8 Tuesday  50% withdrawal refund.
- 15 Tuesday  25% withdrawal refund.
- 21 Monday  President’s Holiday – No classes.
- 22 Tuesday  President’s Holiday – No classes. 25% withdrawal refund.

March
- 1 Tuesday  25% withdrawal refund.
- 7 Monday  Summer 2011 schedule available on the web.
- 8 Tuesday  25% withdrawal refund.
- 15 Tuesday  No withdrawal refund.
- 18 Friday  Fall 2011 schedule and advisement guide available on the web.
- 21 Monday  Spring recess begins – No classes.
- 28 Monday  Classes resume. Summer 2011 registration begins.

April
- 2 Saturday  Fall 2011 undergraduate registration begins. Students with 72.0 or more credit hours begin to register.
- 6 Wednesday  Graduation checkout begins.
- 8 Friday  Last day to withdraw from a course.
- 9 Saturday  Fall 2011 undergraduate registration. Student with 42.0 – 71.0 credit hours begin to register.
- 16 Saturday  Fall 2011 registration. Students with 0.0 – 41.0 credit hours begin to register.
- 21 Thursday  Easter recess – No classes.
- 26 Tuesday  Classes resume.

May
- 2 Monday  First day to withdraw from pass/fail program.
- 6 Friday  Undergraduate classes end. Last day to withdraw from pass/fail program.
- 9 Monday  Final exams begin.
- 13 Friday  Final exams end in undergraduate division.
- 18 Wednesday  Final grades due 9:00 am.
- 19 Thursday  Spring final grades available on the web.
- 20 Friday  Baccalaureate Mass for the undergraduate and graduate Class of 2011.
- 21 Saturday  Undergraduate Commencement Ceremony.
The College and Its Mission

Founded by the Jesuits in 1870, Canisius College is an independent, co-educational, medium sized institution of higher education conducted in the Catholic and Jesuit tradition. It offers undergraduate programs built upon a liberal arts core curriculum, leading to associate and baccalaureate degrees, plus graduate programs in business, education and other professional fields, leading to the master's degree.

Canisius espouses the ideal of academic excellence along with a sense of responsibility to use one's gifts for the service of others and the benefit of society. It seeks to promote the intellectual and ethical life of its students, helping to prepare them for productive careers as well as for meaningful personal lives and positive contributions to human progress. Its curricular and co-curricular programs are designed to educate the whole person through the development of intellectual, moral, spiritual and social qualities. It aims to promote the contemporary Jesuit mission of the service of faith and the promotion of justice.

As a Catholic institution that welcomes all who share in its quest, Canisius will:

- foster an atmosphere of understanding and respect in dialogue with other intellectual and spiritual traditions;
- teach the responsible use of human freedom in a value-oriented curriculum and co-curriculum that incorporate concern for spiritual and human factors as well as more pragmatic ones;
- continue the Jesuit principle of care for individual persons;
- emphasize excellence in teaching, marked by intellectual vigor, close student-faculty relations and an expectation of active rather than passive learning;
- prepare students to assume positions of leadership in church and society;
- foster a sense of community among its students and staff through personal interaction marked by friendliness, respect, openness and integrity;
- take advantage of its location in a major urban center on an international border to serve the community and the world, and to play a significant role in fashioning the world of the 21st century by contributing its own special blend of academic excellence, personal concern and an optimistic commitment to the future.

As an urban college, Canisius enjoys a special relationship with the City of Buffalo. The concept of community service on which the college prides itself is best evidenced by the large number of Canisius graduates who have occupied important positions in the professional, educational, commercial and political life of the city and its surrounding communities. Buffalo's largest private college is named after Saint Peter Canisius, a 16th century Dutch scholar. The college's founders were guided by the same educational ideals that inspired several European universities and initiated a tradition of service to student and community.

Starting out as a single building in the center of downtown Buffalo, Canisius College has since expanded to cover the more than 57 acres and 35 academic buildings of its dual campus on Main Street. It is easily accessible by expressway, subway and bus routes.

In addition to the College of Arts and Sciences, Canisius includes the Richard J. Wehle School of Business, the School of Education and Human Services, a Graduate Division and a Summer Session, with a total enrollment for 2009-2010 of nearly 5000 students.

Canisius College is a private, independent Roman Catholic college. It is governed by an independent self-perpetuating Board of Trustees under a charter granted by the Board of Regents of the University of the State of New York.

Institutional Learning Goals

These broad learning goals express the college's expectations and hopes for all students who study within its walls no matter what path the student takes through the college experience. All of the college's efforts will be in support of one or more of the goals, but we recognize that not every student will achieve each goal in the same way.

The goal statements are declarative sentences in the present tense. In practice, students move at different paces toward these goals, and assessment of goals will occur at appropriate times and places throughout the educational experience.

Goal 1. Academic Excellence: Canisius students:

a. in the Jesuit tradition, are intentional learners who can adapt to new environments, integrate knowledge and continue learning throughout their lives;
b. demonstrate a breadth of knowledge across many humanistic, scientific and social scientific fields;
c. demonstrate a depth of knowledge in one or more fields of learning; they demonstrate the skills and habits of mind that derive from that knowledge and sustain its further growth.

Goal 2. Communication Skills: Canisius students:
   a. demonstrate that they can write and speak with clarity and precision in both their academic disciplines and in more general situations;
b. demonstrate that they can listen and read with both literal comprehension and critical awareness in both their academic disciplines and more general situations;
c. integrate current technologies into research and communication.

goal 3. Integrity and Civility: Canisius students:
   a. demonstrate knowledge of general ethical and moral issues as well as ones specific to their fields of study;
b. act with civility and integrity in pursuit of the responsible use of human freedom.

Goal 4. Critical Thinking and Problem Solving: Canisius students:
   a. synthesize new knowledge and apply it to present and future problems;
b. identify, analyze and comprehend the assumptions and underlying premises in a variety of academic and real-world arguments, conflicts and debates;
c. demonstrate that they can find, evaluate and effectively use information while understanding the ethical and legal issues governing information use.

Goal 5. Community Involvement and Leadership: Canisius students:
   a. demonstrate leadership in the service of others, in intellectual and spiritual inquiry and in assuming positions of responsibility in the community and marketplace;
b. use their gifts for the service of others and the benefit of society.

Goal 6. Jesuit, Catholic Intellectual Tradition: Canisius students:
   a. demonstrate a familiarity with dimensions of the Catholic and Jesuit intellectual traditions as they occur in literature, art, science and social teaching.

Accreditation
Canisius College received its authority to confer bachelor's degrees in 1883 when it was incorporated by the Regents of the University of the State of New York. In 1884, the college offered its first course in the graduate program leading to the degree of master of arts.

Canisius College is an accredited member of the Middle States Association of Colleges and Schools. All of the college's programs are registered by the Regents of the University of the State of New York through the State Education Department. The undergraduate programs in Business Administration and the M.B.A. program are accredited by the Association to Advance Collegiate Schools of Business International.

The Chemistry major is accredited by the American Chemical Society and the Athletic Training major by the Commission on Accreditation of Athletic Training Education. The programs of the School of Education and Human Services designed to prepare students for school-based careers are accredited by the National Council for Accreditation of Teacher Education. The Graduate Program for Teachers of the Deaf is accredited by the Council on the Education of the Deaf. The Department of Counseling and Human Services is accredited by the Council for Accreditation of Counseling and Related Educational Programs and offers master's degrees in School Counseling and Community Health Mental Counseling. The accreditations are for School Counseling and Community Counseling.

The college is also a member of the National Association of Independent Colleges and Universities, the Commission on Independent Colleges and Universities of the State of New York, the Association of Catholic Colleges and Universities, the Association of Jesuit Colleges and Universities, the Association of Colleges and Universities of the State of New York, the Middle Atlantic Association of Colleges of Business Administration and the Western New York Consortium of Higher Education.

Campus Ministry
Campus Ministry is responsible for supporting the spiritual and religious life of the campus. The activities of campus ministry are open to students and staff of all faiths. Campus Ministry at Canisius College seeks to empower students, faculty, administrators, staff and alumni as persons of faith “for and with others,” in the Catholic, Jesuit tradition.

In addition to providing for a vital Roman Catholic
liturgical and sacramental life, the campus ministry team:
- offers opportunities for spiritual retreats;
- organizes opportunities for prayer and small faith communities;
- promotes opportunities for service to those in need, both locally and through domestic and international service trips;
- promotes ethical values and educates and organizes around issues of social justice and peace;
- and provides pastoral counseling and spiritual direction.

Mission statement: Campus Ministry at Canisius College is missioned to empower our students, faculty, administrators, staff and alumni to grow as leaders and persons for others within Church and community. We do this in the spirit of Jesus and the Jesuit tradition. We are guided by the cornerstones of spirituality, community, simplicity of life and service and are committed to work toward justice with people of all faiths.

The Faculty
The college seeks faculty members known to be creative and energetic teachers who also seek to engage their students in their research and scholarship. Modest class size is the norm, and interaction among students and faculty is easy and natural.

Canisius’ full time faculty members have degrees from over 100 different universities, including 24 degrees from Europe, nine from Asia/Pacific, 16 from Canada and two from South America. Each of the 226 full-time faculty members has been chosen for his or her academic competence, ability to teach, interest in research and moral integrity. The college’s present faculty is a group of highly trained, dedicated individuals who take a personal interest in the students under their charge. Over 96 percent have earned doctoral or terminal degrees in their fields.

Over 280 individuals from the fields of law, health care, education, business, government, science, technology and the arts contribute as part time faculty members to the mission of Canisius College.

The Library
The quality of any educational institution is determined largely by the proficiency of its faculty and the excellence of the information resources available to support the curriculum.

The Andrew L. Bouwhuis Library is evolving into a learning commons to better accommodate collaborative learning styles and to provide additional support for student learning. The building now has ample study facilities, computers, a curriculum materials center for K-12 teacher training, group work rooms, audio-visual areas and a Tim Hortons coffee shop. Canisius students have at their disposal an excellent library collection of over 400,000 volumes of books, periodicals, microforms and other materials. The Library subscribes to over 27,000 full text electronic periodicals as well as to hundreds of paper journal subscriptions. Electronic resources can also be accessed from computer labs and residence halls through the campus network and from off-campus via the World Wide Web. The Library has a substantial complement of computer equipment to access these resources, including over 50 laptop computers with wireless network access that may be used by students within the building.

Canisius students have convenient and rapid access to over eight million volumes in the ConnectNY consortium and to the extensive research collections of the Center for Research Libraries. Additional library materials are available via Interlibrary Loan.

When school is in session, the Library is open every day of the week for study and research, and is open nights until 2:00 a.m. from Sunday through Thursday. Assistance and guidance in the use of the Library and its facilities are provided by a highly competent staff of professional librarians and technical assistants.

The Rev. J. Clayton Murray, S.J. Archives, located in Bouwhuis Library, houses information related to the history of Canisius College. Visitors and researchers are welcome. The Library

Computer Facilities
Wireless networking is available throughout the campus. Instructional computing facilities include over 300 personal computers, as well as scanners and printers. Computers in student labs have access to word processing, spreadsheet, database, presentation, web development and statistical analysis software. There are several Internet Plazas located around campus where students may check their electronic mail or access the World Wide Web. All computers are connected to the World Wide Web and have access to extensive online research databases provided by the Andrew L. Bouwhuis Library. Laptops for loan and wireless networking are available for use in the Bouwhuis Library.

Canisius College has an extensive web site at www.canisius.edu that includes web-based electronic mail, course materials, course discussion boards and course registration.

Residence halls are wired for satellite TV (including several Canisius-oriented channels and Internet access. Classrooms have been recently renovated and all contain some level of technology. Most classrooms provide video and computer projection for the instructor.

Several departments, including Digital Media Arts and Computer Science, maintain a substantial complement of computing equipment specific to their needs.

Student Retention
Retention from freshman to sophomore years has been as follows for the last three years:

Class of 2009 - 80.4%
As defined by the federal government, the retention rate is the percentage of first-time bachelors degree-seeking undergraduates from the previous fall who are again enrolled in the current fall. Freshmen are defined as those who registered prior to their initial matriculation. Sophomores are those still registered following the drop/add period one year later.

Service Learning: Forming the Complete Student
Service Learning is the incorporation of community service within academic courses, together with structured reflection upon that experience and its connection to the course. The service becomes "a text" within the course.

As an educational method, Service Learning provides students with fertile ground on which to test theories acquired in the classroom and to concretize abstract thought.

Research has indicated that students involved in Service Learning courses agree that their service experience helped them better understand the course, and has benefited them personally. Service Learning is also "values education." The development and formation of values arise out of a social consciousness of the situation of the other, especially the other who is deprived in some way. Service Learning attempts to make students more aware of social injustices, causes them to consider serious civic engagement in society and introduces them to the challenges and possibilities of systemic change.

The integration of Service Learning into an undergraduate or graduate course has five key components:
1. Service activities may be mandatory or optional. The number of service hours can vary, but the suggested norm over a semester is 15-20.
2. Clear connections exist between service activities and the academic discipline.
3. Service activities benefit the one receiving the service, the students, the service partner and the university, in a significant way.
4. Students engage in a carefully articulated reflection process around the service, the discipline and the way in which the experience has affected them.
5. Assessment of the outcomes of the service experience is done through evaluations by the service agency, the student and the professor.

For more information, go to the Service Learning website at www.canisius.edu/service learning.

Nondiscrimination
Canisius College does not discriminate on the basis of age, race, religion or creed, color, sex, national or ethnic origin, sexual orientation, marital status, veteran's status, genetic predisposition or carrier status, or disability in administration of its educational policies, employment practices, admissions policies, scholarship and loan programs and athletic and other school administered programs.

Canisius admits students of any age, race, religion or creed, color, sex, national or ethnic origin, sexual orientation, marital status, or veteran's status to all rights, privileges, programs and activities generally accorded or made available to students at the college.

It continues to be the policy of Canisius College not to discriminate on the basis of handicap. No person is denied employment, admission or access solely because of any physical, mental, or medical impairment which is unrelated to the ability to engage in the activities involved in the education requirements or occupation for which application has been made.

Course Rotations
Certain majors and programs have listed their courses and included the semester of offering, either fall or spring or both. These course rotations are subject to change. Actual offerings are listed in the online course schedule produced each semester by the Office of Student Records.
Participation at all levels of the college’s operation is an important part of the student experience at Canisius. Student involvement is a valuable part of each individual’s learning process and to the college as a whole as well, enabling the institution to draw upon the creativity, innovation and leadership of its students in its efforts to serve them better.

Students discover that education takes place both inside and outside of the classroom. In keeping with the Jesuit ideal of educating the whole person, students learn and develop a complete sense of self through participation in such experiences as life in the residence halls, co-curricular activities, organizational membership and leadership, social involvement in the community and membership on the various college committees. Through such involvement in the entire life of the college community, a student’s years at Canisius will be a time of intellectual growth, advancement in self knowledge and an improved knowledge of others.

**Division of Student Affairs**
The vice president for student affairs and the dean of students, with the aid of staff and various committees, determine all student affairs policies and procedures for the college, subject to the approval of the president.

Assistance to students is provided by the following offices:
- Athletics - Intercollegiate
- Athletics - Intramural Athletics
- Campus Programming and Leadership Development
- Counseling Center
- Disability Support Services
- International Student Programs
- Multicultural Programs
- Public Safety
- Residence Life
- Student Affairs/Community Relations
- Student Center
- Student Health Center

**Athletics**
Canisius College conducts an extensive athletics program for both men and women, including varsity sports (NCAA Division I), clubs and intramural opportunities.

**Varsity Sports:** Men—baseball, basketball, cross country, golf, ice hockey, lacrosse, soccer, swimming and diving.
Women—basketball, cross country, lacrosse, soccer, softball, swimming and diving, synchronized swimming and volleyball.

**Athletic Clubs:**
Men’s & Women’s—rugby, volleyball hockey, equestrian.
Men’s—lacrosse, field hockey.

Women’s—crew.
Co-ed—bowling, cheerleading, power lifting.

**Intramural Opportunities:**
Men—5 on 5 and 3 on 3 basketball, flag football.
Women—5 on 5 and 3 on 3 basketball.
Co-ed—indoor & outdoor soccer; volleyball, floor hockey, water polo, ultimate frisbee. softball, badminton.

**Student Health Center**
The Student Health Center is committed to providing high quality health care that is easy to access, individualized and effective. The staff views each visit as an opportunity to care for and to educate students to be knowledgeable consumers of health care and to understand how lifestyle choices today impact current and future health.

By creating an atmosphere that is marked by openness, warmth, respect and integrity, students are made to feel welcome, comfortable and safe seeking health care on campus.

The Health Center is staffed by physicians, a nurse practitioner, physician assistance and registered nurses. Appointments are strongly recommended and can be made using GriffMed, the student on-line scheduler or by calling Student Health. Students can “walk in” for care and will be given the next available appointment.

The Health Center refers students to local medical specialists and to local hospitals for services not rendered in the Health Center. Medical emergencies on campus are handled by Public Safety. The Public Safety staff is trained in first aid and CPR. Students needing health care on the evenings and weekends are referred to Public Safety for transportation to a local hospital or urgent care center.

Full time undergraduates are required to have a complete physical examination by their health care provider before starting classes. The physical examination form is mailed to all newly deposited students. The Student Health Center does not accept any other form or documentation of a physical examination.

All students, undergraduate and graduate, registered for six or more credits are required by New York State Public Health Laws to submit proof of immunizations to the Health Center before classes begin. All immunization records must be signed by a doctor, nurse practitioner or physician assistant.

For more information about the Student Health Center, physical examination and immunization requirements, please visit our web site at www.canisius.edu/student health.

**Health and Accident Insurance**
Canisius College strongly recommend that all students have health insurance coverage. An unexpected illness or sudden injury can result in financial burden if a student must pay for medical services out of pocket. This burden can impact a
student’s ability to complete their studies at Canisius.

Students should carry their health insurance card with them on campus and also submit a copy of the card to the Health Center. Students should know how their plan works and what must be done when health care is needed at school. Students should contact their health plan member services for this information prior to arrival on campus.

Canisius College offers all students registered for six or more credits, a sickness and accident plan designed specifically for college students. Enrollment periods for the plan occur in September and January. For information about the plan including cost, eligibility, benefits and exact enrollment dates, visit the Health Center web site at www.canisius.edu/studenthealth.

Counseling Center
The Counseling Center is committed to developing the personal and academic potential of Canisius College students by providing comprehensive counseling services and outreach education to support the emotional and mental health of our students. Professional counseling services are available to all registered students to address issues that may interfere with a student’s academic success and personal growth. In addition to individual and group counseling, the Counseling Center staff is available to conduct educational programs and workshops for the Canisius College community.

Other services available through the Counseling Center are evaluations for medication, as well as consultation and referrals to community resources. In addition, counselors are available after hours for crisis intervention and mental health emergencies.

Students who access counseling services are assured confidentiality, unless it is apparent that the student may do harm to self or others. A student’s privacy and confidentiality are carefully guarded and protected. No information about participation in counseling becomes part of any official record.

Counseling services are of no additional cost to registered students. Students may schedule appointments by calling the Counseling Center at 888-2620. Appointments may also be scheduled in person. The Counseling Center is located in the tunnel level of Frisch Hall, (located in the same office suite as the Student Health Center).

Public Safety
The Department of Public Safety, located in the basement of the Bosch Residence Hall, is open 24 hours a day, providing around the clock protection and services to the campus community. The department was established to protect the educational environment of Canisius College, keeping the environment free from the threat of physical harm, property damage and disruptive activity. Departmental objectives include: aiding in the enforcement of federal, state and local laws; preventing crime; regulating non-criminal conduct and preserving the peace.

Uniformed Public Safety Officers are on duty 24 hours a day, seven days a week, 365 days a year. Their primary responsibilities include: patrolling the campus area on foot, on bicycles and in vehicles; security services; emergency response; and requests for assistance involving members of the campus community.

Public Safety also provides a variety of support services that are tailored to meet the needs of the campus community. These services include: conducting crime prevention and personal safety programs, operating the campus shuttle system, providing Canisius ID cards, and providing assistance to campus motorists experiencing minor mechanical problems.

For a comprehensive summary of the activities and services provided by Public Safety, visit the Department of Public Safety Web site at www.canisius.edu/public_safety.

Crime Statistics
Canisius College complies with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act by making available information on campus security and personal safety. This information includes crime prevention, public safety, law-enforcement authority, crime reporting polices, disciplinary procedures and other important matters about security on campus. Also available are statistics for the three previous calendar years on reported crimes that occurred on campus, in certain off-campus buildings or property owned or controlled by Canisius College and on public property within or immediately adjacent to and accessible from the campus. The Canisius College Advisory Committee on Campus Safety will provide upon request all campus crime statistics as reported to the United States Department of Education. This information is available on-line at http://www.ope.ed.gov/security. A PDF of the full report is available on the Canisius College Web site at http://www.canisius.edu/public_safety/stats.asp. A printed copy may be obtained by calling the dean of students at 716-888-2130.

Residence Life (On-Campus Living)
The Office of Residence Life promotes the personal growth of resident students as they adjust to college life; interact with others in the residence halls and the college community. Canisius College believes that the experience of living on campus contributes to the development of a well-rounded individual. The Office of Residence Life creates an environment where students can live, learn and develop leadership skills; while becoming men and women for others.

Canisius College has been building and renovating residence halls since 1992. Canisius offers some of the best state-of-the-art residence halls currently in the country.

In the fall of 2005, Canisius College opened a new residence hall, Dugan Hall, which features suites; half with private bathrooms and half with private living rooms. This building also features a kitchen, lounge and laundry facilities on every floor. Dugan Hall is open to freshmen and sophomores, and
is also the home to a themed floor dedicated to freshmen students who are enrolled in the ’s Honors Program. New in fall 2009, a second Honors themed floor will be available for sophomore residents continuing in the program.

There are several other housing options available for resident students. Bosch and Frisch Halls are the traditional residence halls for freshmen students. They include double rooms, suites with common rooms and lounges with kitchens on every floor. A three-year upgrade program is underway as of summer 2008 to replace carpeting in the rooms, mattresses and suite furniture. New 32” LCD televisions have also been installed in every floor lounge.

Campion Hall, renovated in 2002-2003, is the International Living Center. Campion features single, double and triple rooms. A large kitchen and computer lab are also available to students. Campion Hall strives to build a community that celebrates, explores and recognizes cultural traditions and heritages from intellectual, interpersonal and individual perspectives.

George M. Martin Honors Hall offers students in the College Honors Program a unique opportunity to live in an educational learning environment. The hall features single and double rooms with community bathrooms, a kitchen and two social lounges. This hall’s environment stresses academic excellence, social interaction, and fosters community values and trust among its residents.

The Delavan Townhouses, built in 2002, feature two-, three-, four-, and five-person apartments with single bedrooms. These apartments also have living rooms, kitchens, and private bathrooms.

The Village Townhouses, Main-Humboldt and Main-Delavan Apartments feature four- and five-person apartments. These apartments are equipped with some single and double bedrooms, kitchens, and private bathrooms.

Residence hall staff members live on floors and in apartment buildings to respond to the needs of students. Our staff, which is comprised of undergraduate and graduate students, is trained to handle the personal, disciplinary, academic and social concerns of the students. Each month, our staff members plan educational and social community builders for the residents to attend.

Living well in the Canisius College community gives student’s rights, privileges and responsibilities. The Office of Residence Life is committed to helping students explore new experiences. For further information on services, cost, virtual tours and much more, visit the Residence Life web page at www.canisius.edu/reslife/.

Campus Programming and Leadership Development

The Office of Campus Programming and Leadership Development (CPLD) encourages and promotes involvement and enhances student learning through co-curricular program-

ning and leadership development opportunities.

To help achieve this mission, Campus Programming & Leadership Development allows students the opportunity to get involved on- and off-campus. Students may choose from a variety of clubs and organizations including the Undergraduate Student Association (USA) which is comprised of the entire student body and is represented by an elected group, the Student Senate. The purpose of the Senate is to assist, finance and integrate all student organizations and to represent the views of the student body to the college administration. The Commuter Student Association (CSA) represents all of the commuter students and the Residence Hall Association (RHA) is the student governing body for the resident students at Canisius. Additionally, there are over 100 student clubs and organizations at Canisius. These organizations provide students with an opportunity to explore an academic subject informally yet deeply, gain familiarity with the arts or with differing cultures, provide service to the college or to the community, develop a wide range of leadership skills, or simply socialize with other students. For example, the Student Programming Board sponsors the annual fall barbecue, concerts, comedians and the end of the year Spring Fest.

Various honor societies give recognition to student excellence in numerous areas, and the student-run media on campus, such as the college newspaper (The Griffin), the campus radio station (The Wire) and the college’s yearbook (AZUWUR), provide students with opportunities to explore communications media while keeping the college community informed and entertained. Furthermore, Greek social organizations provide students with the opportunity to interact with each other in a unique context. A variety of club sports enhance the recreational opportunities for students. Many special events such as concerts, plays and lectures are also scheduled.

The Office of Campus Programming and Leadership Development sponsors a number of programs throughout the year including: Canisius Cinema, Best of Buffalo and the Griffins After Dark. The Canisius Cinema series enables the college to show current movies that are no longer playing at the movie theaters, but have not been released on VHS or DVD. Through the Best of Buffalo program, students are provided with the opportunity to attend many of the cultural, sporting, historical and entertainment offerings that Buffalo and Western New York provide. Examples of these programs may include Buffalo Sabres games, Broadway musicals at Shea’s Performing Arts Center and Ghost Walks Tours of Buffalo. Our alcohol-free, late night programming includes the Griffins After Dark series. “Grocery BINGO, Fusion Game Night and annual Mardi Gras Celebration” are just a few examples of the fun, creative programs offered to students. Free food and beverages are provided, as well as prizes at some of the events.

Furthermore, the office sponsors an array of leadership development opportunities and programs that will enhance your college experience such as Leadership Workshops,
Leadership Series, Leadership in Film series, LEAD Team,
and the High School Leadership Workshop. Additionally, a
“leadership library” of books and other resources is available
to students. For more information, come visit our office or
our website at www.canisius.edu/campus_leader to see what’s
happening around Canisius!

Office of Disability Support Services
The Office of Disability Support Services (DSS) is commit-
ted to creating equal access for all Canisius students with
disabilities, whether the disability is permanent or temporary.
The mission of DSS is to see that no student is excluded
from or discriminated against while participating in any
Canisius program, function or activity, while at the same
time maintaining the highest level of academic integrity.
DSS advocates responsibility for an accessible and holistic
learning environment through the removal of informational,
physical and attitudinal barriers.

The DSS staff is devoted to providing the college commu-
ity with support and services necessary to achieve excellence
in academic, social and personal growth. DSS promotes
self-advocacy and self-determination for students with
disabilities, while reinforcing personal responsibility. The
aim of DSS is that, with proper accommodations, all quali-
fied individuals with disabilities at Canisius will have the
opportunity to achieve success.

Students who wish to utilize the services available through
DSS must self-identify, register with the office and complete
the DSS intake form. Students must also provide current
documentation by a licensed or certified official that
describes the disability in order to obtain special accommo-
dations. For more information, please feel free to contact
the office at (716) 888-3748.

Career Center
Choosing a career path is one of the most important
decisions made by any college student. Obtaining a college
education and planning one's future occupation are activi-
ties closely bound to each other. For this reason, Canisius
College provides a number of programs and services through
the Career Center that are designed to help students define
their career goals and be well prepared to ensure a successful
transition from student life to the world of work. Services
that are available include:

Career Counseling: Individual sessions with a career coun-
selor are always available. Students make appointments to
discuss career interests, assess skills and interests, determine
the best matches between academic major and post-graduate
career, review resumes and develop career strategies.

Career Assessment: All students will have access to self-
assessment tools, including the Strong Interest Inventory, to
assist them in determining the areas of their occupational
interests.

Career Library: An extensive collection of career research
resources and self-help career-related materials are available
to students and alumni.

Workshops: The Career Center collaborates with Residence
Life, Student Activities and other divisions of the college to
provide workshops on career-related topics such as interview
skills, resume writing and job search strategies.

Graduate/Professional Schools Fair: This annual fall
semester event provides access to representatives of graduate
and professional programs locally, regionally and nationwide
from a variety of academic disciplines.

Web-Based Job Posting Bulletin Board: An on-line, web
based job bulletin board that lists full- and part-time posi-
tions, internships and seasonal and volunteer opportunities.

On-Campus Recruiting, Job Fairs, and Career Days:
Regularly scheduled events provide access to employers
from public, private and non-profit organizations.

Students discover that career services are best used early
during the college years. Freshmen and sophomores will find
the Career Center an excellent source of information on
occupations and majors. Juniors refine their career objec-
tives, identify specific career paths and seek internships,
as well as volunteer and job opportunities that will aide in
their job search. Seniors can take advantage of a variety
of programs, such as on-campus recruiting and networking
events that are intended to assist them in obtaining their
first professional position.

International Students
Canisius College welcomes international students and
appreciates the cultural diversity they offer our student body.
Currently our international students are from approximately
30 countries including areas as diverse as Europe, the Middle
East, Africa, Asia, South America and Australia. The
Office of International Student Programs advises interna-
tional students and assists them with their adjustment to
Canisius College and American culture by organizing
educational and social programs. To further encourage
cultural understanding within the Canisius community, the
International Student Programs Office also arranges host
families for our international students and organizes an
annual International Fest, a celebration of cultural diversity
on campus. Other services for international students include
an extensive orientation for new students, assistance with
immigration regulations and special tutorial help in English.
The Global Horizons Association, a student organization for
American and international students, plans additional
activities to promote cultural awareness on campus, and a
peer mentor program.

All international students studying on a F1 or J1 Visa are
required by the college to purchase a health insurance plan
offered by Canisius College. This plan is designed and writ-
ten specifically for the health care needs of international
students studying in the United States. Information about
the required health insurance plan is available in the Inter-
national Student Programs Office.
Multicultural Programs
A genuine, pluralistic campus fosters respect, equality and understanding of a mosaic of cultural heritages. Such a campus recognizes the interdependence of cross-cultural student communities and the integrity of each individual. The college aims for all individuals to feel a sense of being participants in the college’s mission and activities, particularly those who have been historically marginalized in America primarily due to the color of their skin.

Multicultural Programs assists this Jesuit campus in providing services for African American, Latino/a American, Asian American and Native American (ALANA) students while educating the entire student population about ALANA cultural patterns and trends in higher education. Multicultural Programs assists students concerning racial perspectives, self-concept issues and participatory involvement within the framework of the campus. Although primarily co-curricular focused, this area also serves students as a referral and support unit with respect to other collegiate matters.

Multicultural Programs provides a place for students to share and discuss cross-cultural experiences and to interpret those experiences. By way of this service, and other support services campus-wide, Canisius College provides students with tools essential for their success in school and in the greater community.

Rolling Admission and Priority Notification
Canisius adheres to a rolling admissions policy, which allows students to apply at any time until the class is full. Canisius offers a priority consideration deadline of November 15. Students who apply by this date will be notified of an admissions decision and scholarship award by December 15. Students who do not apply by this date are encouraged to apply by March 1 for full and equal consideration.

Condition of Admission
Students who are accepted for freshman admission are admitted with the expectation that they will successfully complete their senior year of high school and graduate prior to enrollment at Canisius. Failure to graduate from high school or to maintain the academic standard for which admission has been granted are sufficient grounds to rescind an offer of admission to Canisius.

Early Admission Policy
Canisius College will accept approved candidates for early admission from high schools that officially approve of this policy and whose curricula are satisfactory. Early admission candidates are defined as students who have completed all or a majority of their high school graduation requirements in less than four years. Students applying for early admission must adhere to all freshmen admission policies.

Additional conditions for early admission are as follows:

1. Students must be recommended by their high school principal or counselor with the understanding that students will only be recommended if they have demonstrated excellence in academic achievement and motivation.
2. Students must have completed three years of their high school curriculum prior to enrollment at Canisius. Exceptions to this rule are very unusual.
3. Ordinarily, students must have reached their sixteenth birthday or will reach their sixteenth birthday by the end of the first semester of freshman year.

Candidate’s Reply Date Agreement – May 1
Canisius College adheres to the College Entrance Examination Board’s Candidates’ Reply Date Agreement (CRDA). According to this policy students may submit their tuition (and housing) deposit upon receipt of their letter of acceptance or any time prior to and including May 1. The deposit is non-refundable after May 1.

Advanced Standing and Transfer Credit Policies and Processes for Incoming Freshmen
Under the conditions indicated below, students may obtain credit for college-level courses delivered in high school through advanced placement exams, International Baccalaureate scores, CLEP exams, and submission of transcripts from accredited two- and four-year institutions. Requests for acceptance of such credits should be directed to the Director of Academic Advisement, who will consult with the major program or department as needed. A maximum of 30 credit hours will be granted to first-time freshmen enrolling...
directly from high school.

**College Courses Delivered in High School Settings**

Students who achieve a grade of C- or above will earn at least elective credit for classes offered in their high school by accredited colleges. An official college transcript must be received by Canisius College before credit can be awarded. All requests to use such credits to fulfill core curriculum or major requirements should be made to the Director of Academic Advisement.

**Advanced Placement Courses**

Students achieving a 3 or higher on a College Entrance Examination Board Advanced Placement Test will normally earn at least elective credit toward a degree at Canisius College. (Canisius College reserves the right to deny credit for a 3 in a particular Advanced Placement Test if subsequent student performance in relevant courses at Canisius College has provided evidence that a 3 on that Test does not demonstrate college level competence.) Core curriculum credit for such courses is subject to approval by the Director of Academic Advisement, and credit in the major is subject to approval of course equivalency by the major department or program. Official results of the exam must be sent from the College Board to Canisius College before credit can be awarded. All such requests should be directed to the Director of Academic Advisement who will consult with the major program or department as needed.

**International Baccalaureate Program**

Canisius College grants academic credit for only higher level (HL) IB exams with a minimum grade of five (5). A student who has earned the IB Diploma will be awarded a maximum of 30 credit hours and will have individual HL diploma exams evaluated as transfer credit to be applied toward major, core curriculum, or elective course requirements. Major credit will be determined in consultation with department chairs. Students will not receive additional credit for AP exams that duplicate credit awarded for the IB exams.

If a student does not attain the IB Diploma but presents individual Higher Level examinations with scores of 5 or above, he/she will receive 3-6 credits per examination (depending on the Canisius College course equivalency) up to a total of 30 credits. These credits may be applied toward major, core curriculum, or elective course requirements. Major credit will be determined in consultation with department chairs.

Credit for subsidiary exams will not be awarded. Official IB exam scores should be sent directly to the Office of Student Records, who will consult with the Director of Academic Advisement or the major program or department as needed.

**College Level Examination Program (CLEP) Credit**

Please see page 22 for a full description of the college’s CLEP policy.

**International Students**

International candidates for undergraduate admission should submit a completed application and certified transcripts from all secondary schools or colleges attended. Transcripts not in English should be accompanied by a certified English translation. International students from countries whose original language is not English must also submit official test results from either the paper or electronic version of the Test of English as a Foreign Language (TOEFL) exam. All documents should be submitted to the Office of Undergraduate Admissions.

To be eligible for a student visa, students must also submit evidence of sufficient funding to cover educational expenses.

**Applications for Transfer Admission**

Students who have graduated from high school and have completed at least three credit hours of post-secondary, college-level work as a matriculated student will be considered for transfer admission to Canisius College. Candidates for transfer admission should submit an application for transfer admission and submit official transcripts for all colleges attended. Additionally, a Transfer Recommendation Form completed by the dean of students or other appropriate official from the most recent college attended is required. Candidates who have completed fewer than 24 credit hours of college level work at the time of application must also submit an official high school transcript.

**Adult Applicants**

Applicants for freshmen or transfer admission who have had a break in their academic work must submit a statement of activity for the period representing the break in their education.

**Advanced Standing and Transfer Credit Policies for Transfer Students**

A transfer credit evaluation will be completed for transfer students who are accepted for admission to Canisius. A maximum of 60 credit hours may be transferred from two-year colleges and at least 60 more credit hours must be earned at Canisius in order to be awarded the bachelor's degree. Students transferring from four-year institutions must complete at least 30 credit hours at Canisius, including at least 18 in their major, in order to earn the bachelor's degree.

Transfer credit from accredited two-and four-year institutions of higher education is granted when the course objectives for the completed work are substantially the same as the course objectives at Canisius College. Transfer credit is awarded only for courses with a minimum grade of C- or better. If an associate’s degree was earned by the student all courses with a minimum grade of D or better will be considered for transfer credit.

For teacher certification candidates, a grade of C or better is required to transfer courses listed as major courses in teacher education, special education, adolescence education, physical education, health education and athletic training programs. Once transcripts have been submitted to
and reviewed by the Office of Student Records, the student must meet with the appropriate associate dean to review the transfer credit and register for classes. Canisius College has a variety of articulation and dual degree agreements with community and junior colleges throughout New York State. These agreements recognize specific programs and majors at the two-year institutions that allow students the most comprehensive transfer of courses and credits. Students at these institutions should consult with their academic counseling center for specific information on articulated programs and majors.

Dismissed Students
Academic policy at Canisius College prohibits acceptance of a student who has been academically dismissed from another college or university until one academic year after date of dismissal. Exceptions to this policy may be made after review of the applicant’s academic credentials by the appropriate academic dean.

Non-Matriculated Students
Non-matriculated students, i.e., individuals who are not working towards a degree at Canisius, may be approved for a maximum of three courses per semester. Courses requiring prerequisites may be taken only when supporting documents are presented at the time of application insuring that the prerequisite courses have been successfully completed. Non-matriculated students will receive the normal college credit for all work successfully completed.

Students enrolled on a non-matriculated basis who wish to enroll as matriculated students must complete a Change of Status Request form, available from the Associate Dean of Adult Academic Services. These students must then submit all required admission documentation based on their status as either a freshman or transfer student.

Visiting Students
Students from other colleges or universities who wish to attend Canisius for the purpose of transferring earned credits to their home institutions must apply for entrance through the Office of Undergraduate Admissions.

An application for visitation must be accompanied by a letter of permission from the appropriate academic dean at the home institution. The letter, in substance, should state that the applicant has permission to take courses at Canisius for the purpose of transfer back to the home institution. If the student is involved in programs through that office. If the student is involved in programs through that office. If the student is participating on one of the NCAA athletic teams, the Athletic Academic Advisor must also sign the form. The instructor indicates either approval or disapproval of the student’s request to withdraw. An instructor might disapprove withdrawal if there is evidence of academic dishonesty. In cases where the instructor disapproves of the withdrawal, permission to withdraw is determined by the associate dean of the student’s school in consultation with the instructor of the course. Requests for withdrawal are not granted automatically, nor are they denied automatically.

Auditors
Students wishing to audit courses at Canisius College must secure the approval of the Office of Student Records and Registration. No credit is granted for an audited course. Responsibility for examination, assignments and attendance is determined by the faculty member teaching the course. No student will be permitted to change from audit to credit after the first session of the class.

Auditing fees are listed in the Tuition section of the catalog.

Class Attendance
Students are expected to attend all regularly scheduled classes, labs and other course-related activities. Students are expected to accept personal responsibility for absences, and are responsible for fulminating all requirements and completing assignments in each course. However, on some occasions students may need to be absent. When possible, students should inform their instructors if they plan to be absent from class. Instructors are privileged to establish reasonable absence regulations, which should be clearly stated at the first class meeting. The instructor is expected to determine when the number of absences has reached the level where any additional absences would prevent the student from attaining the objectives of the course.

Making Changes
Change in registration: Once registration has been completed, the student must follow the program of studies shown on the official registration form. No change or deletion of courses will be approved after the first six full days of classes.

Change of Major A change of major form is available in the Student Records Office. The form should be completed by the student with all appropriate information. It is the student's responsibility to make sure that their major is correctly listed in the official college records. This will insure that the student's information is available to the correct academic departments.

Change in name, address and phone:
It is the responsibility of each student to notify the college of any change of name, address and/or phone number. Change-of-address forms are available in the Student Records office.

Withdrawal
Withdrawal from a course: A student wishing to withdraw from a course must submit a course withdrawal form to the Student Records office after it has been signed by the instructor and the departmental or freshman advisor, as well as by a financial aid counselor if the student receives financial aid and by a counselor from COPE if the student is involved in programs through that office. If the student is participating on one of the NCAA athletic teams, the Athletic Academic Advisor must also sign the form. The instructor indicates either approval or disapproval of the student’s request to withdraw. An instructor might disapprove withdrawal if there is evidence of academic dishonesty. In cases where the instructor disapproves of the withdrawal, permission to withdraw is determined by the associate dean of the student’s school in consultation with the instructor of the course. Requests for withdrawal are not granted automatically, nor are they denied automatically.
The deadline for withdrawal without academic penalty is the end of the twelfth week of each fall and spring semester. See the Official Calendar. Summer sessions have their own deadlines for withdrawal. Consult the summer session course schedule for details. Withdrawal from a course results automatically in a grade of “W” (withdrawal) for the course. Failure to submit the withdrawal form results automatically in a grade of “FX” (failure due to excessive absence) being entered on the student’s record. The student should consult with the Financial Aid Office to see how withdrawing from a course will affect their next semester’s financial aid.

Ordinarily, no student will be allowed to withdraw from any course after the deadline. However, in extreme circumstances, a student may request a late withdrawal with the associate dean of his/her school. Before such a request can be granted, the student must submit to the appropriate associate dean written documentation explaining the reasons for requesting a late withdrawal. Submission of third party documentation of medical, psychological or legal issues is strongly recommended. The associate dean will confer with the instructor of the course. In all requests for late withdrawal, the final discretion to grant it resides with the relevant associate dean. Withdrawals will not be granted during final exam week.

**Withdrawal from the college:** A student desiring to withdraw from the college must consult the director of student retention, who will forward the withdrawal form to the appropriate associate dean. In the case of freshmen, a parent or guardian must indicate approval of withdrawal by signing the withdrawal form. The official date of the student’s withdrawal is the date on which the withdrawal form is received and approved by the appropriate dean. A student withdrawing from the college at any time during a semester without proper authorization fails all his/her courses for that semester.

A student who does not register for two or more semesters and returns to the college, is required to follow the catalog requirements at the time they were first admitted to the college.

**Medical/Psychological Leave of Absence**

Students may request a leave of absence from Canisius College when a medical or psychological condition significantly interferes with their ability to function at the college. This policy is intended to assist students with an absence of one to two semesters. It is not intended to allow a long period of absence during a single semester. A student taking a leave of absence for medical reasons will not be eligible to complete courses within the semester for which the medical leave is approved.

Students must submit a written request for a medical leave of absence with the Dean of Student’s Office (Old Main 102) or the Student Retention Office (HO-003). For a leave of absence to be considered, a student must provide written verification from a licensed health professional or a licensed mental health professional of the presence and/or severity of a medical/psychological condition. If a student is incapable of completing this request in person, the student may call the Dean of Student’s Office at (716)888-2130, to initiate the review process. The dean of students will consult the appropriate associate academic dean prior to granting a leave of absence.

A student granted a leave of absence will be expected to return to Canisius College after the leave has ended. Failure to return from a leave of absence after two semesters results in a formal academic withdrawal from Canisius College. A registration hold will be placed on the student’s account during a leave of absence.

To return from a leave of absence, the student must provide the dean of students with an appropriate written statement from a licensed health professional or a licensed mental health professional that confirms the student sought and received treatment and is capable of meeting the challenges of academic life without further risk to his/her or others’ welfare. When appropriate, this statement should also include recommendations for continued treatment once the student returns to the college and any needed academic restrictions or accommodations. Normally, a request to return should be made at least 30 days in advance of the commencement of the new semester. The dean of students will review the statement with appropriate personnel (e.g. Student Health, Counseling Center, Associate Academic Dean). The dean of students will determine the conditions a student will need to meet in order to return to and continue at Canisius College.

**Involuntary Leave of Absence**

When a student’s behavior is disruptive to the college community or when a student’s behavior presents a danger to himself/herself or to others, the dean of students may refer the student to the Student Health Center or Counseling Center for the coordination of a medical and/or mental health evaluation. A student may be subject to an involuntary leave of absence if medical or psychological conditions render the student incapable of meeting the challenges of academic life without further risk to his/her or others’ welfare. Students who choose not to cooperate with a request for evaluation are subject to an interim suspension until requirements outlined by the dean of students are satisfied.

**Voluntary Leave of Absence**

A leave of absence can be a planned interruption in a student’s formal education. It is designed for full-time undergraduate students in good standing with cumulative grade point average of 2.00 or above. The student voluntarily steps out of college for a specified period of time for one or two semesters. A student who elects this program may do so to re-evaluate their educational goals, earn additional money for their educational expenses, travel, medical reasons and/or gain other practical experiences not available on campus. The program is not intended for students who wish to temporarily attend another college or university. The principal advantage of a leave of absence is that it offers a student the opportunity to leave college temporarily with the assurance that he/she will be able to return and resume his/her
I. Mission and Pledge
The Canisius College community is dedicated to academic excellence and is, therefore, committed to establishing and maintaining an atmosphere of trust. All members of the community agree and pledge to exercise complete integrity in their academic work. Academic integrity is the foundation of true intellectual growth; it demonstrates respect for oneself and for others.

The students, faculty and administration of Canisius College understand their responsibility for maintaining academic integrity to be both individual and collective. Fulfilling this responsibility requires us to uphold high standards in our own conduct and to exercise fairness towards each other. All instances of academic dishonesty are a breach of community standards. Students, administrators and staff, course instructors and their representatives are expected to report violations of the Code of Academic Integrity.

All members of the Canisius College community are committed to administering the Code of Academic Integrity in a manner consistent with our mission: to teach responsibility, to foster learning and to care for the intellectual and ethical development of the whole person.

Violations of the Code of Academic Integrity shall be dealt with in a manner which is just to all parties and contributes to the learning process. Sanctions shall be shaped by the belief that infractions are not simply occasions for punishment, but opportunities for learning and for improving the ethical standards of the individual and the community.

All Canisius College students are automatically bound by the Code of Academic Integrity. As a reminder and reinforcement of the ideals this code embodies, course instructors are asked to place a pledge on scheduled tests and assignments, as well as in the course syllabus. Students, in turn, are asked to carefully consider and sign the pledge, which reads: "As a member of the Canisius College Community I understand and will uphold the standards for academic behavior as stated in the Code of Academic Integrity."

II. Standards for Academic Behavior
A. Prescriptions
Academic integrity requires a commitment to five fundamental values: honesty, trust, fairness, respect and responsibility.

1. Honesty.
As an academic community of integrity, Canisius College requires intellectual and personal honesty in learning, teaching, research and service. Honesty is the prerequisite for full realization of trust, fairness, respect and responsibility. The policies of Canisius College discourage dishonesty in the forms of cheating, lying, fraud, theft and other behaviors that jeopardize the rights and welfare of the college community and diminish the worth of its academic degrees. All members of the community subscribe to the principle of observing basic honesty in their work, words, ideas and actions.

2. Trust.
As an academic community of integrity, Canisius College seeks to foster a climate of mutual trust, encourage the free exchange of ideas and enable all members of the community to reach their highest potential. Trust creates an environment in which collaboration is valued and information and ideas can be shared without fear of one's work being stolen. It also allows us to believe in the social value of our scholarship and the degrees that are achieved here.

3. Fairness.
As an academic community of integrity, Canisius College seeks to set clear standards, practices and procedures, and expects fairness in the interactions of all members of the community.

4. Respect.
As an academic community of integrity, Canisius College recognizes the participatory nature of the learning process and honors and respects a wide range of opinions and ideas. If they are to be rewarding, teaching and learning demand both active engagement and mutual respect among all members of the community. Respect is shown by being on time, paying attention, listening to other points of view, valuing the aspirations and goals of others and recog-
nizing them as individuals, being prepared and contributing to discussions, meeting academic deadlines and performing to the best of your ability.

5. Responsibility.
As an academic community of integrity, Canisius College upholds personal accountability and depends upon action in the face of wrongdoing. Every member of the academic community is responsible for upholding the integrity of the scholarship and research carried out here. Such shared responsibility leads to personal investments in upholding our academic integrity standards. Being responsible means taking action against wrongdoing, discouraging and seeking to prevent misconduct by others. One primary responsibility is to discourage violations of the Code of Academic Integrity by others.

B. Proscriptions
All students of the college are expected to understand the meaning of the Code of Academic Integrity. Ignorance of the code is not a valid reason for committing an act of academic dishonesty. Students should realize that their actions may affect other students. In general, students may not obstruct or interfere with other students' academic work or otherwise undertake an activity with the purpose of creating or obtaining an unfair academic advantage over other students. Each of the following behaviors violates all of the principles of honesty, trust, fairness, respect and responsibility explained above and is thus prohibited.

1. Plagiarism.
The MLA Handbook for Writers of Research Papers defines plagiarism as using “another person's ideas or expressions in your writing without acknowledging the source....” Of course, common sense as well as ethics should determine what you document. For example, you rarely need to give sources for familiar proverbs (‘You can't judge a book by its cover’), well-known quotations (‘We shall overcome’), or common knowledge (‘George Washington was the first president of the United States’). But you must indicate the source of any appropriated material that readers might otherwise mistake for your own” (5th Edition, pp. 30, 33). Plagiarism may range from isolated formulas, sentences, or paragraphs to entire articles copied from books, periodicals, web sites, speeches, or the writings of other students. Honesty requires that any work or materials taken from another source for either written or oral use must be acknowledged. Any student who fails to give credit for ideas or materials obtained from another source is guilty of plagiarism. Plagiarism, in any of its forms, and whether intentional or unintentional, violates standards of academic integrity. Examples of plagiarism include, but are not limited to:

- Direct quotation of any source material whether published or unpublished without giving proper credit through the use of quotation marks, footnotes and other customary means of identifying sources. This includes complete sentences or paragraphs, or an entire piece of written work.
- Paraphrasing another person’s ideas, opinions, or theories from books, articles, web sites, etc., without identifying and crediting sources.
- Borrowing facts, statistics, graphs, diagrams, photographs, or other illustrative or visual materials that are not clearly common knowledge without identifying and crediting sources.
- Copying another student’s essay test answers.
- Submitting papers written by another person or persons. This includes copying, or allowing another student to copy, a computer file that contains another student’s assignment and submitting it, in part or in its entirety, as one’s own.
- Working together on an assignment, sharing the computer files and programs involved, and then submitting individual copies of the assignment as one’s own individual work without course instructor approval.
- Buying or selling, or exchanging term papers, examinations, or other written assignments, or any part of them.
- Offering false, fabricated, or fictitious sources for papers, reports, or other assignments.

2. Cheating.
Cheating includes, but is not limited to: using unauthorized notes, study aids, or information on an examination, test, etc.; altering a graded work after it has been returned, then submitting the work for regrading; or allowing another person to do one’s work and submitting that work under one’s own name. Cheating also includes the possession, without authorization, of copies of tests, answer sheets, or other materials, however obtained, that could interfere with fair, accurate testing, as well as retaining, possessing, using or circulating previously given examination materials without authorization.

3. Duplicate Submission of the Same Work.
Submitting the same work for more than one course is a violation unless the professor(s) assigning the work gives consent in advance. This includes work first produced in connection with classes at either Canisius College or other institutions attended by the student.

4. Collusion.
Collusion includes cooperation that results in the work or ideas of others being presented as one’s own (e.g., rather than as a group effort). However, ordinary consultation of faculty, library staff, tutors or others is legitimate unless the instructor has imposed stricter limits for a particular assignment.

5. False Information and Lying.
This includes consciously furnishing false information to other students, faculty members and their representatives, advisors, administrators or representatives of the college offices with the intent to mislead. Instances would include but are not limited to misrepresenting activity outside of the classroom (reports on field work, internships, etc.) or improperly seeking special consideration or privilege (e.g., for postponement of an examination or assignment deadline, etc.).

This includes any attempt to forge or alter academic documentation (including transcripts, letters of recommendation, certificates of enrollment or good standing, registration forms, drop/add forms, withdrawal forms, and medical certification of absence) or to falsify other writing in academic matters (e.g., any documentation provided to instructors) concerning oneself or others.

7. Theft, Abuse and Destruction of Academic Property.
This comprises unauthorized removal, retention, mutilation or destruction of common property of the college that
deprives others of equal access to these materials. Such property includes but is not limited to library materials, laboratory materials, computers and computer software, etc. This includes also sequestering library materials for the use of an individual or group; a willful or repeated failure to respond to recall notices from the library; and the removal or attempt to remove library materials from the library without authorization. The theft, mutilation or destruction of another student’s academic work, including books, notes, computer programs, papers, reports, laboratory experiments, etc. also falls under this type of violation.

8. Unauthorized Use of Information Technologies.
In the context of the completion of a course and/or assignments (contained within a course), the unauthorized use of computers or the college's computer network (e.g., the unauthorized use of software, access codes, computing accounts, electronic mail and files) or other electronic devices (calculators, personal digital assistants, pagers, etc.) is prohibited.

This includes intentionally: (a) providing material, information, or other assistance to another person with knowledge that such aid could be used to commit any of the proscribed acts noted above; or (b) providing false information in connection with any inquiry regarding academic integrity.

III. Procedures for Adjudicating Violations of the Code of Academic Integrity
A course instructor who suspects academic dishonesty may ask the associate dean about the student's prior record in this area.

Anyone other than the course instructor suspecting a violation is expected to inform the course instructor or proctor at the earliest possible opportunity, even while the suspected violation is being committed. In the absence of the course instructor, the associate dean will receive reports of violations and will replace the course instructor in the following procedures. “Associate dean” refers throughout to the associate dean of the school to which the course belongs.

A. Initial Procedure
The course instructor meets with the student to discuss the incident. The student will be informed of the course instructor’s suspicions. The student may respond to the allegations and may bring witnesses, if deemed pertinent by the instructor.

The instructor decides whether the student has violated the Code of Academic Integrity and, if necessary, assigns a sanction. This determination of responsibility shall be based upon the facts of the incident and whether it is more likely than not that the student is responsible for the alleged violation(s).

The student shall be provided written notification of the instructor's decision and sanction, normally within five business days. Possible sanctions include:

- Warning: a notice in writing to the student that the student has been found responsible for violating the Code of Academic Integrity;
- Grade Reduction or Course Failure;
- Discretionary Sanctions: work assignments, community service, participation or completion of college service or program, service to the college and/or other related discretionary assignments;
- Educational Program or Project: participation in or completion of a program or project specifically designed to help the student understand why the Academic Integrity violation was inappropriate. If a sanction is imposed the course instructor is expected to file a “Notification of Academic Dishonesty” form with the appropriate associate dean. Forms are available in all associate dean offices and in other campus offices. The form, the sanction and supporting documentation become part of the academic misconduct file shared by the associate deans of Arts and Sciences, the School of Education and Human Services and the Wehle School of Business.

The Academic Misconduct file is separate from the student’s permanent academic file and confidential. First violations of the Code are a part of this confidential record. Second violations are handled on a case by case basis and will become part of the student’s academic file only in those instances when subsequent offences are serious enough to warrant inclusion.

B. Appeal
The student may request, in writing, a review by the appropriate associate dean, of the course instructor's decision. The written request from the student must be submitted to the associate dean not more than five business days after the student is notified of the course instructor's decision. The associate dean shall review the decision and meet with the student to discuss the matter. If the student chooses, the college ombudsman shall be present during the appeal. The appropriate associate dean coordinates arrangements for the college ombudsman's presence.

If an appeal is granted, the associate dean may replace the sanction with another that may be more severe, less severe, or otherwise different. The associate dean may impose any sanctions found in Article IV, Section C of the Community Standards except grade change or course failure.

Normally, however, the associate dean may request that the course instructor reconsider the original decision and/or sanction. In very serious cases or when a pattern of academic dishonesty is documented, the associate dean may direct the case to a Hearing Panel. If the associate dean is the course instructor or has acted in the course instructor’s place, the appeal shall be submitted to the dean of the school in which the course is offered.

C. Hearing Panel
When a case of academic dishonesty is very severe or a documented pattern of violations of the Code of Academic Integrity exists, the associate dean may refer the case to the dean of students so that a Hearing Panel from the Commu-
Academic Forgiveness Policy

This policy is intended to assist former Canisius College students whose grade point average is below 2.0. Education majors must have a grade of “C” or better in their education courses and have a cumulative grade point average of 2.50 or higher to be eligible to student teach. It is to be used to assist students that have reapplied to the college and demonstrate personal growth and motivation to accomplish their educational goals. This policy will allow for up to thirty (30) credit hours of course work with grades of F or FX to be removed from the calculation of the grade point average.

A period of not less than five years must have passed prior to the student's readmission to the college. The student must submit a petition for academic forgiveness with the application to the college. The appropriate associate dean will meet with the student, review the petition and make a recommendation. No acceptance decision will be made without the recommendation of the associate dean, after the review of the petition.

The admissions office will then process the application and notify the student of the decision. Once the associate dean has made a recommendation, a memo will be sent to the Student Records office indicating that the student has been approved for academic forgiveness. The memo will list the courses that should be removed from the student's academic record. Each course will have a grade of “X” listed. This will indicate the course is part of the academic forgiveness policy and not included in the calculation of the grade point average. The course will remain on the student’s academic transcript.

The student must maintain a minimum semester average of 2.50 until a minimum cumulative grade point average of 2.00. The student must meet with the department chair of the intended major. The department chair will review the academic record and make recommendations about what courses from five or more years ago will count toward completion of current major requirements. The student must take a minimum of ten (10) courses at Canisius College to be eligible for a degree. The student will be required to meet with the appropriate associate dean at least twice during the first semester. Progress reports will be required for students during their first semester after academic forgiveness is granted.

An agreement between the associate dean and the student will be completed in writing. The agreement will outline all the requirements for the student to be approved for academic forgiveness. This will also include but not be limited to the minimum semester and grade point average requirements, the required appointments for progress review and course restrictions or limitations for the first semester. Failure of the student to meet the forgiveness agreement will result in automatic dismissal from the college.

Mathematics Placement and Developmental Mathematics Courses

The Department of Mathematics and Statistics, in conjunction with the Student Advisement Center screens incoming freshmen for appropriate placement in mathematics. We use high school average, SAT, ACT and high school mathematics scores to determine the placement.

Placement in MAT 002 indicates serious weaknesses in the student's background. Since the admission requirements for Canisius mandate a minimum of three years of high school mathematics, the student must take and pass MAT 002, a non-credit developmental math course, before signing up for ANY Field 7 – Mathematical Sciences courses.

Grades

Grades inform students of the level of performance they have achieved in a course. Grades are means whereby students may come to know and appreciate their capacities and abilities. Instructors are responsible for specifying the performances required in their courses; students are responsible for meeting the requirements specified.
Grades earned by students at Canisius College reflect:
1. The extent to which the requirements specified in the course syllabus have been met.
2. The degree to which the requirements completed exhibit mastery of the subject or skills which are the object of the course.
3. Other criteria specified by the instructor at the beginning of the course, criteria such as, but not limited to, attendance at lectures or other course functions, projects voluntarily undertaken in excess of specified requirements, correct use of oral or written English and contribution to discussion or other course activities.

Grades earned by undergraduate students include the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior performance.</td>
</tr>
<tr>
<td>A-</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>Good performance.</td>
</tr>
<tr>
<td>B</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>Adequate performance.</td>
</tr>
<tr>
<td>C+</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Poor, but passing,</td>
</tr>
<tr>
<td>C-</td>
<td>performance.</td>
</tr>
<tr>
<td>D</td>
<td>Failing, but passing</td>
</tr>
<tr>
<td>F</td>
<td>Failing performance.</td>
</tr>
<tr>
<td>FX</td>
<td>Failure due to excessive</td>
</tr>
<tr>
<td></td>
<td>absences or unauthorized</td>
</tr>
<tr>
<td></td>
<td>absence from the final</td>
</tr>
<tr>
<td></td>
<td>examination.</td>
</tr>
<tr>
<td>P or U</td>
<td>Passing. U Failing.</td>
</tr>
</tbody>
</table>

The description of the Pass/Fail program is given later in this chapter.

Grades authorized by the deans include the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Authorized Withdrawal from a course. The description of withdrawal procedures is in a preceding section of this chapter.</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete. A student who has failed to fulfill all requirements of a course may petition the instructor to request an incomplete grade. The request must be approved by the instructor and then the appropriate associate dean. An incomplete grade will be granted for only serious and well-defined reasons.</td>
</tr>
<tr>
<td>NG</td>
<td>No grade submitted by the course instructor.</td>
</tr>
</tbody>
</table>

Final course grades cannot in normal circumstances be altered after they have been recorded by the registrar. The appropriate dean's permission is required if a final grade is altered. Final grades are available on the college's on-line services page at the conclusion of each semester. If an official grade report is needed for any reason, contact the Student Records office to request a grade report.

Students who are dissatisfied with their grade in a course may repeat the course once (exceptions may be approved by the appropriate associate dean in consultation with the department chair). In such cases both grades will be entered in the student's record, but, for the purpose of computing grade point average, only the second grade will be used for the calculation. Because retaking courses that have already been passed (any grade of D or above) affects a student's financial aid, students should consult with the financial aid office before retaking any courses.

Incomplete Grade:
A student who, for serious and well-defined reasons, has failed to fulfill all requirements of a course or has failed to take the final exam may petition an instructor to request, from the appropriate associate dean, a grade of “I,” indicating “Incomplete Performance.”

Only the appropriate associate dean may grant an incomplete grade. It will not be granted to a student whose only reason is excessive absence during the semester or failure to complete the work of the course before the close of the semester without an exceptionally good reason. Examples of such good reasons might be prolonged illness or hospitalization during the semester, serious illness at the time of the final examination, or other unusual circumstances.

An Incomplete grade, when granted, is merely temporary and will automatically be changed to an “FX” grade if a final grade is not submitted to the appropriate associate dean, who then forwards the grade change to the Student Records office within six weeks after the close of final examinations.

Grade Grievance Procedure
Occasions may arise when a student does not agree with the grade he/she has received in a course. When this happens, the question of whether the grade should be reconsidered is addressed in two stages.

A. The initial stage in the grievance procedure is as follows:
1. The student first contacts the course instructor to discuss the grade in question within four weeks of the start of the semester (regular academic session) immediately following that in which the grade was awarded. If the instructor agrees that the grade in question was inaccurate, a grade change is processed by the instructor.
2. If the student and the instructor cannot agree on the appropriateness of the grade in question, the student may petition the chair of the instructor's department, in writing, within ten working days after the meeting with the instructor. If a mutually agreeable decision is made through mediation conducted by the chair, the instructor will submit the agreed-upon grade and the process is completed. If there is no outcome that is mutually acceptable to the student and the instructor, the process may continue. If the instructor is also the chair, then Step 2 is omitted and the process goes to Step 3.
3. The student may appeal the decision to the appropriate associate dean's office within ten working days after the mediation process is complete. The associate dean shall collect written views/and other pertinent material
from the involved instructor, student and chair, as well as consult with any other individuals deemed necessary. The associate dean shall render the decision whether the grade should be reconsidered.

4. The decision of the associate dean to reconsider or not to reconsider the grade in question is final. If the decision is to reconsider the grade, the procedure outlined in Part B below is followed. If the decision is not to reconsider the grade, the original grade cannot be changed.

Cases which are referred to the procedure in Part B can be withdrawn only with the consent of the student, instructor, department chair, and associate dean – and after first informing all parties involved.

**B. The final stage in the grievance procedure is as follows:**

1. If the associate dean feels that the reconsideration of the grade in question is appropriate, a panel of tenured faculty who have not been involved in the process described above is formed from the department in question. The panel must be formed within ten days of the associate dean’s decision. If the department does not have a minimum of four members, it will be expanded to include all the tenured members of the departments within the division (Natural Science, Social Science, Humanities, or Business) of which the department in question is a member.

2. A three-member panel will be selected as follows. The associate dean, faculty member and student involved will each select one member of the panel from the designated pool.

3. The panel will review all appropriate material and make a determination about the grade change. This review must be completed within thirty days of the formation of the panel. The panel has the authority to assign a grade for the course in question. That grade may be the same grade as assigned by the instructor or a higher or a lower grade, according to the panel’s judgment. The student and the instructor will be informed of the panel’s decision and, when applicable, the authorized grade change will be submitted to the registrar.

4. The decision of the panel may be appealed by the original instructor or the student to the vice president for academic affairs only in the following extraordinary circumstances:
   a. The grade grievance procedure was not followed.
   b. Prejudice was manifested against either the student or the instructor.
   c. New, relevant information was introduced.

The appeal must be brought within thirty days of the panel’s decision. The burden of proof for the appeal rests with the individual bringing the appeal.

5. If the vice president for academic affairs believes that the decision of the panel should be reviewed, a three-member appeal panel will be appointed from the pool of tenured faculty as described in Step B-1. The vice president, the faculty member and the student involved will each select one member. No member of the original panel may serve on the appeal panel. The appeal panel will follow the procedure in Step B-3, including completion of its task within thirty days of the formation of the panel. The decision of the appeal panel is final.

**Pass-Fail Program**

Seniors and juniors are eligible to elect one course each semester for which they will receive a grade of either “Pass, P grade” or “Fail, U grade.” The purpose of this plan is to enable upperclassmen to take more difficult courses than they would normally take for fear of lowering their grade point average.

**The program is as follows:**

1. Juniors and seniors who have completed at least 30 hours at Canisius may elect one course each semester, not to exceed a total of four courses in their college careers, for which they will receive a recorded grade on their transcript of either “Pass” or “Fail.”

2. This course must be a free elective in the student’s degree program.

3. Within one week after the semester begins, the student must file a request for “Pass-Fail” grading. Application forms may be found in the office of the appropriate associate dean. If the associate dean grants permission for a course to be taken pass-fail, grades will still be assigned for all work done during the course and on the final examination. A final grade will be entered for the student by the instructor. If this grade is “D” or above, the registrar will record a pass (P grade) for the course on the student’s transcript; otherwise, he will record a failure (U grade).

4. Having received permission to take a course on the “Pass-Fail” option, a student may request in the last week of classes to withdraw from the option and receive a conventional letter grade. A form for this request is available in the office of the appropriate associate dean. A student who withdraws from the “Pass-Fail” option receives the letter grade assigned by the instructor.

5. A student attaining a grade of Pass will receive full credit for this course.

6. If a student elects to receive pass or fail in a course, this course will not be counted in the grade point average. The student must carry at least four courses to be eligible for this program. Part-time students, however, are eligible with fewer than four courses.

7. This plan is entirely optional. A student may or may not elect to take advantage of it.

**Courses at Other Colleges**

Students matriculating at Canisius should plan to complete all their coursework at the college. The rationale for this policy rests in the mission and philosophy of the college and in its concern for the essential unity and integrity of all aspects of the curriculum: the college core, major requirements and free electives. Permission to take courses at other colleges during the regular and summer sessions is granted by the appropriate associate dean, who will consider all aspects of the student’s request, including the quality and level of the proposed course and its role in the student’s program. Courses intended to fulfill major requirements must also be approved by department chairperson. Permission to take courses at other colleges must be requested on the appropriate form and in advance of taking the course.

**Generally, the following guidelines apply:**

1. Students are ordinarily limited to one course at another institution for every ten courses taken at Canisius.
2. Junior- and senior-level core curriculum and major course requirements are not transferred from community colleges.
3. Courses taken at a four-year college/university will be accepted only if they are offered at a comparable level at Canisius (i.e., freshman-sophomore level/junior-senior level).
4. Students who live outside the greater Buffalo area may receive more lenient consideration in taking a summer course at another college. However, the associate dean may recommend an online web-based course as a preferred option if he/she considers it more appropriate than the off-campus course.
5. Courses used to fulfill Core requirements should be taken at Canisius College.

Cross Registration Program
This program is sponsored by the Western New York Consortium of Colleges. Participating colleges/universities include Alfred State College, Buffalo State College, Canisius College, Daemen College, D’Youville College, Fredonia State College, Empire State College, Erie Community College, Genesee Community College, Jamestown Community College, Medaille College, Niagara County Community College, Niagara University, St. Bonaventure University, Trocaire College, University at Buffalo and Villa Maria College.

Cross registration enables Canisius students to enrich their programs of study by taking specialized undergraduate courses available only at other campuses, and it provides some flexibility for meeting graduation requirements in a timely manner. During the fall and spring semesters only, full-time undergraduate students are eligible to participate in this program. Students must maintain a full time course load (12 credits minimum) at Canisius during the semester in which they cross register. Students must abide by the rules and regulations of the institution where they are cross registered. Students may cross register for only one undergraduate course per semester. Students may not cross register for independent study or tutorial courses. Course registration is on a space available basis only. At the end of the semester, the grade will be forwarded to the Canisius by the visiting institution. The grade received will count in to the Canisius grade point average. Course loads above 18 credit hours including the cross registration course will result in additional Canisius tuition charges.

Students may only cross register for a course that is approved. A major course must be approved by the student’s major department chairperson. A core curriculum course must be approved by the appropriate associate dean. A free elective course can be approved by the cross registration officer. Student should check with the visiting school for course registration restrictions, for additional requirements such as proof of residency and dates and times when cross registration will be permitted. Cross registration during your final semester at Canisius is discouraged since this may delay your degree conferral.

The cross registration forms are available in the Student Records Office located in Bagen Hall 106.

Study Abroad
The college manages undergraduate study abroad programs with:
• Australia — University of the Sunshine Coast
• Belgium — University of Antwerp
• China — The Beijing Center, Beijing, China
• France — Catholic University of Lille
• France — IECS School of Management, Robert Schuman University, Strasbourg
• Germany — Berlin School of Economics
• Germany — University of Dortmund
• Ireland — National University of Ireland, Galway
• Italy — Lorenzo DeMedici, Florence
• Italy — Lorenzo DeMedici, Rome
• Japan — Sophia University
• Mexico — ITESO, Universidad Jesuita de Guadalajara
• Mexico — Universidad Iberoamericana, Universidad Michoacana de San Nicholas de Hidalgo
• Puerto Rico — Universidad Del Sagrado Corazon
• Spain — University of Oviedo
• Sweden — University of Uppsa
• United Kingdom — London Metropolitan University

Students interested in study abroad should begin planning early in their college experience so that preliminary course work and language study can be completed in advance. Students should confer with the Study Abroad office located in the International Student Programs office (Frisch Lower Level 005, extension 2784) and with their academic advisor to discuss the options.

In keeping with the college’s policy on “Courses at Other Colleges,” students who wish to study at the universities listed above must study through the Canisius programs.

Students who wish to study at other foreign universities or in other countries than those listed should confer with the International Student Programs office.

Credit by Examinations
Students who are applying for admission or who are presently in attendance may obtain credit for previously completed examinations sponsored by the College Level Examination Program (CLEP) of the College Entrance Examination Board (CEEB) or by the New York State College Proficiency Examination Program (CPE). The minimum acceptable grades for these exams are “Pass” for exams graded Pass/Fail, “C” for exams with letter grades, and 50 on exams graded on a standard score scale of 20 to 80. Credit is not awarded for the CLEP general examinations. Credit in appropriate subject area exams is granted by the Student Records Office after the student has matriculated at the college. However, not all CPE and CLEP exams are acceptable as transfer credits. In addition, credits to be used in fulfilling departmental major requirements must first be approved in writing by the department chair. Students should plan to complete all their coursework at the college. Permission for matriculating students to take CPE or CLEP exams to fulfill degree requirements must be requested from the appropriate associate dean and will be granted only under extraordinary circumstances.
Regents College Examination

Students who are applying for admission to Canisius College or who are presently in attendance may be eligible, under unusual circumstances, to receive college credit for previous experience through the Regents College Examination program. The minimum acceptable score on the examinations is 50.

Students who have already taken such examinations should speak to the appropriate associate dean. Permission to take the examination must be obtained from the appropriate associate dean.

Grade Points

The grade point average indicates the student's general scholastic average and is a measure of the quality of his or her work, just as credit hours are the measure of its extent. Points are assigned as follows for each semester hour completed:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A–</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
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<tr>
<td>B–</td>
<td>2.7</td>
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<tr>
<td>C+</td>
<td>2.3</td>
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<tr>
<td>C</td>
<td>2.0</td>
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<tr>
<td>C–</td>
<td>1.7</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

A student's grade point average is obtained by dividing the total number of grade quality points by the total number of credit hours carried.

Academic Standing

Academic standing is determined by the cumulative grade point average from the beginning of the student's studies at Canisius.

The following terms are used to describe a student's academic standing:

1. **Academic probation:** When a student's grade point average falls beneath the level indicated on the chart on the next page, he/she is placed on academic probation – a serious warning that the student's academic record at the college is unsatisfactory. It is generally not advisable for students on academic probation to take part in extracurricular activities. Varsity athletes, in addition, are governed by NCAA and regional conference regulations. Probation for two successive semesters will result in automatic academic disqualification from the college.

2. **Academic dismissal:** Academic dismissal results from any of the following:
   a. Falling below the grade point average indicated on the chart below.
   b. Failing three courses in a single semester.
   c. Being placed on academic probation for two successive semesters. Dismissed students may not enroll in any division of the college and must wait at least six months before applying for readmission.

3. **Good academic standing:** This is a term used to determine a student's eligibility for financial aid. A student who is on academic probation is considered to be in good academic standing. Further details may be found in the chapter on Financial Aid.

The grade point average levels for academic probation and academic dismissal are given as follows:

**Cumulative grade point average, based on 0-30 credits and 31 or more credit hours:**
- **ACADEMIC PROBATION:** 1.50-1.99
- **ACADEMIC DISMISSAL:** Below 1.50

**Cumulative grade point average, based on 31 or more credit hours:**
- **ACADEMIC PROBATION:** 1.75-1.99
- **ACADEMIC DISMISSAL:** Below 1.75

To be eligible for graduation, a student must have earned an overall cumulative grade point average of 2.00.

Separation from the College

Each student's continued registration at the college, the awarding of academic credits and the granting of any certificate or degree are entirely subject to the disciplinary authority of the college. The college reserves the right, therefore, to enforce the regulations concerning satisfactory academic performance and, in consequence, to cancel a student's registration, to refuse academic credits or to deny a certificate or degree. Separation from the college may also be imposed as a penalty for any conduct which conflicts with the ideals of the college or damages its reputation and that of its students.

Policy on Student Records

The Family Educational Rights and Privacy Act of 1974, as amended (FERPA), is the federal law governing individuals' access to student records. The guiding principle of FERPA is that education records are private and that students have the right to limit their disclosure to third parties. FERPA grants students the right to inspect and review their education records, the right to request to amend their education records and the right to limit disclosure of some personally identifiable information known as directory information.

For purposes of FERPA, "education records" are all records which contain information directly related to a student and maintained by Canisius College. Records that are not "education records" include but are not limited to sole possession, law enforcement, employment, medical and counseling, and post-attendance records. A "student" is defined as one who has attended or is attending Canisius College and regarding whom Canisius College maintains education records.

Normally, education records will not be released – nor access given – to third parties without written consent of the student unless the party meets one of the following:
- To school officials who have a legitimate educational interest in the records.
- To federal, state and local officials involving an audit or evaluation of compliance with educational programs.
- To anyone who is providing financial aid to the student ("financial aid" does not include any payments made by parents).
• To organizations conducting certain studies for or on behalf of the college.
• To accrediting organizations to carry out their functions.
• To comply with a judicial order or a lawfully issued subpoena.
• To parents of a dependent student.
• To appropriate parties in a health or safety emergency.
• To schools in which a student seeks or intends to enroll.
• To an alleged victim of a crime of violence of the results of a disciplinary hearing regarding the alleged perpetrator of that crime with respect to that crime.
• To parents/legal guardian when their children (under age 21) are found to have violated the Canisius College alcohol or drug policy.
• To military recruiters who request “Student Recruiting Information” for recruiting purpose only.
• To the Internal Revenue Service (IRS) for purposes of complying with the Taxpayer Relief Act of 1997.
• To the Bureau of Citizenship and Immigration Services (BCIS) for purposes of the Student and Exchange Visitor Program.
• To authorized representatives of the Department of Veterans Affairs for students receiving educational assistance from the agency.

It should be noted that FERPA permits the disclosure of education records to the parents of a dependent student. The college, however, considers its students to be adult decision-makers; as such, students have the right and responsibility to share information about their grades and degree pursuit with their parents and/or guardians. This means that the staff of the college normally will not give out information about grades or degree pursuit and will instead suggest that parents or guardians have conversations directly with students about these matters. The college's policy provides a greater degree of privacy for dependent students than FERPA would require. If the student or the parent wish to have this information released to the parents, the student must sign an Authorization to Disclose Grades form with the Student Records office, Bagen 106.

A notification of releases made to third parties shall be kept in the student's record (unless forbidden by a judicial order or subpoena). The third party shall be informed that no release of personally identifiable data is authorized without the written consent of the student.

The college has established the following procedures enabling students to have access to their records:
1. The student may inspect and review his or her record by filling out a request form at the office where the record of interest is maintained. Students may not inspect and review the following:
   • Financial information submitted by parents.
   • Confidential letters and recommendations placed in their files prior to January 1, 1975.
   • Confidential letters and statements of recommendation placed in records after January 1, 1975, to which the student has waived his or her right to inspect and review.
   • Education records containing information about more than one student; however, in such cases, students will be given access to the part of the record which pertains only to the inquiring student.
2. Access is to be granted promptly and no later than 30 days from the date of the request.
3. The student may obtain copies of documents to which he or she is entitled. The college may charge for these copies.
4. The student may request and receive interpretation of his or her record from the person (or designee) responsible for maintaining the record.

Students have the right to challenge the content of their education records if they consider the information contained therein to be inaccurate, misleading or inappropriate. The process includes an opportunity for amendment of the records or insertion of written explanations by the student into such records. The procedures for challenging records can be found in the Office of Student Affairs, Old Main 102.

Unlike education records, directory information shall be released freely unless the student files the appropriate form requesting that certain information may not be released. This form is available at the Student Records Office, Bagen 106. Directory information includes but is not limited to name, address, Email address, phone number, photograph, date and place of birth, major field of study, dates of attendance, grade level, enrollment status, participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards, received and most recent education agency or institution attended.

This policy does not preclude the destruction of any record if the college does not consider it germane. Persons in charge of records shall ensure that only pertinent items are retained in student files. The forms for “Request for Confidential Status of Directory Information” and “Authorization to Disclose Grades” shall be removed from a student's educational records upon graduation unless the student makes a specific request that these forms remain.

Recognition of Academic Excellence
Two categories of recognition are awarded at the end of each semester. The first recognizes full-time students and the second recognizes both full-time and part-time students. In addition, students in either category who achieve a 4.00 will receive the designation “with Special Distinction.” The two categories are:
1. Dean's List. Awarded to students who have attained a grade point average of at least 3.50 for the semester and have completed at least four courses of three credits or equivalent.
2. Merit List. Awarded to students who have attained a grade point average of at least 3.25 for the semester and have completed two courses of three credit hours or equivalent.

Students who receive an “Incomplete” grade will be eligible for the Dean's or Merit lists once the work is completed and a passing grade submitted. The “Incomplete” grade must be changed within six weeks from the end of final examinations deadline.
Graduation

Degrees are awarded three times a year. September 15th for students completing their degree requirements during the summer; February 1st for students completing their requirements during the fall semester and at the annual commencement ceremony on the date designated in the college academic calendar.

To qualify for the degree of bachelor of arts or bachelor of science, a candidate must complete a minimum of 120 credit hours, the core curriculum requirements and all requirements of the major. To qualify for the degree of associate of arts, a candidate must complete satisfactorily 20 three- or four-credit hour courses and a minimum of 60 credit hours.

Satisfactory completion of requirements means that the candidate has maintained the grade point average indicated in the section on Academic Standing and has completed all general and departmental requirements as outlined in this catalog.

In extraordinary circumstances a student may petition the appropriate associate dean to be allowed to participate in graduation ceremonies even though the student will not have completed all degree requirements by the date of commencement. Before graduation, the degree candidate must settle all accounts with the Office of Student Accounts.

A student who completes the degree requirements in August or December and wishes to obtain his/her diploma before the next commencement should submit a diploma request form to the Student Records office. Students should contact that office regarding the deadline dates for such requests. Each student’s name should be submitted to the Student Records office exactly as the student wishes it to appear on all official documents of the college.

It is the student’s responsibility to keep this file accurate. A fee of $30.00 will be assessed to reprint a diploma if the name on the new diploma is to differ from that on the official record of the college.

Graduation Honors

Only students who have completed the last 60 credit hours of academic work at Canisius College are eligible for graduating with honors. The Canisius College cumulative grade point average determines graduation with honors according to the following scale:

- Degree is awarded summa cum laude to those whose average is 3.80 or higher.
- Degree is awarded magna cum laude to those whose average is 3.65 or higher.
- Degree is awarded cum laude to those whose average is 3.45 or higher.

Alpha Sigma Nu is the honor society of Jesuit institutions of higher education, including all 28 Jesuit colleges and universities in the United States, the two U.S. Jesuit schools of theology, Regis College of the University of Toronto, Campion College in Regina, Saskatchewan, and Sogang University in Seoul, South Korea. Juniors, seniors, and students in graduate and professional schools who rank in the top 15 percent of their classes may be considered for membership. The college’s chapter may nominate no more than four percent of the junior and senior classes for membership. In addition to scholarship, loyalty to the college and the Jesuit ideals of higher education — intellectual, moral, social and religious — and service to the college and larger community are the criteria for admission.

All-College Awards and Prizes

(Awards and prizes are based upon seven semesters of completed work.)

The Father Francis A. O’Malley, S.J., Memorial Award is awarded to the member of the graduating class who has achieved the highest cumulative average among students who have completed four years of study at Canisius College.

The James M. Demske, S.J., Scholastic Achievement Award is bestowed upon a senior who has transferred to Canisius College and has completed at least 60 credit hours here. This student will have achieved an exceptionally high cumulative average while a student here.

The Alumni Association Distinguished Senior Award is awarded to a senior who has distinguished him/herself through leadership roles and service to the college.

The Kristin M. Brady Award for Excellence in Senior Honors Thesis is awarded to the student who writes the most outstanding thesis in the All-College Honors Program.

The Robert J. Butler Award for Leadership recognizes the student who has exercised strong leadership in carrying out the co-curricular and extra-curricular activities for the All-College Honors Program and who has taken leadership roles in honors classes. It is named for a previous director of the Honors Program.

The Campus Ministry Award is given to a graduating senior who has contributed to the Canisius College community through participation in the events and programs of Campus Ministry and who has taken a leadership role in faith and justice activities.

The Dr. Martin Luther King, Jr. Awards are given to faculty members, students, or administrators whose lives and work best represent the ideals of Dr. King.

The Albert R. Mugel Award is presented annually by the Raichle Pre-Law Center. It is given to a senior intending to pursue a career in law and whose achievements, individual character and dedication to the welfare of the community best exemplify the career and ideals of Albert R. Mugel. Mr. Mugel was a member of the college's Board of Trustees and worked tirelessly to enhance the Pre-Law Center and enhance its position in Western New York.

The I. Joan Lorch Award for Women’s Studies is awarded to a student who has made a significant contribution to promote women's issues on the Canisius College campus through such activities as writing a newspaper series, performing committee work, or representing women's issues on a governing body.

College of Arts & Sciences

Departmental/Program Awards

BIOINFORMATICS PROGRAM

The Student General Excellence Award in Bioinformatics honors the bioinformatics major who, along with a high GPA, has also made contributions to the field through research and/or service activities.

The Bioinformatics Program Excellence in Research Award honors a bioinformatics student who has completed significant research at the undergraduate level.

BIOLOGY DEPARTMENT

The Alpha Theta Chapter of Tri Beta, National Biological Honor
Society, Falkiewicz Award for Academic Excellence in Biology is given to the graduating biology major with the highest academic average.
The Alpha Theta Chapter of Tri Beta, National Biological Honor Society, Alexander Award for Outstanding Research in Biology is given to the graduating biology major who has completed the most significant independent research project leading to presentation or publication in scientific literature.
The Nancy Wohlschlag Distinguished Research Award is given to the graduating biology major who has completed a significant research project leading to presentation or publication in the scientific literature.
The Biology Department Excellence in Research Awards are given to graduating biology majors who have completed substantial research projects leading to presentation or publication in the scientific literature of their discipline.
CHEMISTRY DEPARTMENT
The Valerian A. Ruskieiwicz Award for Distinction in Chemistry acknowledges superlative academic achievement demonstrated by the highest GPA in the department.
The Student General Excellence Awards of the WNY Section of the American Chemical Society, the department's highest awards, are presented to one chemistry and one biochemistry major who demonstrate outstanding academic achievement along with a strong commitment to service within our academic community.
The Student General Excellence Award of the American Institute of Chemists is given in recognition of a demonstrated record of ability, leadership and professional promise within the field of chemistry.
The Merck Award recognizes significant research accomplishments in the field of chemistry or biochemistry.
Distinction in Chemistry Award is awarded for outstanding performance (greater than 90%) on the DUCK Test (Diagnostic Undergraduate Chemistry Knowledge Test) as well as a GPA greater than 3.5.
CLASSICS DEPARTMENT
The David B. Dietz Classics Book Award is given for outstanding performance in Classics courses.
COMMUNICATION STUDIES DEPARTMENT
The Communication Studies Department Academic Excellence in Communication Studies Award is given to the graduating Communication Studies senior with the highest G.P.A. in the major.
The Communication Studies Department Academic Excellence in Digital Media Arts Award is given to the graduating Digital Media Arts senior with the highest G.P.A. in the major.
The Association of Women in Communication Scholarship Award is given to the graduating senior member of the association with the highest G.P.A. in the major.
The American Advertising Federation Academic Excellence Award is given to the graduating senior member with the highest G.P.A. in the major.
The Gene and Peter Jankowski Award of Excellence is given to a graduating senior in Communication Studies or Digital Media Arts who has demonstrated excellence in academic performance and television production.
The Public Relations Student Society of America Academic Excellence Award is given to the graduating senior member with the highest G.P.A. in the major.
COMPUTER SCIENCE DEPARTMENT
The Computer Science Department Excellence in Academics Award is presented to graduating computer science majors who have achieved an outstanding academic performance.
The Computer Science Department Excellence in Research Award is presented to graduating computer science majors who have achieved outstanding results in computer science research.
ENGLISH DEPARTMENT
The Charles A. Brady Award for Excellence in English is awarded to the graduating English major whose achievement in English courses and literary extra-curricular involvement has been superior throughout his or her college career.
The Leslie C. Warren Award for Academic Excellence is awarded to the graduating English major who has the highest academic average for his or her college career.
ENVIRONMENTAL SCIENCE PROGRAM
The Environmental Science Award for Academic Excellence is awarded to the graduating Environmental Science major with the highest academic average for his or her college career.
The Environmental Science Award for Excellence in Research is awarded to the graduating Environmental Science major who has completed a substantial research project in environmental science leading to presentation and/or publication.
EUROPEAN STUDIES PROGRAM
Jean Monnet Award for European Studies is named for one of the founders of European integration. It recognizes achievement in European Studies in the classroom and through study-abroad and co-curricular activity.
FINE ARTS DEPARTMENT
The Edith DeLuca Memorial Award is given to a graduating senior who has contributed musically to the college and the community through excellence in musicianship, service and leadership. The student exemplifies the high standards and values of Edith DeLuca, the founder of the Buffalo Philharmonic Concert Series at Canisius College.
The Thalia Feldman Memorial Award in Art History is awarded to a graduating senior in Art History who has maintained outstanding academic achievement and has demonstrated leadership in furthering an understanding of the importance of the visual arts in our community.
HISTORY DEPARTMENT
The Professor William M. Harrigan Award for Excellence in History was inaugurated in 1971 to commemorate the late Dr. William M. Harrigan, chair of the History Department from 1960 to 1968. To promote excellence in historical scholarship, the award is presented to the senior who best exemplifies the standards of scholarship, interest in history and Christian values which Dr. Harrigan upheld.
The Professor Edwin L. Neville Graduate Scholarship is given to a senior History major or Secondary Education/Social Studies major who will pursue an advanced degree in history or social studies, preferably in Asian history.
The Rev. Nicholas J. Sullivan, S.J. Award is given for excellence in historical writing.
INTERNATIONAL RELATIONS PROGRAM
The International Relations Academic Excellence Award is given to the senior with the highest G.P.A. among International Relations majors.
The International Relations Award for Global Understanding and Involvement is presented annually to the senior International Relations major demonstrating academic excellence and furthering international understanding.
MATHMATICS & STATISTICS DEPARTMENT
The Dr. Robert Tidd Award for Distinction in Mathematics is given to an outstanding senior upon recommendation by the Department of Mathematics and Statistics.
The Dr. William M. Huebsch Award in Mathematics is given to a senior who combines excellent performance in mathematics with great promise in a career in the application of mathematics to other fields. The award is named in honor of Dr. Huebsch '43, who was a former chair of the Mathematics department.
MILITARY SCIENCE PROGRAM
The General George C. Marshall Award is given annually by
The Outstanding Military Graduate Award is given to a distinguished Canisius College cadet who demonstrates exceptional leadership potential, academic achievement and participation in ROTC activities.

The Cyril O. Schommer S.J. Memorial Prize in Religious Studies is awarded to the senior whose written work demonstrates theological insights and mastery of one of the religious studies disciplines.

The James P. McDermott Award in Religion & Life is given to the senior who manifests Dr. Jim McDermott’s love of learning and his application of religious values in his daily life.

The Outstanding Military Graduate Award is given to a distinguished Canisius College cadet who demonstrates exceptional leadership potential, academic achievement and participation in ROTC activities.

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DEPARTMENT OF SPORTS MEDICINE, HEALTH, & HUMAN PERFORMANCE
John T. Gabbey, MD. Award for Excellence in Athletic Training is presented to the graduating senior who has demonstrated outstanding skills in all aspects of the Athletic Training program.
The Health and Human Performance Award is awarded to the student who best shows excellence in the field of human performance and exercise science, community involvement and excellent internship performance.

Wehle School of Business Departmental/Program Awards
The Alpha Kappa Psi Scholarship Key is awarded annually to the graduate in the Richard J. Wehle School of Business who has attained the highest scholastic average over a three-year period. The award is made by the Delta Tau Chapter of Alpha Kappa Psi, the oldest national professional fraternity in commerce.
The Wall Street Journal Award of a desk plaque and a year’s subscription to the paper is given each year to a graduating senior who has demonstrated outstanding academic achievement in the Richard J. Wehle School of Business.

ACCOUNTING DEPARTMENT
The Bradley J. Shelp, Jr. Memorial Award represents the most prestigious honor the Department of Accounting can bestow upon an accounting student. This award is given on those occasions when the Department of Accounting identifies a senior accounting student who excels in demonstrated attributes of excellence in scholarship and service to the college.
The New York State Society of Certified Public Accountants Awards are given annually, one to a graduating senior in accounting and one to a graduating student in the M.B.A. program in professional accounting. In each case the award is given to the student who has attained the highest scholastic average in accounting subjects and who is considered to be a desirable candidate for admission to the profession of public accounting.
The Accounting Society Award for Excellence in Scholarship is awarded annually to the outstanding senior accounting major.
The Accounting Society Award for Excellence in Scholarship in the Accounting Information Systems Program recognizes outstanding achievement by a senior AIS major and is given to the senior with the highest GPA in the AIS major courses.
The Financial Executives Institute Award is given to a graduating accounting major who displays, as assessed by the department, superlative academic skills and a commitment to professional success.

ECONOMICS/FINANCE DEPARTMENT
Nelson D. Civello Most Outstanding Graduate Award is given upon the recommendation of the faculty to the outstanding senior in the department.
Economics/Finance Department Best Finance Student Award is given to a graduating senior for academic excellence in finance.
John S. Murphy Award for Academic Excellence in Economics is given to a graduating senior for academic excellence in economics.

ENTREPRENEURSHIP PROGRAM
Entrepreneurship Outstanding Student Award is given in recognition of academic excellence and commitment to entrepreneurial leadership as an entrepreneurship major.

INFORMATION SYSTEMS DEPARTMENT
The International Business Outstanding Student Award recognizes a student who has demonstrated academic excellence in his/her major as well as achievement in extracurricular activities including study abroad, international internships and participation in international conferences.

MANAGEMENT/MARKETING DEPARTMENT
The Donald E. Calvert Scholarship is awarded to a senior marketing or management student who displays superior academic and professional skills.
The Thomas J. Schillo Scholarship is awarded to a senior for high standards of academic excellence and personal integrity.
The Management Academic Excellence Award is presented annually to the top ten percent of senior management majors based on overall G.P.A.
The Marketing Academic Excellence Award is presented annually to the top ten percent of senior marketing majors based on overall G.P.A.
The Management/Marketing Academic Excellence Awards are presented to the outstanding dual majors in the department.
The Management/International Business Academic Excellence Awards are presented to the outstanding dual majors in the department.
The Marketing/International Business Academic Excellence Awards are presented to the outstanding dual majors in the department.
NOTE: The information in this section is valid only for the academic year May 12, 2009 through May 9, 2010. Information for the following academic year will be made available in the 2010-2011 Undergraduate Catalog Supplement. All tuition charges, student fees, room deposit for returning students, and room and board charges are assessed and collected by the Student Accounts Office, with the exception of the application and deposit fees for new students, which are assessed by the Office of Admissions. The Trustees of the college, when necessary, may amend the tuition charges, fees and room and board charges.

Application Fee
An application fee of $40.00 must accompany each formal application for admission to Canisius College. This fee is not refundable.

Tuition Deposits
All candidates for undergraduate day-school admission must make a pre-registration deposit of $200.00 on or before Candidate’s Reply Date of May 1. This deposit will be applied to the tuition bill of the first semester after the formal notice of acceptance. The entire deposit is forfeited if the student fails to enter the college or withdraws from the college before the completion of the semester.

Room Deposits
A $200.00 deposit is required of first time and returning students occupying a room in one of the residence halls. The room deposit is non-refundable and is applied as a credit toward the spring semester room rental charge.

Payment of Tuition, Fees and Room and Board
The college bills the student, rather than his or her parent(s). Each semester a student is issued a bill for tuition, fees, and room and board by the Student Accounts Office. Financial responsibility begins with registration for a course. Failure to attend will not cancel a bill. Tuition, fees and room and board are due on the due date printed on the bill. If a bill remains unpaid after the due date without payment arrangements being made, a $300.00 late charge will be added. All money is credited on the day received, NOT the day mailed.

A student must pay the bill in full or make arrangements with the Student Accounts Office to sign a Semester Payment Plan. An administration fee is added to the bill. The bill is then payable in installments throughout the semester. Failure to adhere to the payment plan will result in the canceling of future registrations and placement of a hold on the student’s transcripts, and may also result in suspension from classes. Legal action may result to collect monies due the college.

Canisius College accepts for payment MasterCard, Amex, Discover, cash, check (US funds only) and money orders. It is the college policy to write the student’s ID number on the face of the check or money order to ensure accurate posting. By submitting a check, please be aware that you are authorizing Canisius College to use information on your check to make a one time electronic debit from your account at the financial institution indicated on your check. This electronic debit will be for the amount on the check. Funds may be withdrawn from your account as soon as the same day your payment is received and you will not receive your check back from your financial institution. Call the Student Accounts Office if you have any questions about electronic check collection or options available if you do not want your payments collected electronically.

Policies
Withdrawal, Cancellation and Refund
Unofficial withdrawal does not cancel an account. No withdrawal credit will be given to any student who does not fill out the proper withdrawal forms provided by the appropriate academic dean. No withdrawals will be accepted or withdrawal credit given over the telephone. Withdrawal credit or refunds of tuition will be given to those students whose bills are paid, or have signed a Semester Payment Plan on or before the due date specified on the bill.

No refund of tuition or housing costs may be demanded as a matter of right when a student leaves the college or college owned housing without completing the semester in which enrolled. For a student to request a refund, the withdrawal must be authorized by the appropriate dean and/or the Director of Residence Life or designee by the filing of an official form, countersigned by the parent or guardian in the case of a freshman. If this is done, the student may request in writing a refund of tuition and/or housing costs only according to the following schedule:

<table>
<thead>
<tr>
<th>Category of Refund</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>First week of classes (Drop and Add Week)</td>
<td>100%</td>
</tr>
<tr>
<td>Second week of classes</td>
<td>90%</td>
</tr>
<tr>
<td>Third and fourth week of classes</td>
<td>50%</td>
</tr>
<tr>
<td>Fifth week through eighth week of classes</td>
<td>25%</td>
</tr>
<tr>
<td>After eighth week of classes</td>
<td>None</td>
</tr>
</tbody>
</table>

Fees are not refundable.

The refund policy is set by the federal government (Appendix A to Part 668 - Standards for Acceptable Refund Policies by Participating Institutions).

No refund of tuition will be granted to a full-time undergraduate student who withdraws from a course but continues attendance in other courses at the college, with the exception of drop-and-add week. Such students will be deemed to retain full-time status. Refunds of tuition will be calculated from the date on which the withdrawal is approved by the appropriate academic dean. The refund will be sent to the student within thirty days of approval. Full tuition and fees will be refunded in the event of cancellation of a student’s enrollment because of an error on the part of the college.
Any individual remaining enrolled may terminate the room and board agreement only under special circumstances approved by the Office of Residence Life. The same schedules noted above will be used to determine the final bill for housing costs, as specified in the Room and Board Contract.

**Outstanding Financial Obligations**
Any outstanding financial obligation which a student owes to the college can prevent the student from registering for courses or making schedule adjustments after registration.

The following types of outstanding financial obligations can cause a financial hold to be placed on a student’s record and stop registration transactions:

A. **Student Accounts Office** - any outstanding tuition, default on payment plans, late charges, write-offs or delinquent NDSL/Perkins loans and Peter Canisius loans;

B. **Library** – any late fines or replacement fees for books not returned;

C. **Residence Life** - residence hall damage fees;

D. **Koessler Athletic Center** - fees for lost or damaged equipment.

In order to clear a financial hold, a student must pay the obligation due at the appropriate office or make suitable payment arrangements with that office. A student must clear ALL financial holds in order to register for classes, make schedule changes, receive or send transcripts or view their transcripts on line.

**Governmental Programs**
Students who attend Canisius College under the provision of Public Laws 16, 346, 550, or 894 and those under the sponsorship and benefits of other government agencies are subject to regulations governing certified papers from the Department of Veterans Affairs or other appropriate government agencies. They must present these papers to the Student Records Office and the Student Accounts Office.

**Deferred Tuition Payments**
Students desiring a tuition deferment or monthly installments in paying their tuition may enter into a Semester Payment Plan with the college. If a student wishes to utilize the Semester Payment Plan, he/she must enroll in the plan by the due date on the bill. All Semester Payment Plans are subject to an administration fee and a penalty fee if the balance is not paid in full by the payment plan’s final due date. Once enrolled in a Semester Payment Plan, the administration fee will be added to the tuition bill and the remaining balance is due in accordance with the terms of the agreed upon plan.

**Full-Time Students**
A full-time undergraduate student is one who is registered for at least 12 semester hours of credit.

**Part-Time Students**
A part-time undergraduate student is one who is registered for less than 12 semester credit hours.

**Tuition and Fees: Undergraduate Division**
**FALL AND SPRING SEMESTERS**

**Effective May 12, 2009 through May 9, 2010**

Per semester in all curricula -

- **Full time (12-18 credit hours)** ........................................ $14,227.50
- **Part-time** ................................................................. $812.00/credit hour
- Undergraduate courses in excess of semester hours allotted to each curriculum per semester hour ....................................... $812.00/credit hour
- **Audit, per semester hour** ............................................... $406.00
- **Audit, Alumni & Parents of Students, per course** .............. $60.00
- **Audit, Senior Citizens, per semester (no course limit)** ........ $50.00

**Board, Per Semester:**
Plan 1: 19 meals/week + $75 Bonus Bucks (includes 15 Bonus Meals) ........................................... $2163.00
Plan 2: 14 meals/week + $100 Bonus Bucks (includes 10 Bonus Meals) ........................................... $2023.00
Plan 3: 10 meals/week + $225 Bonus Bucks (includes 8 Bonus Meals) ............................................... $1805.00
Plan 4: 75 meals/semester + $500 Bonus Bucks (includes 5 Bonus Meals) ......................................... $1368.00
Plan 5: SUPER Flex Fund (qualifies for meal plan exchange rates) ...................................................... $600.00
Plan 6: Flex Fund Only (minimum deposit) (increase in $25 increments) ........................................... $50.00
Plan 7: Golden Choice (minimum deposit) ......................................................................................... $25.00

**Room, Per Semester:**
Bosch/Frisch – Double .......................................................... $3115.00
Bosch/Frisch - Suite ............................................................... $3505.00
Bosch/Frisch Bathroom Suite ................................................ $3562.00
Campion Hall - Single ............................................................ $3625.00
Campion Hall (2&3) ............................................................... $3135.00
Delavan Townhouses 2 & 3 person ...................................... $4399.00
Delavan Townhouses 4 & 5 person ...................................... $4025.00
Desmond Hall-Single ............................................................ $3827.00
Dugan - Double .................................................................. $3198.00
Dugan - Suite .................................................................... $3578.00
George Martin House - Single ............................................ $3625.00
George Martin House - Double ........................................... $3135.00
Griffin-Double .................................................................. $3531.00
Village Townhouses ............................................................. $3703.00
Main Humboldt - Double ..................................................... $3703.00
Main Delevan - Single ........................................................ $4025.00

**Semester Fees:**
Student Government tax (provides partial support for various student activities)
- **Full-time students** ......................................................... $120.00
- **Part-time students** ......................................................... $18.00

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1 Tuition waiver: see Financial Aid section.
2 On a space-available basis.
3 No fees, except for laboratory, are charged
4 A detailed description of each plan may be obtained from the Student Accounts Office. First semester freshmen in Bosch, Frisch, or Eastwood may choose either Plan 1 or Plan 2. Freshmen in the second semester may choose either Plan 1, 2, or 3. Upperclassmen in Bosch, Frisch, or Eastwood must be on Plan 1, 2, 3, or 4. Residence students not in Bosch, Frisch, or Eastwood, and commuter students, may choose any of the six options. If Plan 1, 2, or 3 is purchased in the fall semester, it will automatically be re-billed in the spring semester, unless changed during the first two weeks of the spring semester.
Semester Fees (continued):

Technology fee
Full-time students .................................................. $112.50
Part-time student ..................................................... $7.50/credit hour

Health Fee
Full-time students .................................................. $25.00
Part-time students .................................................... $15.00

Special Fees:
Non-Collegiate Learning Assessment Program (NLAP)
LLL 499 ................................................................. $200.00
Portfolio assessor fee ............................................... $100.00
GRN 497 - Gerontology Practicum Assessment .......... $40.00
EDU 122, PED 150 Portfolio (4 years) ....................... $100.00

Laboratory, Computer Usage, or Cassette Usage Fees:
(per course)
Laboratory Usage:
Athletic training
ATH 132, 231, 332, 333, 332, and 431 ..................... $20.00
ACC 211 .................................................................. $30.00

Chemistry (including breakage allowance) .............. $40.00
Education ................................................................ $20.00
Modern Language .................................................. $25.00
Physics .................................................................. $35.00
Psychology .............................................................. $20.00

Electronic Course Usage (where required, cost of workbook will be extra) ............................................... $225.00

Occasional Fees and Charges:
Application fee ......................................................... $40.00
Diploma reprint fee .................................................... $30.00

Orientation fee: all new full-time undergraduate freshman students .................................................. $125.00
Undergraduate transfer orientation fee ...................... $55.00
Late payment fee ....................................................... $300.00
ID card late fee or replacement ................................ $20.00
Returned check charges ........................................... $25.00
Vehicle registration fee ............................................. varies
Transcript of records, each ....................................... N/C

Thesis binding fee ..................................................... varies
Consortium Administration fee, per semester .......... $350.00

Tuition remission and exchange program ................. varies

Study Abroad Canisius Program ................................ $500.00
Study Abroad Non-Canisius Program ...................... $750.00

The cost of financing a college education is an important consideration for both students and parents. A Canisius College education is affordable and can be made financially possible through the many types of financial assistance administered by the Student Financial Aid Office. The staff of this office is available to help both students and parents plan for the financing of a Canisius education.

Students seeking federal and state financial assistance or institutional funds must complete the Free Application for Federal Student Aid (FAFSA).

The FAFSA worksheet may be obtained by incoming freshmen from their high school guidance counselors or on-line at www.fafsa.ed.gov. Transfer students and students in attendance at Canisius may obtain the FAFSA worksheet at the Student Financial Aid Office, or on-line at www.fafsa.ed.gov by using the FAFSA Renewal Form that is e-mailed directly to the student. Incoming students (freshmen and transfers) who complete their applications by February 15 will receive first preference in the evaluation procedure. Returning students should submit their applications by April 15 for first-preference consideration. These dates are recommendations. However, students who do not meet these dates are urged to apply at any time for second consideration.

Estimated Student Budget for the Academic Year 2009-2010

<table>
<thead>
<tr>
<th></th>
<th>Commuter</th>
<th>Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$28,455</td>
<td>$28,455</td>
</tr>
<tr>
<td>Fees</td>
<td>1,057</td>
<td>1,057</td>
</tr>
<tr>
<td>Books/Supplies</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>Room and Board</td>
<td>1,500</td>
<td>10,556</td>
</tr>
<tr>
<td>Personal/Recreation</td>
<td>630</td>
<td>700</td>
</tr>
<tr>
<td>Transportation</td>
<td>430</td>
<td>430</td>
</tr>
<tr>
<td>Total</td>
<td>$32,772</td>
<td>$41,898</td>
</tr>
</tbody>
</table>

General Eligibility Requirements

To be considered for student financial aid, a student must:

1. Study at least half-time at an educational institution approved by the federal government. It may be located in New York, in another state, or in a foreign country.
2. Be a U.S. citizen or eligible non-citizen.
3. Be a resident of New York State for 12 months immediately preceding the first term for which the student is applying for aid (for New York State financial aid programs).
4. Be in good academic standing and making satisfactory academic progress.
5. Have no outstanding debt from a previous student loan default and must not owe a refund on any federal grant at any institution.
6. Demonstrate compliance with applicable Selective
7. Demonstrate financial need or meet individual program or scholarship requirements.
8. Have never received a drug conviction while receiving aid OR have satisfied federal requirements to reinstate eligibility after a drug conviction.

Repeating a Course
The repeating of a course may have an impact on a student’s financial aid. Once a student has received financial aid for a course for which they have obtained a passing grade, they may not receive New York State aid again for that course.

Therefore, students repeating a course in this instance should take care to enroll in enough credit hours in addition to the course to maintain their aid. For example: You are registered for 12 credits and 3 of those credits are for a repeated course. For New York State aid purposes (TAP, HEOP, Merit Scholarship, etc.) you are only taking 9 credits and are not eligible for state aid. You would need to register for 15 credits in order to keep your state financial aid.

Students repeating a failed course, or a course requiring a higher grade for your major requirement in order to graduate, may be able to receive aid for that repeated course.

Criteria for Student Financial Aid Consideration
In order to be considered for student financial aid, students must matriculate. That is, they must have satisfied the entrance requirements and be following a prescribed program of study toward a degree. Non-matriculated students are students who are not pursuing a degree at Canisius College, but have met the college’s entrance requirements and have received the permission of the appropriate dean to take classes. Non-matriculated students are not eligible for financial aid.

Student Financial Aid awards are generally based on full-time attendance, which is at least 12 credit hours per academic semester. It is recommended that students contact the Financial Aid Office before reducing their academic load below 12 credit hours per semester in order to determine the effect on their financial aid. Students whose academic loads do fall below 12 hours per semester are required to contact the Financial Aid Office because it is very likely that the financial aid award will be affected. Certain aid programs are available to students who have enrolled part-time for at least six credit hours per semester. Students should contact the Financial Aid Office for further information.

Note: To receive financial aid, a student must remain “in Good Academic Standing.” For further information, the student should read the section entitled “Satisfactory Academic Standing.”

Part-Time TAP
New York State now offers a part-time TAP Program for students who were first-time, full-time freshmen in 2006-2007 and beyond. Students should complete the FAFSA and TAP applications to be evaluated for eligibility.

In addition to the general eligibility requirements listed above, students must have earned 12 credit hours or more in each of the two consecutive preceding semesters, for a minimum of 24 credits earned. Recipients must also be registered for 6 – 11 hours for consideration.

New York State Tuition Assistance Program
The Tuition Assistance Program (TAP) is a state-funded program for New York State residents. It may be used only at approved post-secondary institutions within New York State. Grants range from $500 to $5,000 a year, based on the family’s net taxable income for the previous year. There is no competition for this award. To be eligible, students must be full-time matriculated students who meet the standards stated below. Students may receive only eight semesters of TAP as undergraduates. However, students enrolled in approved five-year programs are eligible for 10 semesters of undergraduate TAP. At this time, only HEOP (Higher Education Opportunity Program) is such an approved program at Canisius College. The following table illustrates the amount of a TAP award at Canisius.

<table>
<thead>
<tr>
<th>2008 New York State Net Taxable Income</th>
<th>2008 TAP Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - 7,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>8,000</td>
<td>4,930</td>
</tr>
<tr>
<td>9,000</td>
<td>4,860</td>
</tr>
<tr>
<td>10,000</td>
<td>4,790</td>
</tr>
<tr>
<td>11,000</td>
<td>4,720</td>
</tr>
<tr>
<td>12,000</td>
<td>4,620</td>
</tr>
<tr>
<td>13,000</td>
<td>4,520</td>
</tr>
<tr>
<td>14,000</td>
<td>4,420</td>
</tr>
<tr>
<td>15,000</td>
<td>4,320</td>
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<tr>
<td>16,000</td>
<td>4,220</td>
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<tr>
<td>17,000</td>
<td>4,120</td>
</tr>
<tr>
<td>18,000</td>
<td>4,020</td>
</tr>
<tr>
<td>19,000</td>
<td>3,900</td>
</tr>
<tr>
<td>20,000</td>
<td>3,780</td>
</tr>
<tr>
<td>21,000</td>
<td>3,660</td>
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<td>22,000</td>
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<td>23,000</td>
<td>3,420</td>
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<td>2,580</td>
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<td>31,000</td>
<td>2,460</td>
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<td>32,000</td>
<td>2,340</td>
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<td>33,000</td>
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<td>2,100</td>
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<td>46,000</td>
<td>660</td>
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<tr>
<td>47,000</td>
<td>540</td>
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<tr>
<td>48,000 - 60,000</td>
<td>500</td>
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<tr>
<td>60,001 - 70,000</td>
<td>500</td>
</tr>
<tr>
<td>70,001 - 80,000</td>
<td>500</td>
</tr>
</tbody>
</table>
Federal Financial Aid Programs
The FAFSA and all requested income verification forms are the required forms for the following programs administered and/or awarded by Canisius College.

Federal Pell Grant: The Federal Pell Grant Program was legislated by the federal government through the 1972 Education Amendments and was amended by the Higher Education Opportunity Act of 2008.

In order to be eligible for this grant, a student must be a U.S. citizen or a permanent resident alien. All full-time and part-time matriculating students should apply for this grant. Federal Pell grants range from $523 to $4,731 depending on the amount of funds appropriated by the federal government each year. Individual family circumstances and the cost of education at the college being attended are also taken into consideration. The Free Application for Federal Student Aid (FAFSA) is used to apply for the Federal Pell Grant Program. FAFSA worksheets are available on-line at www.fafsa.ed.gov at all high schools and at the Student Financial Aid Office.

Federal Perkins Loan Program: The Federal Perkins Loan Program is a federally funded program administered by Canisius College and awarded on the basis of financial need. It is available to both full-time and part-time (at least six hours) matriculating students. The total undergraduate maximum is $15,000, including all undergraduate loans through this program.

The annual percentage rate of the loan is 5 percent. Repayment will begin nine months after the student ceases to be enrolled at least on a half-time basis. There is no interest charged while the student is enrolled in school at least half-time or during the nine-month grace period.

<table>
<thead>
<tr>
<th>Amount Borrowed</th>
<th>Amount of Payment</th>
<th>Number of Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,000</td>
<td>$90.26</td>
<td>12</td>
</tr>
<tr>
<td>2,000</td>
<td>93.64</td>
<td>25</td>
</tr>
<tr>
<td>3,000</td>
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<tr>
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</tr>
<tr>
<td>10,000</td>
<td>319.21</td>
<td>40</td>
</tr>
</tbody>
</table>

Federal and institutional regulations require students who have taken out a Federal Perkins Loan, a Federal Stafford Student Loan or a Peter Canisius Student Loan to attend pre-loan and exit interviews before graduating or withdrawing from the college. Important information concerning repayment schedules and deferment and cancellation provisions will be discussed. It is to the student’s advantage to attend. Students must contact the Financial Aid Office for this interview if they withdraw from the college.

Federal Work-Study Program: The Federal Work-Study Program (FWS) is a federally funded program designed to offer students part-time employment while in school. It is available to both full-time and part-time (at least six hours) matriculating students. Students are employed on campus, ideally in work related to their academic and vocational goals. A student qualifying for Federal Work-Study employment may work between five and 20 hours a week during the academic year and up to 40 hours a week during the summer. All job referrals are made by the Office of Student Financial Aid.

Federal Supplemental Educational Opportunity Grant: The Federal Supplemental Educational Opportunity Grant (FSEOG) is a federally funded program administered by Canisius College and based on financial need. Recipients may be either full-time or part-time (at least six hours) matriculating students. At Canisius, grants range from $200 to $1,500 a year. This award is a grant, not a loan. FSEOG funds are limited. FSEOG will be awarded to students with exceptional financial need, that is, to students whose financial need exceeds 50 percent of the student budget under which they are evaluated. Priority will be given to students who have the lowest expected family contributions and/or who are eligible for the Federal Pell Grant Program.

Federal Academic Competitiveness Grant (ACG): The Academic Competitiveness Grant (ACG) is a federally funded program based upon financial need and academic performance. Students must file a FAFSA annually to be considered.

First year undergraduates who began no earlier than the 2006-2007 academic year may be eligible for an ACG grant of $750 for the first year. Recipients must be U.S. citizens, Pell eligible and enrolled at least half time. Eligible students must also meet criteria of rigorous study in high school as determined by the Offices of Admissions and Financial Aid and federal guidelines. To receive the award of $1,300 for the second year of study, students must maintain a 3.0 GPA.

National Science and Mathematics Access to Retain Talent (SMART) Grant: The National Science and Mathematics Access to Retain Talent Grant (SMART) is a grant funded by the federal government to encourage students in the science and mathematics fields. Pell eligible U.S. citizens enrolled at least halftime, in their third and fourth year of study in specific majors may be eligible. Students must file a FAFSA annually to be considered. A GPA of 3.0 must be earned and maintained to receive this award of $4,000 for each of the junior and senior years.

Teacher Education Assistance for College and Higher Education (TEACH) Grant: The Teacher Education Assistance for College and Higher Education Grant (TEACH) is a grant funded by the federal government to encourage students to become highly qualified teachers in high-need subject areas to low income students. Undergraduate and graduate students who are U.S. citizens or eligible non-citizens may be eligible for this grant beginning in the 2008-2009 school year. Grants of up to $4,000 per year may be awarded to eligible recipients who agree to a teaching commitment of four years in a specific subject. A FAFSA must be completed to be considered. Failure to complete the commitment will result in a conversion of the grant to a loan payable with interest accrued from the
Canisius College Academic and Need-Based Scholarships

The Scholarship Committee annually awards a limited number of need-based scholarships. To apply for these scholarships, a student must:

1. Be accepted for admission to Canisius;
2. Take the SAT or ACT tests. (Scores for tests taken before December 31 of the senior year in high school for priority consideration. A separate scholarship application is not required.

Canisius College also funds renewable scholarships for incoming freshmen which range from $6,000 to $17,000 per academic year. Among the scholarships awarded are the Trustee’s Scholarships, the Dean’s Academic Scholarships, the Benefactor’s Scholarships and the Academic Scholarships. These scholarships are awarded on the basis of SAT or ACT scores and high school records. A separate scholarship application is not required. In order to be eligible for one of these scholarships, a student must:

1. Be accepted for admission to Canisius; and
2. Take the SAT or ACT tests. (Scores for tests taken before December 31 of the senior year in high school for priority consideration. A separate scholarship application is not required.

Freshmen who are offered these scholarships are required to maintain a 2.0 cumulative G.P.A. at the college to retain their scholarship aid. All applicants are encouraged to apply for financial aid.

Martin Luther King Scholarships: The purpose of the Martin Luther King Scholarship Program is to provide assistance to students who aspire to the goals of Dr. Martin Luther King. Recipients are awarded for $1,000 per year for 4 years of full time study. Applicants must be accepted for admissions and submit a separate application, essay and letters of recommendation by the deadline.

Other Programs

Higher Education Opportunity Program: The Higher Education Opportunity Program (HEOP) is a New York State education program. The purpose of this program is to assist academically under-prepared and financially disadvantaged students. In order to qualify, students must meet specific criteria in each of these areas. Students interested in applying for admission under this program should contact the Canisius Opportunity Programs for Education (COPE) Office for more information. All students in this program must file the FAFSA. This program may be affected by State appropriations.

Children of Alumni: Full-time undergraduate students who are children of Canisius alumni are eligible for an alumni grant of $1000 per year for four years.

Army ROTC Scholarship Program: The purpose of the Army ROTC Scholarship Program is to assist outstanding students in paying for their college education while they complete requirements for a commission in the U.S. Army Reserves, the National Guard, or the United States Army. High school students interested in the four-year scholarship should contact their high school guidance counselors or the Professor of Military Science at Canisius College. Students may also apply on the Internet at www.armyrotc.com. The application deadline is November 15 of the student’s senior year in high school.

Three- and two-year scholarships are also available to Canisius College students. It is not necessary that a student be enrolled in the Military Science curriculum to qualify for these scholarship awards. Deadlines for these awards are March 15 of the sophomore year for the two-year scholarship and March 15 of the freshman year for the three-year scholarship.

The scholarship covers tuition and mandatory fees. All qualifying students will also receive a flat rate of $600 for books, and a subsistence allowance of up to $400 per month for the length of the scholarship.

Canisius College also provides a grant to assist resident ROTC Scholarship recipients with their room and board costs.

Endowed Scholarships: Endowed scholarships are permanently invested funds that provide a perpetual source of scholarship assistance to deserving students. These are made possible by endowed gifts, which yield an annual income sufficient to defray, in whole or in part, the tuition and fees of the student.

The annual income from endowed scholarships partially finances the scholarship program of Canisius College according to the wishes of the donors.

Education Loans

A loan is money the student borrows. It must be paid back. A loan is a serious obligation. Students should borrow only what they need. Education loans are for tuition and fees, room and board, books, transportation and personal expenses.
An education loan cannot exceed the student’s total educational costs minus other student financial aid and, if required, a family contribution. Education loans have lower interest rates than most other types of loans.

The Federal Family Education Loan Program (FFELP) loans offered at Canisius College include:

- Federal Stafford Student Loans (subsidized)
- Federal Stafford Student Loans (unsubsidized)
- Federal Parent Loans for Students (Federal PLUS)

Funding for the FFELP Loans is provided by banks, credit unions, savings and loan associations and pension funds. Canisius College processes applications for all lenders.

Federal Stafford Student Loans
(subsidized & unsubsidized)

Federal Stafford Student Loans are available to undergraduate and graduate students with demonstrated financial need. The maximum loan amounts available to undergraduates are as follows:

First Year: $3,500 each year
Second Year: $4,500 each year
Third, Fourth & Fifth Years+: $5,500 each year

PLEASE NOTE: a combination of subsidized and unsubsidized Federal Stafford Loans cannot exceed the class year limits listed above for dependent students. However, for periods of enrollment beginning with July 1, 2008, all eligible undergraduate students may now borrow an additional $2,000 in unsubsidized loan funds.

The total undergraduate Federal Stafford amount (both subsidized and unsubsidized combined) cannot exceed $31,000.

Independent undergraduates may borrow up to an additional $4000 for their first and second years and $5000 for their third, fourth, and if necessary fifth year of study through the Federal Unsubsidized Loan Program. Students are required to pay interest on this loan while they are in school. The total undergraduate Federal Stafford amount for independent students (both subsidized and unsubsidized) cannot exceed $57,500.

How to Get a Loan:

Three factors must be considered to determine Federal Stafford Loan eligibility: educational costs, other financial aid the student will receive, and the expected family contribution as determined through an approved needs-analysis system. Therefore, all students must submit a FAFSA before the Federal Stafford Loan application can be processed. The school must report these figures to the lender and certify the student’s enrollment status. Borrowers are required to complete an electronic Master Promissory Note (e-MPN). Information about the e-MPN and instructions for submission are mailed to the student’s permanent address from the New York State Higher Education Services Corporation (NYSHEC) or may be accessed on-line at www.hesc.com.

A loan is usually for a single academic year. An entrance interview will be conducted at orientation. Prior to graduation or withdrawal, the student should complete a loan exit interview. The purpose of these interviews is to explain the rights and responsibilities, including repayment obligations.

Paying Back a Loan: The student is responsible for:

1. Repayment of the amount borrowed
2. Interest on the amount borrowed
3. Fees paid at the time he/she receives the loan check

When a student gets a loan, the terms of repayment are explained. Students must be sure that they understand all repayment terms before signing the loan’s promissory note. If the student fails to meet these terms, he/she is in default and the entire balance of the loan becomes due.

Costs: The interest rate for all Federal Stafford Loans on which the first disbursement is made on or after July 1, 2006 (regardless of any previous loan history) will be the current fixed rate. Loans made prior to July 1, 2006 but after July 1, 1994 (regardless of any previous loan history) will be at the current variable rate. For subsidized loans, there are no interest payments while the student is in school and for six months afterwards. Students who borrow through the unsubsidized Federal Stafford Loan must begin to pay the interest while in school. Some lenders may charge an origination fee of up to 1.5 percent of the amount borrowed. The fees are due when the student is issued the check. The bank will reduce the check by the amount of the fees.

Federal Parent Loans for Undergraduate Students (Federal Plus)

These loans are for parents of financially dependent undergraduate students. Parents may borrow up to the cost of attendance minus financial aid per year per child. A student should apply for a Federal Stafford Loan before the parent applies for Federal PLUS. PLUS pre-approval forms are available in the Financial Aid Office.

Costs: The interest rate for PLUS loans on which the first disbursement is made on or after July 1, 2006 will be the current fixed rate. Interest begins at the time of disbursement. Some lenders may charge an origination fee of up to 4 percent of the amount borrowed. The fee is due when the parent is issued the loan check. The bank will reduce the check by the amount of the fee.

Repayment: Repayment of the amount borrowed plus interest begins 60 days after the loan is fully disbursed. The minimum monthly payment is $50. Repayment must be completed within 5-10 years depending on how much the parent borrowed. Interest accrues immediately and repayment begins within 60 days of disbursement. However, parents may request an in-school deferment from the lender if they wish. Repayment would then begin at graduation or separation from school.

Peter Canisius Loan: The Peter Canisius Loan Fund is an institutional program established to assist Canisius students who are ineligible to borrow from the Federal Perkins Loan Program and the Federal Stafford Student Loan. Full-time undergraduate and graduate students may borrow up to $3,000 per year. Part-time students are eligible...
to borrow up to one half of the maximum amount per year. One co-signer is required of each applicant. The credit ratings of the co-signer and the borrower must be approved before the loan is disbursed. Repayment of the loan, with an annual percentage rate of 5 percent, begins nine months after the borrower graduates or terminates study. The maximum repayment period is ten years, but it is adjusted according to the size of the individual loan.

**Financing Options**
The following options are available to assist students and their parents in financing a Canisius education:

1. **Griffin Tuition Payment Plan**: This plan allows parents to budget tuition payments over a full academic year. An annual fee of $60 is charged. Further information is available at the Financial Aid Office or the Office of Student Accounts.

2. **Canisius College Installment Payment Plan**: A student who is unable to pay his/her semester bill in full by the due date may pay the balance in monthly payments by signing a 2-payment installment plan. Installment plans are subject to an administrative fee of $30. A 2.5 percent penalty fee on the total unpaid balance will be added after each missed payment.

3. **Home Equity Loan**: The Tax Reform Act of 1986 allows interest to be deductible if it is on a debt secured by a residence, up to the value of the residence (purchase price and improvements plus any amount incurred after August 16, 1986) for “qualified medical and educational expenses.” This provision allows homeowners to retain the option of subsidizing loans for their children’s education by deducting interest payments on these loans.

**Other Information**

**Awards Notification**: Freshmen applicants who submit all necessary forms by February 15 are notified by the Student Financial Aid Office by March 1, or before the May 1 Candidate Reply Date. Upperclassmen and graduate students who submit applications by April 15 receive award notices by July 1. Students submitting applications after April 15 are notified as soon as possible.

**Over-Awards**: Each year a number of financial aid recipients are “over-awarded.” As a result, checks are withheld, and, in some cases, students are billed for funds already disbursed. This problem arises because of the length of time needed to match funds from various institutional sources and/or outside agencies against the individual student’s record. To avoid this problem, students are urged to notify the Student Financial Aid Office promptly when they receive additional funds from any source not listed in their award letters, or when a student changes his/her enrollment status.

**Financial Aid Check List**: To be evaluated for possible financial aid, the student must submit the following forms each academic year:

1. Free Application for Federal Student Aid (FAFSA) and a TAP application. FAFSA work sheets are available on-line at www.fafsa.ed.gov. in high school guidance offices, or in the Canisius College Student Financial Aid Office. The TAP application is available to New York State residents as a direct link when they file the FAFSA on-line or by visiting Anytime TAP at www.hesc.com.

2. If requested, Federal Income Tax 1040 Form (parents and student) for the previous calendar year when available and/or letter from Social Services, Social Security, or Veterans Administration or other requested verification of income including child support. These items should be returned to the Student Financial Aid Office.

Students are reminded that financial aid awarded for the freshman year or any other year does not guarantee aid for the following year. Students must re-apply for financial assistance each year.

**Financial Assistance Information for Students**: Section 485 of the Education Amendments of 1998 legislates that institutions participating in Title IV Student Aid Programs shall provide prospective and enrolled students with information about student aid at their respective institutions.

Canisius College has a Student Financial Aid Policy and Procedures Manual which is updated periodically. This manual describes the following:

1. Institutional, federal, and state student aid programs available at Canisius;
2. Procedures for awarding student aid at Canisius;
3. Application processes and deadline dates for the various student aid programs;
4. Student rights and responsibilities under the appropriate student aid programs;
5. Appropriate budgets, outlining an estimated cost of attendance, which includes tuition, fees, books and supplies, room and board on campus and other related costs;
6. Institutional refund policy; and
7. Academic standards needed to retain financial eligibility.

The Student Financial Aid Office (Old Main 100) will provide the above financial aid information upon request. Information pertaining to academic programs, special services available to the handicapped and institutional accreditation is explained elsewhere in the college catalog.

**Satisfactory Academic Standing**

To receive student financial aid, a student must remain “in Good Academic Standing.” This means that students must:
1. make satisfactory academic progress toward the completion of their program requirements and
2. pursue the program of study in which they are enrolled. The two elements of program pursuit and satisfactory academic progress must be met for each term of study in which an award is received.

NOTE: These standards are subject to change upon legislative changes by New York State and/or the federal government.
**Satisfactory Progress:** A student must acquire a minimum number of credits at each semester interval and a minimum cumulative G.P.A. Students must meet the following satisfactory progress standards based on a 4.0 grading system:

**Undergraduate:**
Before being certified for aid for this semester:
1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th

A student must have accrued at least this many graded credits:
0 3 9 21 33 45 60 75 90 105

With at least this Cumulative Quality Point Average:

For example:
Student A has accumulated 18 hours and has a 1.2 G.P.A. She is entering her fourth semester and fourth payment of aid and needs 21 hours and a 1.3 G.P.A. She is ineligible for New York State student aid because she does not meet the satisfactory progress requirements.

**Program Pursuit:** A student must receive a passing or failing grade in a certain percentage of a full-time course load. The percentage increases from 50 percent of the minimum full-time load in each semester of study in the first year for which an award is made, to 75 percent of the minimum full-time load in each term of study in the second year for which an award is made, to 100 percent of the minimum full-time load in each term of study in the third year and each succeeding year for which an award is made. Grades of W (indicating a student’s withdrawal from a course) do not satisfy Program Pursuit requirements. Full-time students must meet the following requirements for Program Pursuit:

**Undergraduate:**
Before being certified for aid for this semester:
1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Minimum credit hours a student must have completed in the previous semester to meet Program Pursuit requirement:
0 6 9 9 12 12 12 12 12

For example:
Student B has accumulated 18 credit hours and has a 2.0 G.P.A. He is entering his third semester of school and his third payment of aid. At this point, he needed nine hours and a 1.2 to maintain satisfactory progress. However, during his second semester, he completed only three credit hours. Consequently, he did not maintain the program pursuit aspect and is ineligible for his third payment.

**Waivers:** If a student fails to maintain program pursuit, fails to make satisfactory progress, or fails to meet both of these elements of good standing, the college may grant a waiver which would allow the student to receive financial aid for the next semester. A maximum of one waiver at the undergraduate level and one at the graduate level may be awarded to a student. The waiver will not be automatic since it is intended to accommodate only extraordinary cases. Waiver policies are somewhat different for aid received under federal Title IV programs and aid received under New York State programs.

**Federal Programs:** Each student’s progress will be evaluated every semester. Students will be required to meet the academic standards as outlined in the college catalog. However, Canisius College will allow all students a one-time probationary period following their first adverse determination of satisfactory progress. During this probationary period, the students still will be considered to be maintaining satisfactory progress and are eligible for federal Title IV funds. The fact that a student was placed on probation must be made a part of his or her record.” (Source: official Federal Regulations.) A one-time probationary period is defined as one academic semester.

Students not meeting satisfactory academic progress or program pursuit requirements will be placed on financial aid probation status for the ensuing semester of the student’s enrollment. Students will be allowed to retain their financial aid during the probationary semester.

Financial aid suspension will occur following the semester of probation if the student fails to meet the required academic standards. Reinstatement of aid will occur when the minimum standards have again been earned. Students may use summer classes (at their own expense) to improve their academic records sufficiently to reinstate their eligibility for financial aid. Only courses taken at Canisius College will affect a student’s G.P.A. Students must complete the requirements for a degree within 150 percent of the normal time allotted for program completion or within a maximum of six years. The following aid programs are subject to the conditions described above:

- Federal Pell Grant
- Federal Perkins Loan
- Federal Academic Competitiveness Grant (FACG)
- Federal National Science and Mathematics Access to Retain Talent (SMART) Grant
- Federal Teacher Education Assistance for College and Higher Education (TEACH) Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work Study (FWS)
- Federal Stafford Student Loans (subsidized and unsubsidized)
- Federal Parent Loan for Undergraduate Students (Federal PLUS)

**New York State Programs:** A waiver will be granted if situations beyond a student’s control prevent the student from maintaining satisfactory academic progress or program pursuit. These situations must be documented. The waiver will be granted only when there is reasonable expectation that the student will be able to meet the successive steps for financial aid eligibility as specified in the tables above. Reasons for which waivers may be granted include:

1. personal medical problems;
2. family medical problems;
3. severe personal problems; and
4. other circumstances beyond the control of the student.

Any student wishing to request a waiver must submit to the
associate dean of his/her division a written statement detailing the reasons why special consideration should be given. (A statement simply requesting a waiver is insufficient.) The written statement must be postmarked no later than ten calendar days after the date of the notice of loss of financial aid eligibility. Documentation supporting the stated reasons for special consideration must be provided and should be included with the written statement or should be forthcoming from appropriate third parties or agencies. The student is responsible for requesting that all documentation be sent or brought to the associate dean. Documentation should indicate that the student's problems have been directly responsible for his or her inability to meet the satisfactory progress and/or program pursuit requirements.

The appropriate associate dean will review the student's written statement and supporting documentation. If additional information is needed, the associate dean may require an appointment with the student. A student will be informed of the associate dean's decision within seven calendar days of receipt of the student's written request. The associate dean will confer with any student being granted a waiver to assure that the student is fully aware of his/her situation and that the student concurs with the granting of the waiver. The associate dean's decision on the waiver request is final.

Award programs affected by this policy at Canisius College include the following student aid programs:
- Empire State Scholarship for Excellence
- Tuition Assistance Program (TAP) Aid to Part-Time Students (APTS)
- Children of Deceased and Disabled Veterans (CV) Award, Children of Deceased State Correction Officers, State Civilian Employees of a Correction Facility (AT), and Fire Fighter Award
- Higher Education Opportunity Program (HEOP)
- Vietnam Veterans Tuition Award

Reinstatement of Canisius' own institutional aid rests with the discretion of the Student Financial Aid Committee.

**Part-Time Students:** Part-time students may receive financial aid for up to twelve years, except when certain program limits have been reached. During each academic year of attendance as a part-time student, the student must maintain a cumulative quality point average comparable to that required of a full-time student, along with a comparable number of credits accumulated toward a degree. (See chart above.)

**Summer School:** Students who lose eligibility for financial aid at the end of an academic year can sometimes make up the deficiency by attending summer school at their own expense. The Financial Aid Office should be consulted regarding the student's intention to do so and should be supplied with a transcript of grades after the completion of courses. Only courses taken at Canisius will affect a student's grade point average.

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**Summary of Curriculum for all Students**

I. Core Requirements (see below)
II. Major Requirements (see alpha listing)
III. Electives (sufficient courses and credits to reach the minimum of 120 credits to graduate)

To determine how your courses fulfill curricular requirements you should run a GriffAudit. To run a GriffAudit go to [http://www.canisius.edu](http://www.canisius.edu), select ‘Current Students’ option, then Online Registration option. Complete instructions can be found on this page.

**Core Curriculum Mission**

For complete information about the Core Curriculum, go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp).

At Canisius College, we espouse the ideal of academic excellence along with the responsibility to use one's gifts for the service of others and the benefit of society. In the spirit of our mission as an American Catholic Jesuit University, Canisius College offers a Core Curriculum founded in Ignatian pedagogy and tradition.

By requiring the Core Curriculum, our faculty attends to *cura personalis* (care for the whole person) as we prepare students to be men and women who strive continually for magis (“something more”). Demonstrating our highest aspirations for all our students, the Core enables you to achieve: 1. A breadth of knowledge in the liberal arts toward development of reflection and judgment. 2. A focused awareness of the human condition, as marked by both cooperation and conflict, to which educated people of good will and good spirit bring both thoughtfulness and understanding. 3. A foundation of skills that helps students to turn their knowledge and understanding into academic productivity and social responsibility.

**Core Curriculum Requirements**

I. Foundation Courses (4 courses: FYS 101, ENG 101, PHI 101, RST 101)

Students are recommended to complete these courses in the first year, as long as the major schedule permits. FYS 101 is recommended for most students in the fall semester, with ENG 101 recommended in the spring semester. First year students take either PHI 101 or RST 101 in the fall semester, and complete the second course in the spring semester.

II. Breadth of Knowledge (at least 7 courses)

Students are required to take at least seven courses, with at least one from each of the following Fields: Religious Studies, Philosophy, Arts, History, Social Sciences, Natural Sciences, and Mathematical Sciences. Only courses appropriately designated count as fulfillment of a Field require-
ment. Courses designated as satisfying Field requirements may also satisfy major requirements. See your major course of study.

III. Cross-disciplinary Knowledge and Skills Courses (courses carrying the following six designations)
Students are required to take courses designated for the following cross-disciplinary knowledge and skills: Justice, Ethics, Diversity, Global Awareness, Advanced Writing-intensive and Oral Communication. Courses designated for Field or courses that satisfy major or elective credit may carry these designations. Some courses may carry more than one designation. Students must take as many courses as necessary to achieve all six requirements.

IV. Core Capstone (1 designated course or experience)
Students must complete all other core requirements before taking a Core Capstone. Typically, students will take a Core Capstone in the junior or senior year. Some core Capstones may also be designated capstones in a major (see your major course of study for such overlap).

Descriptions of Core Curriculum Requirements
The Core Curriculum is a multi-disciplinary program of study required of all students attending Canisius College. The Core requirements are:

I. Foundation Courses
The Core Curriculum provides a Foundation of four common courses, generally completed in the first year. These courses include basic instruction in writing (FYS 101, ENG 101), attention to the process of critical thinking through basic development of information literacy (FYS 101, ENG 101, PHI 101, RST 101), and basic understanding of the importance of studying religion and philosophy within the Catholic and Jesuit tradition of education (PHI 101, RST 101).

Foundation FYS 101 Explorations of Academic Writing: Special Topics
This course emphasizes the production of academic writing through critical analysis of texts, with topics drawn from a wide range of academic disciplines. The courses are intended to be seminar style with reading and discussion appropriately challenging for first year students, with the expectation that students will be able to write so as to enhance learning, find and evaluate information, practice academic integrity, negotiate the process of revision and use correct grammar and syntax.

Foundation ENG 101 Writing about Literature
This course develops strategies for reading and writing about literature (poetry, drama, fiction, literary essays), with the expectation that students will be able to understand and interpret primary literary texts; develop writing skills; and develop and organize interpretive essays through the use and evaluation of sources. ENG 101 courses will have a significant component of the course devoted to writing instruction and developing information literacy. It is expected that in ENG 101 students will engage in revision, as well as write at least 15 pages of polished prose, and that they will engage in appropriate research activities.

Foundation PHI 101 Introduction to Philosophy
This requirement acknowledges the special place of the study of philosophy in Catholic Jesuit education. The course provides a thoughtful examination of philosophical issues, with the expectation that students will be able to use logical and critical analysis to understand the claims and arguments proposed by classical and modern philosophers, including some in the Catholic philosophical tradition.

Foundation RST 101 Introduction to Religious Studies
This requirement acknowledges the special place of the study of religion in Catholic Jesuit education. The course provides an academic introduction to religion, with the expectation that students will understand the nature and role of religion in human life and society, including the Jesuit and Catholic traditions as well as other world religions.

II. Breadth of Knowledge
The Core Curriculum provides for a distribution of seven courses, one in each of seven Fields. The courses provide a broad exposure to the liberal arts tradition, which is an invitation to recognize the multiple ways that natural and social phenomena have been studied and categorized. Many courses designated for Field credit also count as major requirements.

Collectively through the Breadth of Knowledge requirement, students are encouraged to reflect about their inner lives, to consider how attention to the life of the mind bears upon reality, and to discern the human relationship to the natural world and to social institutions. The skills and knowledge students develop through the Breadth of Knowledge reflect the variety of disciplinary norms specific to each Field.

The seven Fields are:
Field 1: Religious Studies and Theology
Designated courses that enable students to gain a clearer understanding of the role which religion plays in human life through a careful and systematic examination of religious ideas, institutions, values or patterns of belief and practice.

Field 2: Philosophy
Designated courses that enable students to understand, articulate, and evaluate the values, principles, and assumptions on which individual and social decisions rest.

Field 3: Arts
Designated courses that enable students to understand the aesthetic dimension of creative work in the fine arts and/or literature and to articulate how that creative work mirrors and shapes human experience.

Field 4: History
Designated courses that enable students to understand how historians use evidence to study the recorded past, to situate events, artifacts and experiences in their historical context, and to analyze the process of change over time.

Field 5: Social Sciences
Designated courses that enable students to explain, interpret and critically analyze human behavior and social structures from the perspective of the social science through which the courses are offered.
The focus will be upon the promotion of justice. Between justice and power, as well as the causes of injustice, understanding of the nature of justice, including the tension in the whole person.

The Core Curriculum provides six requirements which address matters central to the Catholic Jesuit tradition of education and necessary for preparing students for the modern world. Students are required to take courses with all six designations. Any course may carry the Cross-Disciplinary Knowledge or Skill designations as long as the course has a significant component on the specific subjects. Designated courses may also satisfy Field and major requirements, as well as elective credit.

Diversity Designation
Designated courses that enable students to develop an understanding of the multicultural character of the United States by giving attention to the cultural differences within the United States in many areas of society. This Core goal is grounded on the assumption that education ought to provide students with the intellectual tools and expansive perspectives by which to examine their own communities and values as well as the communities and values of people different from them.

Ethics Designation
Designated courses that enable students to develop an understanding of personal action, the good in terms of human agency, happiness and living a worthwhile life. Focus will be upon moral issues, living well and the frameworks that make living well intelligible, both personally and professionally. This Core goal is grounded on the assumption that an understanding of ethics is an integral part of educating the whole person.

Global Awareness Designation
Designated courses that enable students to develop an awareness of nations, countries, regions, communities and cultures outside of the United States. This Core goal is grounded on the assumption that we live in an increasingly interconnected world, and that a liberal arts education ought to provide students the intellectual tools and understandings to comprehend global events.

Justice Designation
Designated courses that enable students to develop an understanding of the nature of justice, including the tension between justice and power, as well as the causes of injustice. The focus will be upon the promotion of justice.

Advanced Writing-intensive Designation
Designated courses at the 200-level or above with significant emphasis on using writing as a way to learn. The Core goal is that students will engage in the process of drafting, re-writing, and editing at an advanced level, with extensive commentary and assistance of instructors.

Oral Communication Designation
Designated courses that enable students to develop abilities to communicate effectively and appropriately in a range of contexts, including face-to-face, through practicing their skills at both sending and receiving messages. Effective communication helps maintain a sense of community as well as an ability to craft consensus in an increasingly diverse and complex world. Preparation for life in the modern world requires sensitive and skillful communication with those of widely different backgrounds, cultural experiences and values.

IV. Core Capstone
The Core Curriculum provides for a Core Capstone, an opportunity for students to reflect upon the meaning and significance of the Core Curriculum, as well as to consider the value of public service and the necessity of leadership. Students take the Core Capstone once all the other core requirements have been fulfilled, usually in the junior or senior year.

Undergraduate Degrees
To earn a bachelor's degree from Canisius College, the student must complete a minimal total of 120 credit hours. Within each curriculum these courses are distributed into three areas: (1) Core Curriculum; (2) Major Requirements; and 3 Electives courses.

Major Requirements
Each major has its own specific requirements, which are listed by the individual department under the heading “Curriculum.” Students should make sure that any restricted electives are chosen from among the courses approved by the department involved.

Electives
The remaining courses may be chosen in any area. These free electives complete the student’s requirements for the baccalaureate degree.

Credit Policy
A bachelor's degree requires the completion of a minimum of 120 credits. The number of actual courses and credits varies depending upon the particular program as described in this catalog. All Canisius credits, regardless of the number of credits earned for a course, count toward the fulfillment of the 120 total. In practice this means that students may combine one credit courses to make the equivalent of a three credit free elective. A student may also combine unrelated laboratory credits to make free electives if that student has changed from a science to a non-science major. Any questions about the award of credits and their application to a degree can be directed to the Student Records Office or to an academic advisor.

To earn a degree of associate of arts, a student must complete the required Core Curriculum courses, major courses, elective courses and a minimum of 60 credit hours. Canisius College offers undergraduate curricula leading to the degrees of Bachelor of Arts (B.A.), Bachelor of Science (B.S.), and Associate of Arts (A.A.) major and/or
concentrations as listed below. Each program is listed with the official approved title and HEGIS number by which it is registered with the New York State Education Department. Enrollment in programs other than those that are registered or otherwise approved may jeopardize a student’s eligibility for certain student-aid awards. The programs are as follows:

**Arts and Sciences – Bachelor of Arts Degree:**
- Anthropology 2202
- Art History 1003
- Biology 0401
- Communication Studies 0601
- Computer Science 0701
- Criminal Justice 2105
- Economics 2204
- English 1501
- European Studies 0310
- History 2205
- Humanities 4903
- International Relations 2210
- Mathematics 1701
- Modern Languages 2205
- French 1102
- German 1103
- Spanish 1105
- Music 1005
- Philosophy 1509
- Political Science 2207
- Psychology 2001
- Religious Studies 1510
- Sociology and Anthropology 2208
- Urban Studies 2214

**Arts and Sciences – Bachelor of Science Degree:**
- Animal Behavior 0499.99
- Biochemistry 0414
- Bioinformatics 0499
- Biology 0401
- Chemistry 1905
- Computer Science 0701
- Digital Media Arts 0605
- Clinical Laboratory Science 1223
- Environmental Science 0420
- Physics 1902
- Social Sciences-General 2201
- Technical and Liberal Studies 4999

**Education and Human Services – Bachelor of Arts Degree:**
- Education (Adolescence) 10401-01
- Biology “7-12” 1905-01
- Chemistry “7-12” 1501-01
- English “7-12” 1102-01
- French “7-12” 1103-01
- German “7-12” 1105-01
- Spanish “7-12” 1105-01
- Mathematics “7-12” 1701-01
- Physics “7-12” 1902-01
- Social Studies “7-12” 2201-01
- Early Childhood Education 0823
- Childhood Education 0802
- English 0804-01
- Social Studies 0804-02
- Mathematics 0804-03
- Science 0804-04
- French 0804-05
- German 0804-06
- Spanish 0804-07

**Education and Human Services – Bachelor of Science Degree:**
- Physical Education Teacher K-12 0835
- Special Education/Early Childhood 0808
- Special Education/Childhood 0808

**Business Administration – Bachelor of Science Degree:**
- Accounting 0502
- Accounting Information Systems 0502
- Economics 0517
- Entrepreneurship 0506
- Finance 0504
- Information Systems 0702
- International Business 0513
- Management 0506
- Marketing 0509
- Accounting/Professional 0502

**Arts and Sciences – Associate of Arts Degree:**
- Humanities (General) 5649
- Social Sciences 5622

**Certificates:**
- Computer Science 0701
- Women’s Studies 2299

**Pre-Professional Programs**
Canisius College offers pre-professional training for students wishing to pursue a graduate degree in a number of professions. Programs and/or concentrations are available in the following areas:
- Pre-Medicine
- Pre-Dentistry
- Pre-Law
- Pre-Veterinary
- Pre-Pharmacy

**Undergraduate Dual Degree Programs**
Canisius College offers 3+2 Dual Degree Program in Physics and Engineering that include the State University of New York at Buffalo, and a dual degree program in physics and engineering with Pennsylvania State University at Erie, The Behrend College.

Students begin the program at Canisius and complete three years, or the equivalent, studying liberal arts courses in addition to pre-engineering courses in the basic sciences. Upon completion of the first three years and with a recommendation from Canisius, students then enter State
University of New York at Buffalo or Pennsylvania State for two years to complete the engineering courses required there, with articulation agreements in place to ensure a smooth transfer process.

Students who complete one of the dual degree programs receive two bachelor's degrees, one from Canisius in physics, and one in an engineering discipline (UB – Chemical, Civil, Electrical, Industrial, Mechanical, Aerospace and Penn State - Mechanical) from the partner school.

**Dual Degree Programs**
Canisius College also offers Dual Degree programs in a number of areas. These programs allow for the completion of a bachelor's degree in four years, followed by a master's degree in approximately one year. These programs are as follows:

- A Dual Degree program leading to a Master of Business Administration degree is offered for students majoring in business and a number of majors in the College of Arts and Sciences.

**Minors**
Minors are available in the following areas:
- Animal Behavior
- Anthropology
- Art History
- Biblical Studies
- Bioinformatics
- Biology
- Business
- Business Management
- Catholic Studies
- Cell and Molecular Biology
- Chemistry
- Child, Family & Community Studies
- Christian History, Thought & Ethics
- Classics Departmental
- Classics Interdepartmental
- Clinical Psychology
- Cognitive Science
- Computer Science
- Computer Theory
- Creative Writing
- Criminal Justice
- Economics
- English
- Environmental Biology
- European Studies
- Exercise Science
- Fine Arts
- Forensic Psychology
- General Psychology
- Gerontology
- Health & Human Performance
- History
- Human Resource Management
- Industrial/Organizational Psychology
- Information Systems
- International Business
- International Management
- International Relations
- Irish Studies
- Law & Public Policy
- Literature
- Management of Technology
- Mathematics
- Music
- Neuroscience
- North American Studies
- Peace and Justice Studies
- Philosophy
- Psychology
- Physics
- Political Science
- Religions of the World
- Religious Studies
- School Psychology
- Social Sciences
- Sociology
- Sports Psychology
- Studio Arts
- Supply Chain Management
- Theatre Arts
- Women's Studies
- Writing
- Zoo Biology

**Courses of Instruction**
The college year consists of two semesters, fall and spring. The unit of instruction is the semester hour or credit hour, which consists of one lecture period of 50 minutes length each week for the entire semester. A course having three 50-minute class periods a week will, therefore, earn three semester hours of credit. A two- to three-hour period of laboratory work in the sciences or education each week is considered equivalent to one lecture period, and therefore, to one semester hour.

The number of semester credits to be earned in a given course is always indicated by the number after the course title.

**Course Registration Restrictions:** In some departments registration in all or some the course offerings may be restricted to majors in that department. In some instances the department chairperson may authorize registration of non-majors in the course offerings.

**Prerequisites:** Some courses have prerequisites that must be met before a student can register for the course. Prerequisites include such requirements as the successful completion of previous courses, concurrent registration in another course, permission of the instructor or chair, and specific G.P.A. and course grade requirements. A student may not register for a course where prerequisites are indicated unless the prerequisites have been successfully completed.

**Note:** For two-semester courses that are listed with one title and description (e.g., BIO 107-108 Human Anatomy and
Physiology), it is understood that successful completion of the first semester is a prerequisite for admission to the second half of the course.

The numerical sequence used at Canisius College indicates the following: Courses numbered 100-199 and 200-299 are usually freshman/sophomore courses; 300-399 and 400-499 are usually junior/senior courses. Upperclassmen, on the approval of the department chair, may take courses in the 500-599 category. Courses in the 600 category are restricted to graduate students only.

All courses described in the catalog are scheduled for both 2009-2010 and 2010-2011 unless otherwise indicated.

Declaring a Major
A student declares a major upon entrance to the college by filling out the "Academic Interest" section on the admission application. If students wish to change their majors, they must complete a Change of Major form in the Student Records Office. It is the students' responsibly to make sure the record reflects their correct major, concentration or minor data.

Minors are an option available to students. The requirements for each minor are outlined in the appropriate departmental sections.

Dual Majors
Students who wish to expand their educational opportunities may decide to declare a dual major. The decision may be based on career goals or planned graduate studies. Before a student declares a dual major it is important to meet with the appropriate academic departments for advisement. Some dual major combinations can be completed within the minimum 120 credit hour degree requirement. But in some cases additional course work may be required.

In order to declare a dual major, the student must complete the appropriate dual major request form and get the signature of each department chairperson and the appropriate associate dean.

Substitutions
All degree requirements must be satisfied as stated in the catalog. In some circumstances it may be necessary to make adjustments to the student's curriculum. Substitutions must be approved in writing by the appropriate person: the associate dean for the Core Curriculum and the department chairperson for the major and/or concentration requirements.

Writing
Writing is a way of learning as well as a way of communicating. The development of skill and fluency in the written use of language is inseparable from the development of skill and fluency in thought. As part of their learning experiences, students should expect to write in a variety of modes, from class notes, diaries and poems to examination essays and research papers. Opportunities for writing are a feature of every course in the college. To help develop skill and fluency in writing of various kinds, students may seek assistance from the staff of the Tutoring Center.

Academic Support Services
Students whose prior academic record or performance on placement examinations indicates that they will need additional help to succeed in their college work will be placed into special sections or courses that are designed to assist them in their future course of studies. Students may also be advised to take special courses or sections if their performance in the first year indicates such special attention may be helpful. When necessary, the college, working through the Student Advisement Center and the various departments, may require that such courses be taken.

Summer Session
The Canisius College Summer Session affords qualified graduate and undergraduate students educational opportunities of the same quality as the courses offered during the regular fall and spring semesters. Course offerings are planned especially for the following groups:

- Undergraduate students who wish to complete required courses, acquire additional credits toward a degree, or make up deficiencies.
- Transient students, graduate and undergraduate, who are pursuing degree work at other colleges and universities.

Academic Advisement
Students come to the college with diverse needs and varied backgrounds. The college believes that this diversity calls for individualized assistance as students develop into self-directed, independent learners. The college's Student Advisement Center is designed to provide professional assistance for students on an individual basis. Advisors help students understand the college's expectations and foster in them a sense of independence as learners and responsibility for achieving their educational goals. The advisor helps students recognize their academic strengths and weaknesses, establish realistic educational goals, and identify the courses and resources necessary to achieve these goals. The advisor provides academic guidance by interpreting institutional requirements, recommending courses of action and referring students to other people or departments for assistance. The Student Advisement Center is located in Bagen Hall, Room 103.

Freshmen: Each entering freshman is assigned an academic advisor in the area of their academic interest who assists the student throughout the freshman year by explaining the college's curriculum and discussing the particular program of study that interests the student. During the freshman year the student will meet with an advisor at least twice each semester to discuss academic performance, student needs, available resources and course scheduling for subsequent semesters.
**Undecided Students:** Students who have not selected a major after their freshman year will receive academic advisement from the Student Advisement Center.

**Part-time Students:** Part-time students are required to meet with an advisor, and are encouraged to use the services of the Student Advisement Center in selecting proper courses and understanding the resources that are available to assist them at the college.

**Upper Class Students:** After their freshmen year students who have selected a major are assigned an advisor in their major field. Each academic department will assign their majors to an advisor. The student must meet with his/her advisor within the department of their major for advisement each semester.

**Adult:** Adult students are advised through the office for Adult Academic Services.

**Non-Matriculated Students:** Non-matriculated students are advised through the office for Adult Academic Services.

**Second Degree**
Individuals may enroll in a second baccalaureate degree if they can demonstrate that a second bachelor's degree is necessary for their career. Individuals must fulfill the admissions requirements for the degree sought and must receive approval from the appropriate dean prior to matriculation in the program. These individuals, however, should be advised that in most cases it is unnecessary to receive a second baccalaureate degree; rather they merely need to complete a prescribed series of courses that apply to their career or life needs.

If they still wish to receive the second degree, the following policy will be the guideline for them: The credits received from the first bachelor's degree will be applied as transfer credit to the second degree. The first degree need not have been completed at Canisius. The minimum requirements for the second degree include the completion of a minimum of at least thirty credit hours at Canisius, with at least 18 credit hours of the courses being taken from the selected major. The student must complete all the departmental requirements for the degree, as well as the general graduation requirements, including a 2.00 grade point average for all courses taken at Canisius.

Individuals should meet with the appropriate dean or advisor to outline the program of courses necessary for the completion of the second degree.
The College of Arts and Sciences offers curricula leading to undergraduate and graduate degrees. The undergraduate curricula provide programs in a wide range of disciplines in the humanities, fine arts, natural sciences and social sciences. We offer 29 undergraduate majors in 18 academic departments. Each program combines the liberal-arts objectives of the Core Curriculum with the specific goals of the student’s major field.

The College of Arts and Sciences offers a graduate program leading to a master of science degree in Communication and Leadership.

**Undergraduate majors**  
Animal Behavior, Ecology and Conservation  
Anthropology  
Art History  
Biochemistry  
Bioinformatics  
Biology  
Chemistry  
Criminal Justice  
Clinical Laboratory Science  
Communication Studies  
Computer Science  
Digital Media Arts  
Economics  
English  
Environmental Science  
European Studies  
French  
German  
History  
International Relations  
Mathematics and Statistics  
Music  
Philosophy  
Physics and Pre-Engineering  
Political Science  
Psychology  
Religious Studies and Theology  
Sociology  
Spanish  
Urban Studies

A number of certificate programs and minors are also offered in the College of Arts and Sciences:

**Certificate Programs**  
Computer Science  
Women's Studies

The many minors offered in the College of Arts and Sciences are identified in the descriptions of departmental offerings.

Also housed in the College of Arts and Sciences are:  
- The William H. Fitzpatrick Institute of Public Affairs and Leadership  
- The Frank G. Raichle Pre-Law Center  
- The George E. Schreiner Pre-Medical Center  
- The Institute for the Global Study of Religion

The faculty in the College of Arts and Sciences is committed to developing knowledge and awareness of past and present dimensions of humanity and culture and to enhancing this knowledge through creative expression, scholarly interpretation and research. By demanding teaching and academic excellence, the College strives to instill in all students the attributes of creative and critical thinking, effective oral and written communication skills and social values that embrace diversity and the Jesuit tradition. Through the various disciplines the College of Arts and Sciences contributes to the formation of responsible citizens by providing an educational foundation upon which students build their lives and professions.
The Richard J. Wehle School of Business offers curricula leading to undergraduate and graduate degrees through the departments described below.

A complete description of the academic majors is contained elsewhere in this catalog. The majors and the departments where they are housed are shown in the following table.

<table>
<thead>
<tr>
<th>Majors</th>
<th>Department</th>
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<tr>
<td>Accounting</td>
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<td>Accounting Information Systems</td>
<td>Accounting</td>
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<tr>
<td>Economics</td>
<td>Accounting</td>
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<tr>
<td>Entrepreneurship</td>
<td>Accounting</td>
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<tr>
<td>Finance</td>
<td>Economics/Finance</td>
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<tr>
<td>Information Systems</td>
<td>Management/Marketing</td>
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<tr>
<td>International Business</td>
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<td>Management</td>
<td>Management/Marketing</td>
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<tr>
<td>Marketing</td>
<td>Management/Marketing</td>
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In addition, dual majors are available in these areas or in combination with other majors outside the Wehle School of Business.

All students majoring in business will be required to participate in assessment exercises appropriate for meeting accreditation requirements.

The graduate programs lead to the degrees of master of business administration (MBA) and master of business administration in professional accounting (MBAPA). They provide the graduate student with a sound general preparation for business decision-making and leadership. They are described in the Graduate Catalog.

The School of Business now offers a 150-hour program leading to undergraduate and graduate degrees in accounting, plus dual degree programs for students in any undergraduate major leading to one of the two graduate degrees: MBA or MBAPA. The 150 hours will be required for anyone in New York wishing to sit for the CPA exam after August 2009.

The School of Business also includes a Center for Professional Development, which provides numerous professional development and training programs for the Western New York community. There is also a Women’s Business Center that assists individuals who are interested in starting a business or growing an existing enterprise.

Mission Statement
The Richard J. Wehle School of Business develops business professionals to lead within their organizations, to excel in the globally competitive marketplace and to behave as ethically and socially responsible individuals. This is achieved through teaching excellence, intellectual vigor and community involvement in the Jesuit tradition.

- **Lead within their organizations**: Prepare students to work with and motivate colleagues to successfully accomplish organizational goals.
- **Excel in the globally competitive marketplace**: Make use of the school’s location on an international border to give students a greater awareness of the challenges faced in the globally competitive marketplace.
- **Ethically and socially responsible individuals**: Help students understand the importance of ethically and socially responsible behavior.
- **Teaching excellence**: Facilitate the intellectual growth of students in an environment of active learning using qualified and caring faculty.
- **Intellectual vigor**: Support student learning and business practices through faculty scholarship that relates primarily to pedagogy and professional practice.
- **Community involvement**: Provide services to and play an active role in the urban environment in which the school is located.
- **Jesuit tradition**: Educate the whole person to use their gifts in the service of others by caring for the spiritual, intellectual, emotional and physical life of the individual.

The AACSB International (The Association to Advance Collegiate Schools of Business) accredits the MBA program and all the undergraduate programs in business. Accreditation establishes standards for collegiate schools of business in order to promote high levels of educational quality. AACSB International accredits over 540 schools around the world.

Canisius College has a chapter of Beta Gamma Sigma, a national honor society recognizing outstanding scholastic achievement by students in business administration. Juniors ranking in the top seven percent of their class, seniors in the upper 10 percent, and graduate students who graduate in the top 20 percent are eligible for membership.

**Business Minor**
The Business minor is available to provide an introduction to business to those non-business students who may want to seek employment in the area of business after graduation. It consists of six required courses and one elective selected from several advanced business courses. For additional information, please see Dr. James Valone, associate dean of business.

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>ACC 201 Financial Accounting</td>
<td>3</td>
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<tr>
<td>ECO 101 Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 255 Business Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>FIN 201 Introduction to Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGT 101 Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MKT 201 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Business elective: one course (ECO 102, 256; FIN 311; MGT 325, 360, 364, 370; MKT 320, 351, 352)</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong> (7 courses)</td>
<td><strong>21</strong></td>
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</tbody>
</table>
Mission Statement
The School of Education and Human Services, in concert with our candidates, school partners, alumni and community, seeks to prepare highly competent, professional and socially committed teachers, administrators and counselors who value the Jesuit traditions of cura personalis, social justice and leadership through service. The mission of the unit is to prepare professionals who possess content, pedagogical and professional knowledge; use their gifts in the service of others; and demonstrate professionalism and leadership in their field.

Academic Programs
All initial teacher preparation and all advanced preparation programs in the School of Education and Human Services are accredited by the National Council for the Accreditation of Teacher Education (NCATE). The major program in athletic training is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). All programs are registered and approved by the New York State Education Department.

The School of Education and Human Services offers curricula leading to undergraduate degrees in a number of areas, including 14 different teacher certification programs available at the early childhood, childhood and adolescence level, and in students with disabilities and physical education.

The Education Department offers undergraduate degree/certification programs in childhood which include: early childhood education (birth through grade 2); childhood education (grades 1 through 6); a dual certification program in early childhood/childhood education (birth through grade 6); a dual certification program in students with disabilities/early childhood (birth through grade 2); and a dual certification program in students with disabilities/childhood education (grades 1 through 6). Each of these five programs requires candidates to select a ten course academic concentration in one of eight disciplines: English, mathematics, science, social studies, music, French, German or Spanish. Candidates enrolled in childhood education programs may elect to take two additional courses in middle childhood education and apply for an extension to teach in grades 7 through 9 (though not in music).

Undergraduate degree programs in adolescence education lead to teacher certification (grades 7 through 12) in one of nine academic disciplines: biology, chemistry, physics, English, mathematics, social studies, French, German and Spanish. Candidates enrolled in adolescence education programs may elect to take two additional courses in middle childhood education and apply for an extension to teach in grades 5 and 6.

The Department of Physical Education, Health and Sport Studies offers a teacher certification program in physical education, and a dual certification program in physical and health education. Minors are offered in sports psychology and sport administration.

The Department of Sports Medicine and Exercise Science has a major program in athletic training and a minor in health and human performance.

As required by the New York State Education Department, the pass rates for Canisius College on the New York State Teacher Certification Examinations for the period 2007-2008 are as follows:
- Liberal Arts and Science Test (LAST): 98%
- Assessment of Teaching Skills Written (ATS-W): 100%
- Content Specialty Test (CST): 94%

These scores were reported to Canisius College on March 2, 2009 by the New York State Education Department.

Conceptual Framework
Canisius’ teacher preparation programs focus on knowledge, service, leadership and professionalism; the foundational tenants of our conceptual framework. Academic programs offer candidates the content, pedagogical and professional knowledge, skills and dispositions necessary for quality performance in their field of study. Candidates will demonstrate the ability to reflect on their instructional practice, apply knowledge, exhibit skills and develop
dispositions essential for success in P-12 schools. In coursework and in practice, candidates will display a clear understanding of the historical, philosophical, sociological, legal and psychological bases of education and educational policy. Candidates must be committed to the education of the whole person and to the belief that all individuals can learn. Within the contexts of their work, candidates promote authentic learning, social and emotional development, and a commitment to service and social justice in environments that foster respect for diversity and the dignity of all. Candidates are required to participate in the urban community in which the college is located and, through a variety of field experiences and service-learning opportunities, to interact with an ethnically, racially, culturally, religiously and intellectually diverse population. Collaborative projects allow candidates to learn from others, develop a professional orientation, and assume positions of responsibility and leadership. Candidates develop the ability to reflect thoughtfully on their experiences in order to guide professional development and to improve practice and are encouraged to join professional organizations and actively participate in professional conferences.

Performance outcomes aligned with knowledge (K), service (S), and leadership/professionalism (P) are:

**Knowledge**: The acquisition, creation and dissemination of knowledge is a continuing, transformational process.

**Knowledge Outcomes** — The competent professional:
- applies theory and research in practice;
- applies effective teacher/counselor/administrator principles;
- demonstrates appropriate dispositions, emphasizing student responsibility for behavior and achievement.

**Service**: Each individual has gifts and talents that should be developed to the highest level.

**Service Outcomes** — The competent professional:
- is committed to diversity, equity and social justice;
- has a sense of purpose and power, and in all endeavors works for the benefit of all learners in their respective human-service professions;
- demonstrates appropriate dispositions:
  + enthusiasm toward content/subject area(s);
  + appreciation of social/cognitive/emotional development of all learners;
  + appreciation of human diversity;
  + values development of students’ critical thinking;
  + engages in comprehensive and collaborative planning that meets curricular goals;
  + commitment to utilizing assessment information to inform decisions.

**Professionalism/Leadership**: Each individual has an obligation to improve the world in which we live as advocates for social justice and through a dedication to education as a vehicle for positive social change.

**Professionalism/Leadership Outcomes** — The competent professional is:
- an effective communicator;
- a reflective practitioner;
- a lifelong learner;
- demonstrates appropriate dispositions:
  + values and utilizes effective communication techniques in professional settings;
  + is committed to, and actively seeks out, opportunities to grow professionally;
  + is committed to advocating for the well-being of children and families.

**Admission, Assessment and Continued Progress**
Although coursework for all teacher certification programs normally begins in the freshman year, continued registration as a major is contingent upon several assessments. Through the assessment system performance is evaluated at four transition points, providing candidates with ongoing and integrated feedback on their progress. The four major transition points are: (1) program entrance; (2) prior to clinical practice; 3 after clinical practice; and (4) program completion. Transition to each successive level requires successful performance on all measures described at the transition point. Performance measures include outcomes based on INTASC (Interstate New Teacher Assessment and Support Consortium) principles, the standards of specialized professional associations, and faculty expectations of knowledge, service, leadership and professionalism. Faculty review the progress of each candidate and, if transition point requirements are not met, the candidate is referred to the departmental Candidate Concern Committee Please refer to the Undergraduate Student Handbook and the Program Portfolio Guidelines Handbook for details of the policy and procedure. The Candidate Concern Committee will work with the candidate to develop a remediation plan. Candidates who consistently do not meet program expectations or do not meet the requirements of the remediation plan may be counseled out of, or dismissed from, the program.

**Assessment at Transition Point 1 - Program Entrance:**
- Acceptance to the college: SAT score; high school GPA

**Assessment at Transition Point 2 - Prior to clinical practice:** [EDY 432, EDE 432, EDS 432, SPE 432/433, PED 441]
- Successful portfolio review
- Cumulative GPA of 2.5 or higher;
- Grade of C or higher in all education courses
- Grade of C or higher in content courses for candidates seeking certification at the middle childhood or adolescence level
- Satisfactory performance in field placements

**Assessment at Transition Point 3 - After clinical practice:** [EDY 450, EDE 450, EDS 460, SPE 450, PED 470]
- Successful final portfolio review
- Satisfactory integrated portfolio reflection
- Cumulative GPA of 2.0 or higher
- Grade of C or higher in all education courses
- Grade of C or higher in content courses for candidates seeking certification at the middle childhood or adolescence level
- Satisfactory performance in field experience II
Assessment at Transition Point 4 - Program Completion:

- Cumulative GPA of 2.0 or higher
- Grade of C or higher in all education courses
- Grade of C or higher in content courses for candidates seeking certification at the middle childhood or adolescence level
- Successful completion of all program requirements

All candidates for teaching certification are required to develop a professional portfolio during their program of study. Specific common assignments from selected courses are compiled into an assessment portfolio on Taskstream through which the candidate demonstrates successful performance according to the standards of professional organizations and the Interstate New Teacher Assessment and Support Consortium (INTASC). In addition, Taskstream supports the development of a showcase portfolio for future job searches. Please refer to the Undergraduate Student Handbook and the Program Portfolio Guidelines Handbook for more information.

The development and exhibition of dispositions appropriate to teaching all children is a requirement of all Canisius teacher preparation programs. Candidates who demonstrate an unwillingness or inability to act in a mature, respectful and professional manner will be referred to the departmental Candidate Concern Committee for remediation. Outcomes of the remediation plan can include but are not limited to: probationary status for student teaching, prohibited from participation in field experiences, including student teaching, and/or repeating a field experience, including student teaching.

Please refer to the Undergraduate Student Handbook for details of the policy and procedure.

Certification
To obtain initial teacher certification, candidates must pass the examinations required by the New York State Education Department. These include the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills-Written (ATS-W) and the Content Specialty Test (CST). The LAST should be taken in the sophomore year or early in the junior year and the ATS-W and the CST in the senior year.

Candidates are required to take three credits of foreign language to meet New York State certification regulations. Canisius College accepts high school foreign language study for the foreign language proficiency requirement for those candidates successfully completing the appropriate Regents Exam with a grade of 85% or higher. For students who graduated from high schools outside New York State, three or more full year courses in a foreign language with grades of ‘B’ or higher are acceptable for the foreign language proficiency. Your proficiency will be evaluated prior to freshman orientation by the Director of Advisement. Candidates may also demonstrate the foreign language proficiency requirement by passing the appropriate CLEP test.

Candidates that do not meet the foreign language proficiency through high school study are required to take a three credit foreign language course at the college level. Candidates that have no prior high school foreign language experience, should register for a 103 level foreign language course. Candidates that have prior high school foreign language experience, should register for a 115 level foreign language course.

In addition, candidates applying must be cleared by the New York State Education Department through a fingerprint-supported criminal history background check.

For the professional certificate, candidates will need additional professional development, three years teaching experience, and the completion of an appropriate master’s degree within five years. Contact the New York State Education Department at www.nysed.gov for additional information.

Codes
EDE  Childhood Education
EDY  Early Childhood Education
EDU  Teacher Education (applies to several or all programs)
EDS  Adolescence Education
EMC  Middle Childhood Education
SPE  Special Education
PED  Physical Education
HED  Health Education
HHP  Health & Human Performance
ATH  Athletic Training
AS  Area Studies
M  Major
CN  Concentration
FE  Free Elective
accounting and accounting information systems


The Department of Accounting seeks to prepare graduates with the skills that are necessary for success in the profession of accounting. Accounting professionals are expected to be competent in accounting skills and well rounded in the various disciplines of business. They should also possess excellent communication and interpersonal skills.

Learning Goals for the 120-hour undergraduate program:

Students will:

1. Calculate financial ratios and performance measures and analyze the results;
2. Explain the budgeting process and analyze business decisions related to the budgets prepared;
3. Apply current principles of accounting to the measurement and reporting of financial accounting information;
4. Apply concepts related to accounting system controls.

Learning Goals for the 150-hour undergraduate program:

Students will:

1. Calculate financial ratios and performance measures and analyze the results;
2. Explain the budgeting process and analyze business decisions related to the budgets prepared;
3. Apply current principles of accounting to the measurement and reporting of financial accounting information;
4. Apply concepts related to accounting system controls;
5. Apply taxation regulations in the measurement and reporting of information to governmental entities;
6. Explain the processes/principles related to providing assurance as to the integrity of the reporting process.

Learning Goals for undergraduate Accounting Information Systems

Students will:

1. Apply concepts related to information technology auditing tools and techniques;
2. Apply concepts related to electronic processing of business information and control issues of E-business;

3. Apply concepts related to financial and non-financial information management issues of enterprise information systems;

4. Apply principles of database design and effectively design database schemas based on conceptual business models;

5. Apply concepts for effectively retrieving information from relational databases using ANSI structured query language (SQL).

The program emphasizes the role of accounting as a vital financial information system in all organizations. An accounting background is an outstanding background for any aspect of business. Many of our graduates have also gone on to graduate school in accounting and law.

The Accounting Information Systems major combines accounting and information technology to meet the technology demands of all sectors of business. AIS majors will find employment opportunities as information specialists in accounting firms, industry, government and nonprofit entities.

Accounting majors take courses in the various fields of accounting: financial accounting, cost and managerial accounting, tax accounting, auditing, accounting information systems and not-for-profit accounting. These courses are presented in a single balanced integrated concept.

Students completing the accounting program find positions in public accounting, industry, the financial sector, government and nonprofit entities. The positions held by accounting graduates include staff accountants, managers and partners in accounting firms; comptrollers, budget directors, internal auditors and chief financial officers in industry; financial analysts, loan officers, vice presidents and presidents of banks; IRS and FBI agents, CIA officers and tax administrators in the government.

The accounting curriculum is registered with the New York State Education Department and the 150 hour accounting programs qualify graduates to sit for the C.P.A. Examination. To become a licensed C.P.A., an accounting graduate should also meet the experience requirement of the State of New York. Students desiring to sit for the exam in other states should check with those states for their specific requirements. Detailed information on New York State certification may be obtained by writing to:

Public Accountancy Processing Unit  
New York State Education Department  
Division of Professional Licensing Services  
Cultural Education Center  
Albany, NY 12230

Graduates of the program may also seek other certifications, such as the C.M.A. (Certified Management Accountant) and the C.I.A. (Certified Internal Auditor) designations.

**Experience Program:** The Department of Accounting, with the Council on Accountancy, helps accounting majors who have completed their junior year to find employment during the summer months in public accounting firms, industrial firms, financial institutions and the government sector. This program is intended to provide eligible students with an opportunity to apply their academic preparation to the realities of the business world. No academic credit is granted for this program. This program is also available to students in the
M.B.A. Program in Professional Accounting upon completion of their intermediate accounting courses.

**Accounting Scholarships:** The Department of Accounting awards scholarships to qualified Accounting majors over and above financial aid and other scholarships made available through the Financial Aid Office. These scholarships are granted on the basis of academic merit and demonstrated need with preference given to the students in their fifth year.

**Degree Programs**
The Department of Accounting offers five degree programs:

1. **A 150 Hours Bachelors Degree in Professional Accounting** which can be combined with a second major or as a stand-alone degree. This program is registered with the State of New York and qualifies a graduate to sit for the C.P.A. examination. This program usually takes 5 years but with proper planning could be completed in 4 1/2 years. AP credits may also reduce the time for completion.

2. **A 150-Hours Program leading to the degree of B.S. in Business Administration (major Accounting) at the end of four years of study and an M.B.A. in Accounting (M.B.A.A.) at the end of the fifth year.** This program is designed to meet the new education requirements of the State of New York for candidates who wish to sit for the C.P.A. Exam after August 1, 2009. Graduates of this program will have to complete the accounting requirements of one of the 150-Hours Programs.

4. **A Four-Year Undergraduate Program leading to the degree of B.S. in Business Administration (major Accounting).** Graduates of this program are generally not eligible to sit for the CPA exam after August 1, 2009 when 150 hours will be required to be eligible to sit for the exam.

5. **An M.B.A. in Professional Accounting to holders of undergraduate or graduate degrees in fields other than accounting.** This program is designed to meet the new education requirements of the State of New York for candidates who wish to sit for the CPA Exam after August 1, 2009. This program is described in the Graduate Catalog.

The curriculum requirements of the Undergraduate Programs in Accounting, the Undergraduate Program in Accounting Information Systems, and the B.A./M.B.A.A. Program are summarized in the table below.

**Flexibility:** The accounting curriculum is designed to allow maximum flexibility and exposure before students must decide on the appropriate accounting program to pursue. A student does not have to make a decision as to which accounting program to pursue until the junior year.

In order to provide flexibility in making the decision, all undergraduate accounting
majors follow the same curriculum in the first five semesters of study. Students choosing to major in Accounting Information Systems start taking a different course of study in their junior year, while students in the other programs will start taking different courses of study in the senior year. The B.S./M.B.A.A. students will start taking M.B.A. courses in their senior year.

Undergraduate Program Admission
Admission to the undergraduate accounting programs is predicated upon admission to the Richard J. Wehle School of Business. The maintenance of an overall G.P.A. of 2.00 at the end of the sophomore year is required for enrollment in the junior year. Transfer students are required to have achieved an overall G.P.A. of 2.00 at all previous institutions attended.

Admission to the M.B.A. program is based on the following criteria:

(1) a minimum cumulative average of 2.75 in all accounting courses taken at Canisius, including all junior accounting courses;
(2) a minimum cumulative overall average of 3.0 by the second semester of the junior year;
(3) a minimum score of 500 on the GMAT. Applicants should plan to take the GMAT at the earliest opportunity during their junior year.

For additional information, refer to the Graduate Catalog or contact the Director of Graduate Accounting programs.

Note: All programs are subject to change to meet State standards.

Common Business and Liberal Arts Courses:

Core Curriculum:
See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements.

Common body of business knowledge:
Mat 105 Finite Mathematics (3 credits)
AND (3 credits)
MAT 106 Calculus for the Non-Sciences (3 credits)
OR
MAT 111 Calculus I (3 credits)
OR
MAT 115 Calculus for Business I (3 or 4 credits)
Arts and Sciences Electives (3 credits)
Eng 389 Business Communications (3 credits)
ACC 211 Principles of Accounting I (3 credits)
ACC 212 Principles of Accounting II (3 credits)
ECO 101 Principles of Macroeconomics (3 credits)
ECO 102 Principles of Microeconomics (3 credits)
ECO 255 Business Statistics I (3 credits)
ECO 256 Business Statistics II (3 credits)
FIN 201 Introduction to Finance (3 credits)
ISB 101 Management Technology (3 credits)
MGT 101 Introduction to Management (3 credits)
MGT 325 Operations Analysis for Business (3 credits)
MGT 446 Managerial Policy Strategy (3 credits)
MKT 201 Principles of Marketing (3 credits)
Business International Requirement (6 credits)

4. Accounting and Accounting Information Systems Programs

150 Hours - B.S. in Professional Accounting
Course Requirements: In addition to the common liberal arts and business courses, students in this program will take:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 301-302</td>
<td>Intermediate Accounting I and II</td>
<td>6</td>
</tr>
<tr>
<td>ACC 303</td>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACC 307</td>
<td>Management and Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACC 415</td>
<td>Basic Taxation</td>
<td>3</td>
</tr>
<tr>
<td>ACC 421</td>
<td>Advanced Accounting Problems</td>
<td>3</td>
</tr>
<tr>
<td>ACC 426</td>
<td>Information Systems Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACC 451</td>
<td>Seminar in Accounting Theory</td>
<td>3</td>
</tr>
<tr>
<td>LAW 371</td>
<td>Business and Commercial Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 372</td>
<td>Business Organizations and Commercial Paper</td>
<td>3</td>
</tr>
</tbody>
</table>

**Accounting Electives** (6 credits)
**Business Elective** (3 credits)
**Free Electives** (18 credits)

**Total** 150 or 151 Credits

Typical Schedule

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Year</td>
<td></td>
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<tr>
<td>FYS 101</td>
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<td>ENG 101</td>
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<td>MAT 105 or</td>
<td>3 or 4 credits</td>
<td>RST 101</td>
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<td>MAT 111 or MAT 115</td>
<td></td>
<td>MAT 106 or</td>
</tr>
<tr>
<td>ECO 101 Field of</td>
<td>3 credits</td>
<td>Elective</td>
</tr>
<tr>
<td>Knowledge Social</td>
<td>3 credits</td>
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</tr>
<tr>
<td>Science</td>
<td>3 credits</td>
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</tr>
<tr>
<td>ISB 101</td>
<td>3 credits</td>
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</tr>
<tr>
<td>Business International</td>
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- 55 -
### Requirement

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<th>Total</th>
<th>15 or 16 credits</th>
<th>Total</th>
<th>15 credits</th>
</tr>
</thead>
</table>

#### Sophomore Year

- **MGT 101** 3 credits
- **ACC 211** 3 credits
- **ECO 255 Field of Knowledge (Math)** 3 credits
- **MKT 201** 3 credits
- **Field of Knowledge** 3 credits
- **Total** 15 credits

#### Junior Year

- **ACC 301** 3 credits
- **ACC 303** 3 credits
- **FIN 201** 3 credits
- **Field of Knowledge** 3 credits
- **Field of Knowledge** 3 credits
- **Total** 15 credits

#### Senior Year

- **MGT 325** 3 credits
- **ACC 421** 3 credits
- **ACC 451** 3 credits
- **Business Elective** 3 credits
- **A&S Elective** 3 credits
- **Total** 15 credits

#### Fifth Year

- **ACC 415** 3 credits
- **ACC 426** 3 credits
- **Law 371** 3 credits
- **Elective** 3 credits
- **Elective** 3 credits
- **Total** 15 credits

**TOTAL** 150 OR 151 credits

*Acc 416 and 425 recommended for CPA preparation
**Acc 331 or 452 recommended*
Requirements for Graduation: To qualify for graduation with a B.S. degree in business administration with a major in Accounting, a candidate must complete all the graduation requirements outlined in this catalog and must have a cumulative average of 2.0 for all of the accounting and business law courses taken at Canisius College.

150 Hours - B.S./M.B.A.A.
Course Requirements: In addition to the common liberal arts and business courses, students in this program will take:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 301-302</td>
<td>Intermediate Accounting I and II</td>
<td>6 credits</td>
</tr>
<tr>
<td>ACC 303</td>
<td>Cost Accounting</td>
<td>3 credits</td>
</tr>
<tr>
<td>ACC 307</td>
<td>Management and Accounting Information Systems</td>
<td>3 credits</td>
</tr>
<tr>
<td>LAW 371</td>
<td>Business and Commercial Law</td>
<td>3 credits</td>
</tr>
<tr>
<td>LAW 372</td>
<td>Business Organizations and Commercial Paper</td>
<td>3 credits</td>
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</table>

Graduate Portion —

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 502</td>
<td>Organizational Behavior</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 507</td>
<td>Operations</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 508</td>
<td>Corporate Finance</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 620/621</td>
<td>Finance Elective</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 630</td>
<td>Marketing</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 641</td>
<td>Human Resources</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 690</td>
<td>Strategic Management</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 672</td>
<td>Advanced Commercial Law</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 715</td>
<td>Basic Taxation</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 716</td>
<td>Advanced Tax</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 721</td>
<td>Advanced Financial Reporting</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 725</td>
<td>Auditing Theory and Practice</td>
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</tr>
<tr>
<td>MBA 726</td>
<td>Information Systems Auditing</td>
<td>3 credits</td>
</tr>
<tr>
<td>MBA 729</td>
<td>Not for Profit Accounting</td>
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</tr>
<tr>
<td>MBA 751</td>
<td>Accounting Theory and Research</td>
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<tr>
<td>MBA Elective</td>
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</table>

Total 150 or 151 Credits

NOTE: Students do not take MGT 325 or 446
### Typical Schedule:

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<th>Fall</th>
<th>Spring</th>
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<tr>
<td><strong>Freshman Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FYS 101</td>
<td>3 credits</td>
<td>ENG 101</td>
</tr>
<tr>
<td>MAT 105 or MAT 111 or MAT 115</td>
<td>3 or 4 credits</td>
<td>RST 101</td>
</tr>
<tr>
<td>ECO 101 (Macro)</td>
<td>3 credits</td>
<td>MAT 106 or Elective</td>
</tr>
<tr>
<td>Field of K Soc Sc</td>
<td>3 credits</td>
<td>ECO 102 (Macro)</td>
</tr>
<tr>
<td>ISB 101</td>
<td>3 credits</td>
<td>Business</td>
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<td>Business International Requirement</td>
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<td>International</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15 or 16 credits</td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

| **Sophomore Year** |                       |                        |
| MGT 101          | 3 credits             | PHI 101                | 3 credits             |
| ACC 211          | 3 credits             | ACC 212                | 3 credits             |
| ECO 255          | 3 credits             | ECO 256 (Stat)         | 3 credits             |
| MKT 201          | 3 credits             | ACC 307                | 3 credits             |
| Field of Knowledge | 3 credits          | Field of Knowledge     | 3 credits             |
| **Total**        | 15 credits            | **Total**              | 15 credits            |

| **Junior Year** |                       |                        |
| ACC 301         | 3 credits             | ACC 302                | 3 credits             |
| ACC 303         | 3 credits             | ENG 389                | 3 credits             |
| FIN 201         | 3 credits             | Capstone               | 3 credits             |
| Field of Knowledge | 3 credits           | Field of Knowledge     | 3 credits             |
| Field of Knowledge | 3 credits           | A&S Elective           | 3 credits             |
|                |                       | A&S Elective           | 3 credits             |
| **Total**       | 15 credits            | **Total**              | 18 credits            |

| **Senior Year** |                       |                        |
| MBA 715         | 3 credits             | MBA 716                | 3 credits             |
| MBA 721         | 3 credits             | MBA 725                | 3 credits             |
| MBA 751         | 3 credits             | MBA 507                | 3 credits             |
| LAW 371         | 3 credits             | MBA 690                | 3 credits             |
| A&S Elective    | 3 credits             | LAW 372                | 3 credits             |
| **Total**       | 15 credits            | **Total**              | 15 credits            |

| **Fifth Year**  |                       |                        |
| MBA 672         | 3 credits             | MBA 620/621            | 3 credits             |
| MBA 726         | 3 credits             | MBA 641                | 3 credits             |
| MBA 502         | 3 credits             | MBA 729                | 3 credits             |
| MBA 508         | 3 credits             | MBA elective           | 3 credits             |
| MBA 630         | 3 credits             |                        |                       |


Requirements for Graduation: Students in the 150-Hour Program will graduate with a B.S. degree in business administration (major Accounting) at the end of their senior year.

To graduate with a degree of M.B.A. in Accounting, a minimum G.P.A. of 3.0 (scale of 4.0) is required in all graduate courses taken.

120 Hours - B.S. in Accounting Information Systems

Course Requirements: In addition to the common liberal arts and business courses, students in this program will take:

- ACC 301 Intermediate Accounting I (3 credits)
- ACC 303 Cost Accounting (3 credits)
- ACC 307 Management and Accounting Information Systems (3 credits)
- ACC 331 E-Business (3 credits)
- ACC 340 Database Management (3 credits)
- ACC 426 Information Systems Auditing (3 credits)
- ACC 452 Enterprise Systems (3 credits)
- MGT 370 Managerial Environment (3 credits)
- Free Electives (6 or 9 credits)

Total 120 or 121 Credits

Typical Schedule:

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Year</td>
<td></td>
</tr>
<tr>
<td>FYS 101</td>
<td>ENG 101</td>
</tr>
<tr>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>MAT 105 or MAT 111 or MAT 115</td>
<td>RST 101</td>
</tr>
<tr>
<td>3 or 4 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECO 101 Field of Knowledge Soc Sc</td>
<td>MAT 106 or Elective</td>
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<td>3 credits</td>
<td>3 credits</td>
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<tr>
<td>ISB 101 Business International Requirement</td>
<td>ECO 102</td>
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<td>3 credits</td>
<td>3 credits</td>
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<td>Total 15 credits</td>
</tr>
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</table>

Sophomore Year
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MGT 101</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ACC 211</td>
<td></td>
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<td>ECO 255</td>
<td>(Field of Knowledge Math)</td>
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<tr>
<td>MKT 201</td>
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<tr>
<td>PHI 101</td>
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<td>3</td>
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<tr>
<td>ACC 212</td>
<td></td>
<td>3</td>
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<tr>
<td>ECO 256</td>
<td></td>
<td>3</td>
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<td>ACC 307</td>
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<td>3</td>
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<td>Field of Knowledge</td>
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<tr>
<td>Total</td>
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</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 301</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ACC 303</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>FIN 201</td>
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<tr>
<td>Field of Knowledge</td>
<td></td>
<td>3 credits</td>
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<tr>
<td>Field of Knowledge</td>
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<td>3 credits</td>
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<tr>
<td>Total</td>
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<td>15 credits</td>
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**Senior Year**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>ISB 340</td>
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<tr>
<td>ACC 426</td>
<td></td>
<td>3</td>
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<td>MGT 325</td>
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<tr>
<td>MGT 370</td>
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<td>3</td>
</tr>
<tr>
<td>A&amp;S Elective</td>
<td>Basic Taxation</td>
<td></td>
</tr>
<tr>
<td>ACC Electives</td>
<td>Elective courses in accounting</td>
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<tr>
<td>LAW 371</td>
<td>Business and Commercial Law</td>
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<tr>
<td>LAW 372</td>
<td>Business Organizations and Commercial Paper</td>
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<td>15 credits</td>
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<tr>
<td>TOTAL</td>
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<td>120 OR 121 credits</td>
</tr>
</tbody>
</table>

**Requirements for Graduation:** To qualify for graduation with a B.S. degree in Accounting Information Systems, a candidate must complete all the graduation requirements outlined in this catalog and must have a cumulative average of 2.0 in all accounting courses taken at Canisius College.

**120 Hours - B.S. in Accounting**

**Course Requirements:** In addition to the common liberal arts and business courses, students in this program will take:

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<tr>
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<td>LAW 372</td>
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</table>

- 60 -
Free Electives (3-6 credits)

Total 120 or 121 Credits

**Typical Schedule:**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
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<tr>
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<tr>
<td>ISB 101</td>
<td>3 credits</td>
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<tr>
<td>Business International Requirement</td>
<td>3 credits</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15 or 16 credits</td>
</tr>
</tbody>
</table>

**Sophomore Year**

| MGT 101 | 3 credits | PHI 101 | 3 credits |
| ACC 211 | 3 credits | ACC 212 | 3 credits |
| ECO 255 (Field of Knowledge Math) | 3 credits | ECO 256 | 3 credits |
| MKT 201 | 3 credits | ACC 307 | 3 credits |
| Field of Knowledge | 3 credits | Field of Knowledge | 3 credits |
| **Total** | 15 credits | **Total** | 15 credits |

**Junior Year**

| ACC 301 | 3 credits | ACC 302 | 3 credits |
| ACC 303 | 3 credits | ENG 389 | 3 credits |
| FIN 201 | 3 credits | Capstone | 3 credits |
| Field of Knowledge | 3 credits | Field of Knowledge | 3 credits |
| Field of Knowledge | 3 credits | A&S Elective | 3 credits |
| **Total** | 15 credits | **Total** | 15 credits |

**Senior Year**

| ACC 415 | 3 credits | ACC elective | 3 credits |
| ACC elective | 3 credits | LAW 372 | 3 credits |
| A&S Elective | 3 credits | MGT 325 | 3 credits |
| A&S Elective | 3 credits | MGT 446 | 3 credits |
| LAW 371 | 3 credits | Elective | 3 credits |
| **Total** | 15 credits | **Total** | 15 credits |

**TOTAL** 120 OR 121 Credits
Requirements for Graduation: To qualify for graduation with a B.S. degree in business administration with a major in Accounting, a candidate must complete all the graduation requirements outlined in this catalog and must have a cumulative average of 2.0 for all of the accounting and business law courses taken at Canisius College.

COURSES: 2009 - 2011

ACC 201 Financial Accounting  3 credits
Introduction to accounting concepts for external financial reporting. Accounting theories and principles relative to asset and liability valuations, and income determination. Spring & Fall

ACC 202 Managerial Accounting 3 credits
Introduction to accounting concepts for internal reporting and control. Cash budgeting, decision making, capital budgeting, tax aspects of managerial planning and performance evaluation. Prerequisite ACC201 Spring & Fall

ACC 211-212 Principles of Accounting I and II  6 credits
Fundamental concepts and procedures of financial and managerial accounting with emphasis on asset and liability valuations, income determination and cash flows. Accounting applications of present value concepts, introduction to budgeting and product costing. For Accounting majors. ACC 211 Spring & Fall, ACC 212 Spring

ACC 301-302 Intermediate Accounting I and II  6 credits
In-depth accounting concepts and theories pertaining to external financial reporting. Emphasis on theories surrounding asset valuations, liabilities, income determination and cash flows. Prerequisites: ACC 211-212, junior standing and overall G.P.A. of 2.0. ACC 301 Spring & Fall, ACC 302 Spring

ACC 303 Cost Accounting  3 credits
Preparation and analysis of data utilized by management in planning and control decisions. Establishment and use of standards and budgets. Prerequisites: ACC 211-212, junior standing and overall G.P.A. of 2.0. Spring & Fall

ACC 307 Management and Accounting Information Systems  3 credits
Development, organization, and implementation of accounting and management information systems. Emphasis on systems controls, processing cycles, and systems development life cycle. Prerequisites: ACC211 and ISB 101. Spring & Fall

ACC 311 E-Business  3 credits
Challenges and strategies in electronic mediated business such as; electronic business relationships; electronic payment systems; virtual supply chains; product development strategies; legal security and privacy issues. Evaluation and construction of electronic business web sites through case studies and projects. Prerequisites: ACC 307 or concurrent registration. Spring

ACC 340 (ISB 340) Database Management  3 credits
Design and use of database management systems through host languages and user query languages. Data structures; database design; database access methods; alternate data models; database administration. Prerequisites: ACC 307 and ISB 101. Fall

ACC 415 Basic Taxation  3 credits
Provisions of Internal revenue Code affecting individuals and corporations; tax factors in planning and decision making; social, political and economic considerations underlying tax laws. There will be an emphasis on learning research and communications skills. Students will learn to prepare various business and accounting correspondence including, reports, memorandums, client and engagement letters. Prerequisite: ACC 212. Fall

ACC 416 Advanced Tax  3 credits
Internal Revenue Code provisions relating to taxation of corporations and shareholders; partnerships and partners including organization, reorganization, distribution and liquidation. Emphasis on Sub-Chapters “C,” “S” and “K.” Course includes learning oral and written presentations skills and techniques. Prerequisite: ACC 415. Spring

ACC 421 Advanced Accounting Problems  3 credits
Problem-solving techniques relative to mergers and consolidations; organization and liquidation of partnerships; introduction to fiduciary accounting for receivers, trusts and estates. Prerequisite: ACC 302. Fall

ACC 425 Auditing Theory and Practice  3 credits
Generally accepted auditing standards, internal control, professional liability of auditors, ethics of the profession, statistical sampling and the auditor’s report. Prerequisite: ACC 302. Spring
ACC 426 Information Systems Auditing  
3 credits
Information system control design and auditing in the internet, electronic and paperless environment; management of security technology; operating and application system processing controls; prevention of unauthorized activity. Prerequisites: ACC 307 and ACC331 or ACC452 or ACC425. Fall

ACC441 Fraud Examination: Detection and Deterrence  
3 credits
The course will concentrate on financial fraud, white-collar crime, how financial fraud is perpetrated, approaches to fraud investigations and documentation, and fraud detection and prevention. Ethical issues in fraud examination and investigation will be covered as well as strategies and tools for fraud deterrence in organizations. Prerequisites: ACC 301/302, ACC 425 or ACC 426. Fall

ACC 429 Not For Profit  
3 credits
Accounting and reporting issues that apply to governmental units, hospitals, schools, religious institutions and other non-profit organizations; budgetary procedures including appropriations and encumbrances. Spring

ACC 451 Accounting Theory and Research  
3 credits
Standard setting procedures at the US and international levels, accounting concepts and principles, contemporary accounting issues, concepts of income determination, extensive database research to support or oppose accounting positions and library research culminating in a research paper or class presentation. The course will also provide instruction in business/accounting written and oral communication. Prerequisite: ACC 302. Fall

ACC 452 Enterprise Systems  
3 credits
Measuring the value of enterprise information; enterprise resource planning (ERP) system design and functionality; international accounting systems issues; data integrity; use of financial and non-financial information for corporate decision-making. Prerequisite: ACC307 Spring

ACC 499 Independent Research in Accounting  
3 credits
Undertaking of a significant piece of independent research. By appointment with chairperson. Spring & Fall

LAW 371 Business and Commercial Law  
3 credits
American legal system and substantive law of contracts, agency, bailments, sales, products liability. Uniform Commercial Code and cases. Prerequisite: ACC 212 or permission of instructor. Fall

LAW 372 Business Organizations and Commercial Paper  
3 credits
Legal aspects of partnerships and corporations; advantages and disadvantages of each, together with commercial paper under Uniform Commercial Code; trade regulation; bankruptcy. Prerequisite: LAW 371. Spring

LAW 472 Advanced Commercial Law  
3 credits
Foreign Corrupt Practices Act of 1977, secured transactions, accountant liability, real property, trusts and estates, and insurance. Prerequisite: LAW 372. Fall
Adolescence (Grades 7-12)

Full-Time Faculty: Barbara Burns, Chair; Ali Ait Si Mhamed, Maria Fernanda Astiz, Nancy Bailey, Suzanne Borowicz, Betsy DelleBovi, Lorrei DiCamillo, Janet Ferguson, Kristin Finn, Roberto Gregorius, Fr. Paul Nochelski, S.J., Guangyu Tan, H. Jeanette Willert, Tonja Williams.

The Adolescence Education Department offers nine certification programs at the Adolescence Level (Grades 7-12).

The professional sequences in Adolescence Education give the prospective teacher a thorough foundation in the many facets of modern American education and a gradually increasing exposure to the realities of the classroom. A broad range of field experiences, from observation and tutoring to a full semester of student teaching, is an essential part of the curriculum. Each program also includes an integrated sequence of subject-area courses offered by one or more of the academic departments at the college.

For more information on the Adolescence Education programs at Canisius, please consult the Canisius College Web site.

Student Learning Goals for Adolescence Education

Knowledge
- Candidates complete high quality academic programs in compliance with New York State and professional standards with the knowledge, skills and dispositions to be successful professionals.
- Candidates integrate theory, research, and practice in coursework and practicum settings.

Service
- Candidates interact effectively with students from diverse cultural backgrounds.
- Candidates, faculty, staff and administrators model *cura personalis* and foster an environment that educates and develops the mind, body and spirit of each individual.
- Candidates team and lead through service in order to better understand the complexities of our educational, political, and social environment and thus be better prepared to advocate for social justice.

Leadership/Professionalism
- Candidates become reflective practitioners able to critically question the ends, means and contexts of teaching and learning.

Certification Requirements
1. To obtain initial teacher certification, candidates must pass the examinations required by the New York State Education Department. These include the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills-Written (ATS-W), and the appropriate Content Specialty Tests (CST). The LAST should be taken in the sophomore year or early in the junior year and the ATS-W and the CST(s) in the senior year.
2. Candidates must be cleared by the New York State Education Department through a fingerprint-supported criminal history background check.

3. Candidates in teacher certification programs are required to take three credits of foreign language to meet New York State certification regulations. Canisius College accepts high school foreign language study for the foreign language proficiency requirement for those candidates successfully completing the appropriate Regents Exam with a grade of 85% or higher. For students who graduated from high schools outside New York state, three or more full year courses in a foreign language with grades of ‘B’ or higher are acceptable for the foreign language proficiency. Your proficiency will be evaluated during freshman orientation by the Director of Advisement. Candidates may also demonstrate the foreign language proficiency requirement by passing the appropriate CLEP test. Candidates that do not meet the foreign language proficiency through high school study are required to take a three credit foreign language course at the college level. Candidates that have no prior high school foreign language experience, should register for a 103 level foreign language course. Candidates that have prior high school foreign language experience, should register for a 115 level foreign language course.

4. Academic Criteria for Endorsement and Completion of Program
   - Cumulative GPA of 2.5 or higher
   - Grade of ‘C’ or higher in content and pedagogical courses
   - Satisfactory performance in field placements
   - Successful portfolio review

Please see the School of Education page for information about transition points in the programs and portfolio requirements.

Curriculum

1. Core Requirements
   Students in all majors are expected to fulfill Core requirements. See pages 38-40 of this catalog for the Core Curriculum requirements. Please go to http://www.canisius.edu/core_curriculum/mission.asp for complete information about the Core Curriculum.

2. Major Requirements
   - **EDS 101** Human Growth and Social Development: Adolescence
   - **EDU 122** Technology in Education
   - **EDS 223** Foundations of Literacy
   - **EDS 224** Teaching for Literacy in Grades 7-12
   - **EDU 250** Foundations of Education
   - **SPE 341** Inclusive Strategies
   - **EDS 360** Evaluation and Teaching Strategies
   - **EDS 390** Cognition, Learning, and Assessment: Adolescence
   - **EDS 402 - 406** Methods of Teaching (Content Area): Adolescence
   - **EDS 432 - 436** Applied Methods of Teaching (Content Area)
3. Free Electives
Courses/credits in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 hours for graduation. Students may graduate with more but not less than 120 credit hours.

4. Concentration Requirements (Areas of Certification)

**Biology Grades 7-12**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 101 and Lab - Intro. to Cellular/Subcell. Biology (AS I)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 102 and Lab - Organismal Biology (AS I)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 201 and Lab - Evolution, Ecology, and Population Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 203 Cellular Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BIO 352 Junior Seminar</td>
<td>1</td>
</tr>
<tr>
<td>BIO 451 Senior Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

6 courses (three courses) plus labs must come from any 3 of 4 tracks:
- Animal Biology (BIO 313, 315, 340, 365, 366, 410, 460);
- Biological Diversity (BIO 305, 307, 320, 303,335);
- Cellular Biology (BIO 418, 419, 425, 426, 435, 445, 455);
- Genetics/Molecular Biology (BIO 304, 408, 432, 450).

The remaining three biology electives may come from within these tracks, or from other electives in biology, and at least one must include a lab. A student enrolled in 3 semesters of BIO 300 would fulfill this last lab requirement. 22 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, CHEM 111 Lab – General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 112, CHEM 112 Lab – General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 227, CHM 227 Lab – Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 228, CHM 228 Lab – Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 201, PHY 201 Lab – General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 202, PHY 202 Lab – General Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Chemistry (Grade 7-12)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 101 and Lab - Intro. to Cellular/Subcell. Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 102 and Lab - Organismal Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 111, CHEM 111 Lab – General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 112, CHEM 112 Lab – General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 201, PHY 201 Lab – General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 202, PHY 202 Lab – General Physics II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 227, CHM 227 Lab – Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 228, CHM 228 Lab – Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 230 Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>CHM 301 &amp; Lab Classical Physical Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 302 &amp; Lab Intro. to Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHM 381 Chemistry Seminar</td>
<td>1</td>
</tr>
<tr>
<td>CHM 444 Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>Select One of the Following:</td>
<td>3-4</td>
</tr>
<tr>
<td>CHM 302 Physical Chemistry II &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHM 334 Spectrometric Analysis &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHM 401 Modern Synthetic Methods &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHM 430 Analytical Chemistry II &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHM 450 Research in Chemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

**Dual Major English Language Arts and English (Grades 7-12)**

- ENG 300 Introduction to English Studies   | 3        |
- ENG 311 Women Writers                      | 3        |
- British Literature (300/400):              |          |
  - Two courses from 2 of 4 historical periods: | 6        |
  - I. Medieval - Early 17th Century          |          |
  - II. Restoration - 18th Century           |          |
  - III. 19th Century                        |          |
  - IV. 20th Century                         |          |
- Native American Literature or African American Literature | 3        |
- American Literature: (300/400) Choose from I or II | 3        |
  - I. Pre-Civil War Period                  |          |
  - II. Post-Civil War Period                |          |
- ENG 322 OR 323 Shakespeare                 | 3        |
- EDS 370 Teaching Young Adolescent Literature | 3        |
- ENG 375 Special Topics in Literary Criticism | 3        |
- ENG 395 The Journey in Literature         | 3        |
- Writing: choose one:                       | 3        |
  - ENG 385 Persuasive Writing               |          |
  - ENG 394 Creative Writing                |          |
  - ENG 402 Creativity & Composition Theory |          |
  - EDU 410 Teaching Writing in the Schools  |          |
- EDU415 Grammar and Language Study for Teachers | 3        |
- ENG 490 Senior Seminar (available in 2009) | 3        |

**French Grades 7-12**

- FRC 115 Advanced Introductory I             | 3        |
- FRC 116 Advanced Introductory II            | 3        |
- FRC 215 Intermediate I                      | 3        |
- FRC 216 Intermediate II                     | 3        |
- FRC 323 Advanced Conversation I             | 3        |
- FRC 324 Advanced Conversation II            | 3        |
- FRC 331 Substance & Style I                 | 3        |
- FRC 332 Substance & Style II                | 3        |
- FRC Electives: Four Courses                 | 12       |
**German Grades 7-12**

GER 103 Advanced Introductory I       3 credits  
GER 104 Advanced Introductory II       3 credits  
GER 215 Intermediate I       3 credits  
GER 216 Intermediate II       3 credits  
GER 323 Advanced Conversation I       3 credits  
GER 324 Advanced Conversation II       3 credits  
GER 331 Substance & Style I       3 credits  
GER 332 Substance & Style II       3 credits  
GER Electives: Four Courses       12 credits

**Math Grades 7-12**

MAT 111 Calculus I        4 credits  
MAT 112 Calculus II        4 credits  
MAT 211 Calculus III        4 credits  
MAT 219 Linear Algebra        4 credits  
MAT 222 Differential Equations        4 credits  
MAT 230 Bridge to Abstract Math        4 credits  
MAT 301 History of Mathematics        3 credits  
MAT 311 Abstract Algebra I        4 credits  
MAT 331 Intro to Modern Geometry        3 credits  
MAT 351 Probability and Statistics        3 credits  
CSC 110 or 111  
Intro to Computing/Programming OR BIF 101, CSC 108, CSC 109 3-4 credits  
MAT Elective        3-4 credits

**Physics Grades 7-12**

PHY 129 or PHY 130 Intro. to Astronomy or Geology       3 credits  
PHY 223 & Lab – General Physics I for PHY Majors       4 credits  
PHY 224 & Lab – General Physics II for PHY Majors       4 credits  
PHY 225 & Lab General Physics III       4 credits  
PHY 226 Basic Electronics       4 credits  
PHY 330 Electricity and Magnetism I       3 credits  
PHY 332 Statistics and Thermal Physics       3 credits  
PHY 350 Advanced Laboratory       1 credits  
PHY 443 Classical Mechanics       3 credits  
PHY 449 Nuclear Physics Lab       1 credits  
CHEM 111 & Lab - General Chemistry I       4 credits  
CHEM 112 & Lab - General Chemistry II       4 credits  
MAT 112 Calculus II       4 credits  
MAT 211 Calculus III       4 credits  
MAT 222 Differential Equations       4 credits

**Social Studies and History Dual Major**

Grades 7 - 12  
HIS 123 History of the US (Colonial – 1877)       3 credits  
HIS 124 History of the US (1877 – Present)       3 credits  
HIS 107 History of Modern Europe to 1815       3 credits  
HIS 108 History of Modern Europe since 1815       3 credits
History of Asia or Latin America (110 or 132) 3 credits
History Elective at the 200 level (History of Asia, Africa, Latin America, or Middle East strongly encouraged) 3 credits
History Elective at the 200 level (History of Asia, Africa, Latin America, or Middle East strongly encouraged) 3 credits
HIS 300 Historical Geography 3 credits
HIS 382 New York State History 3 credits
History Elective at the 300 level 3 credits
History Elective at the 300 level 3 credits
ANT 122 Sociocultural Anthropology 3 credits
SOC 110 Introduction to Sociology 3 credits
ECO 101 Principles of Macroeconomics 3 credits
ECO 102 Principles of Microeconomics 3 credits
PSC 103 or PSC 104 Constitutional Foundations of American Government or American Political Process 3 credits
PSC 140 International Relations OR PSC 150 Comparative Government & Politics 3 credits

Spanish Grades 7-12
SPA 115 Advanced Introductory I 3 credits
SPA 116 Advanced Introductory II 3 credits
SPA 215 Intermediate I 3 credits
SPA 216 Intermediate II 3 credits
SPA 323 Advanced Conversation I 3 credits
SPA 324 Advanced Conversation II 3 credits
SPA 331 Substance & Style I 3 credits
SPA 332 Substance & Style II 3 credits
SPA Electives: Four Courses 12 credits

Middle Childhood Extension
Candidates wishing to obtain an extension to teach grades 5-6 in their area of concentration must take EMC 352 and EMC 391 in addition to the courses listed above.

COURSES 2009–2011
EDS 101 Human Growth and Social Development 3 credits
Introduces human developmental processes and variations in the middle and high school years: effects of culture, heritage, socioeconomic level, health and environment on student performance. Fall/Spring

EDS 223 Foundations of Adolescent Literacy 3 credits
Focuses on three strands of literacy teaching for adolescent students: strategies for developing reading and writing skills in all secondary content areas; methods for reading and writing in Inquiry projects; pedagogical practices for integrating critical literacy in all secondary classrooms. Fall/Spring

EDS 224 Adolescent Literacy in a New Literacies World 3 credits
This course addresses the multiple literacies that adolescents use to make meaning in the world. The focus is on the integration, implementation and assessment of New Literacies in the content areas. Requires 20 hours of field placement. Fall/Spring

EDS 360 Evaluation and Teaching Strategies 3 credits
Addresses instructional planning, curriculum development, formal and informal assessment methods and reflecting on one’s own teaching practice. Highlights instruction modifications and various resources to enhance teaching. Requires 30 hours of field placement. Fall/Spring
EDS 390 Cognition, Learning and Assessment of Adolescents 3 credits
Focuses primarily upon seminal learning theories in order to examine the dynamic nature of knowledge and to attend to how changing epistemological positions can affect teaching and learning. Addresses learning processes and the roles that language, motivation, intelligence, creativity and other social processes play in student performance. Some emphasis upon instructional design, pedagogical decision making and assessment procedures and instruments. Fall/Spring

Choose the appropriate course from EDS 402, 403, 404, 405, 406:

EDS 402 Methods of Teaching English: Adolescence 3 credits
Combines theory and practice to encourage sound, research-based pedagogical strategies for the teaching of English Language Arts for middle and high school students. Focuses on available teaching materials and multiple approaches to teaching literature, writing, grammar and language development, as well as technology integration. Effective lesson planning and unit planning are emphasized. Prerequisite: EDS 360 Fall/Spring

EDS 403 Methods of Teaching Mathematics: Adolescence 3 credits
Combines theory and practice to encourage sound, research-based pedagogical strategies for the teaching of Mathematics for middle and high school students. Focuses on available teaching materials and multiple approaches to teaching including technology applications. Effective lesson construction and unit planning are emphasized. Prerequisite EDS 360 Fall/Spring

EDS 404 Methods of Teaching Modern Languages: Adolescence 3 credits
Combines theory and practice to encourage sound, research-based pedagogical strategies for the teaching of foreign languages for middle and high school students. Focuses on available teaching materials and multiple approaches to teaching the grammar, literature and culture of French-, German-, Spanish-speaking countries, as well as technology integration. Effective lesson planning and unit planning are emphasized. Prerequisite: EDS 360 Fall/Spring

EDS 405 Methods of Teaching Science: Adolescence 3 credits
This course focuses on developing a rich intellectual life through study, reflection and practice. Students will have discussions on Philosophy of Science, the philosophy of individual science disciplines and pertinent Education Psychology theories as applied to science teaching. Current research-based science teaching techniques will be emphasized. Students will write reflection papers and use these theories and principles in classroom exercises and presentations. Requires a working knowledge of at least one science discipline. Prerequisite: EDS 360 Fall/Spring

EDS 406 Methods of Teaching Social Studies: Adolescence 3 credits
This course addresses the objectives, methods, curricula, materials and assessment necessary for teaching social studies at the secondary level. Students will examine topics such as teaching for democratic citizenship, teaching for higher-order thinking, authentic instruction and assessment, technology in the social studies classroom and multicultural curriculum. This course models various instructional strategies and includes practical assignments and experiences for students. Prerequisite: EDS 360 Fall/Spring

EDS 432 Applied Methods of Teaching English: Adolescence 3 credits
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the adolescent level. Requires 50 hours of field experience. Prerequisite: EDS 402 Fall/Spring

EDS 433 Applied Methods of Teaching Mathematics: Adolescence 3 credits
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the adolescent level. Requires 50 hours of field experience. Prerequisite: EDS 403 Fall/Spring

EDS 434 Applied Methods of Teaching Modern Languages: Adolescence 3 credits
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the adolescent level. Requires 50 hours of field experience. Prerequisite: EDS 404 Fall/Spring

EDS 435 Applied Methods of Teaching Science: Adolescence 3 credits
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the adolescence level. Requires 50 hours of field experience. **Prerequisite:** EDS 405  
*Fall/Spring*

**EDS 436 Applied Methods of Teaching Social Studies 3 credits**  
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the adolescence level. Requires 50 hours of field experience. **Prerequisite:** EDS 406  
*Fall/Spring*

**EDS 450 Student Teaching Seminar 0 credits**  
This seminar prepares student teachers for the interview and job search process, allows student teachers a structured time to discuss and analyze their student teaching experiences with their peers and the instructor, and provides the mandatory trainings in Detection and Reporting of Child Abuse and the Prevention of School Violence needed for New York State Certification. Special topics of seminars commonly include classroom management, professional development opportunities, and what to expect in the first year of teaching. The seminar meets 6 times during the student teaching semester. **Co-requisites:** EDU 451, EDU 452, EDS 470. Students must have a minimum GPA of 2.5 in their concentration as well as in the major.

**EDS 470 Supervised Student Teaching 12 credits**  
Highlights knowledge, skills and dispositions of professional educators. Two full-time 7-week placements in adolescent classrooms require candidates to become the instructional leader under the supervision of cooperating teachers and college faculty. **Prerequisites:** Overall G.P.A. of 2.50 to date: “C” in each required subject area course (modern language majors must also pass proficiency examination); “C” in each required Education course; interview; EDS 450. Some schools may require certain health tests. **Fall/Spring**

**EDU 122 Technology in Education 3 credits**  
Explores applications of technology in education. Emphasizes evaluation and selection of software, high and low-tech devices, distance learning and state of the art technologies that impact teaching. **Fall/Spring**

**EDU 250 Foundations of Education 3 credits**  
Addresses social, philosophical, legal, historical, organizational, theoretical perspectives on education, including multicultural perspectives. Highlights rights and responsibilities of teachers, students and others involved in education. **Fall/Spring**

**EDU 451 Child Abuse Workshop 0 credits**  
Mandatory training by NY State Education Department for teacher certification. Occurs during the student teaching seminar. **Fall/Spring**

**EDU 452 Prevention of School Violence Workshop 0 credits**  
Mandatory training by NY State Education Department for teacher certification. Occurs during the student teaching seminar. **Fall/Spring**

**EMC 352 Human Growth and Social Development: Middle Childhood 3 credits**  
Major concepts, principles, theories and research related to the intellectual, emotional, physical, social and moral development of young adolescents. **Fall/Spring**

**EMC 391 Cognition, Learning, Assessment and Diagnostic Teaching: Middle Childhood 3 credits**  
Concepts, standards and research related to middle level curriculum development stressing the importance of a curriculum that is relevant, challenging, integrative and exploratory. Interdisciplinary middle level curriculum standards and models will be introduced in addition to assessment strategies that promote the continuous intellectual, social and physical development of all young adolescents. **Fall/Spring**
animal behavior, ecology & conservation

Full time faculty: Michael Noonan (Program Coordinator); Susan W. Margulis, Sara Morris, Helen Hull-Sanders, Lindsey Walters; Adjunct Faculty: Donna M. Fernandes, Lisa Leuchner.

The Animal Behavior, Ecology and Conservation major (ABEC) offers broad training on topics related to the nature of animals, their behavioral ecology, and mankind’s relationship to them. It is designed for students who wish to engage in a rigorous course of study in behavioral biology, while critically examining issues pertaining to animal welfare and wildlife conservation. A central theme underlying this program is the use of scientific knowledge about animal behavior for the benefit of the other species with which we share the planet.

This background serves as solid preparation for:
1. Graduate studies in animal behavior and conservation biology
2. Zoo based employment
3. Animal training
4. University animal welfare compliance
5. Companion animal evaluation and welfare
6. Animal advocacy (wildlife conservation)

The program of study combines lectures with hands-on learning experiences in both its required and elective courses. The courses are broad ranging so that the student has the opportunity to sample widely in the discipline, or to concentrate thoroughly in specific areas of interest. Students are strongly encouraged to participate in research projects and internships that will allow them to relate their coursework to real world situations.

**Student Learning Goals**
The Animal Behavior, Ecology and Conservation major will demonstrate:

Goal 1: Mastery of the facts and theoretical underpinnings of animal behavior and conservation biology.

Goal 2: Comprehension of neuroscience’s role in understanding an animal’s capacity for pain and suffering.

Goal 3: An ability to evaluate an individual animal’s welfare.

Goal 4: An understanding of the changing status of animals in human society.

Goal 5: An understanding of the role of animal behavior in wildlife conservation.

**Animal Behavior, Ecology and Conservation Curriculum**

**1. Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius
2. **Major Course Requirements:** 17 courses

A: Support Courses (5 courses):
- BIO 101 Introduction to Cellular Biology 4 credits
- BIO 102 Organismal Biology 4 credits
- BIO 201 Evolution, Ecology and Population Biology 4 credits
- PSY 101 Introductory Psychology 3 credits
- MAT 141 Inferential Statistics (or PSY 201 Behavioral Statistics) 3 credits

B: Major Courses (4 courses):
- BIO 315 Comparative Animal Behavior with lab 4 credits
- BIO 320 Conservation Biology 3 credits
- PHI 245 Animal Ethics 3 credits
- RST 321 Religious Perspectives on Animals 3 credits

C: Major Electives (any 8 courses from the following list)
- ABEC 220 Animal Learning with lab 4 credits
- ABEC 250 Zoo Animal Husbandry 3 credits
- ABEC 318 Applied Animal Behavior 3 credits
- ABEC 319 Anthrozoology 3 credits
- ABEC 350 Zoo Biology 4 credits
- BIO 137 Special Topics in Natural History 1 3 credits
- BIO 138 Special Topics in Natural History 2 3 credits
- BIO 366 Ornithology (or BIO 166 Biology of Birds) 4 credits
- BIO 316 Social Organization of Mammals 4 credits
- BIO 317 Sex, Evolution and Behavior 3 credits
- BIO 320 Field Ecology with lab 4 credits
- BIO 325 Reproductive Biopsychology 3 credits
- BIO 343 Entomology 3 credits
- BIO 355 Behavioral Neuroscience 3 credits
- BIO 365 Vertebrate Biology 3 credits
- BIO 370 Ecology 3 credits
- BIO 371 Behavioral Ecology 3 credits
- PHI 348 Environmental Ethics 3 credits
- ABEC 490 Canisius Ambassadors for Conservation 3 credits
- ABEC 495 Research Seminar 3 credits
- ABEC 498 Internship 3 credits

3. **Free electives:**
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120
credit hours.

Minors
The ABEC program offers three minors for students who wish to concentrate in specific areas:

The Anthrozoology Minor (six courses)
The Anthrozoology minor is designed for students who want to concentrate on mankind’s relationships with other animal species. This minor is open to any student from any major.

One required course:
ABEC 319 Anthrozoology

Plus any five of the following:
- ABEC 318 Applied Animal Behavior
- BIO 137 Special Topics in Natural History 1
- BIO 320 Conservation Biology
- BIO 350 Zoo Biology
- PHI 245 Animal Ethics
- RST 321 Religious Perspectives on Animals
- PHI 348 Environmental Ethics
- ABEC 490 Canisius Ambassadors for Conservation
- ABEC 498 Internship
- ABEC 499 Research Seminar (Anthrozoology Project)

The courses may be taken independently of the others and in any order. Interested students usually begin with the course that best fits their schedule. Most of the courses are offered every other year, so interested students should plan accordingly.

The Animal Behavior Minor (six courses)
The Animal Behavior minor is designed for students who want to concentrate on animal behavior as a topic of study. This minor is open to any student from any major.

One required course:
BIO 315 Comparative Animal Behavior (with lab)

Plus any five of the following:
- ABEC 220 Animal Learning
- ABEC 318 Applied Animal Behavior
- BIO 166 Biology of Birds (or BIO366 Ornithology)
- BIO 316 Social Organization of Mammals
- BIO 317 Sex, Evolution & Behavior
- BIO 325 Reproductive Biopsychology
The courses may be taken independently of the others and in any order. Interested students usually begin with the course that best fits their schedule. Most of the courses are offered every other year, so interested students should plan accordingly.

**The Zoo Biology Minor (six courses)**
The Zoo Biology minor is designed for students who want training relevant to careers associated with captive exotic animals. This minor is open to any student from any major.

One required course:
- BIO 350 Zoo Biology

Plus any five of the following:
- ABEC 250 Zoo Animal Husbandry
- ABEC 318 Applied Animal Behavior
- BIO 110 Zoo Nutrition
- BIO 316 Social Organization of Mammals
- BIO 325 Reproductive Biopsychology
- ABEC 495 Research Seminar (Zoo-based Project)
- ABEC 498z Internship (Zoo based)
- ABEC 498a Internship (Aquarium based)

The courses may be taken independently of the others and in any order. Interested students usually begin with the course that best fits their schedule. Most of the courses are offered every other year, so interested students should plan accordingly.

**COURSES: 2009-2011**

**BIO 101 Introduction to Cellular/Subcellular Biology**  4 credits
Introduction to principles governing biological processes at the cellular/molecular level with emphasis on the role of experimentation in the scientific process. (Lab required)

**BIO 102 Organismal Biology**  4 credits
Introduction to principles governing biological processes at the organismal level in plants and animals. Function of organisms is stressed. (Lab required)

**BIO 201 Evolution, Ecology and Population Biology**  4 credits
Intra- and inter-specific interactions between organisms, interactions between organisms and their environment, and mechanisms of evolutionary change and speciation. (Lab required)

**PSY 101 Introductory Psychology**  3 credits
The study of behavior from a psychological perspective. Topics include motivation and emotion, thinking and language, learning, memory and the
physiological bases of behavior.

**MAT 141 Inferential Statistics (or PSY201 Behavioral Statistics) 3 credits**
Descriptive statistics, probability, sampling distributions, hypothesis testing and inferential statistics.

**BIO 315 Comparative Animal Behavior with lab 4 credits**
Behavior across a wide range of species. Similarities and contrasts allow deductions regarding mechanisms and evolution. (Lab required)

**BIO 320 Conservation Biology 3 credits**
Study of the plight of endangered species, the biological consequences of fragmented populations, and scientific bases of habitat/species restoration.

**PHI 245 Animal Ethics 3 credits**
The philosophical principals underlying concerns for animal welfare/animal rights. Application to real-world examples is stressed.

**RST 321 Religious Perspectives on Animals 3 credits**
Comparative survey of mankind’s religious perspectives on other species.

**ABEC 220 Animal Learning with lab 4 credits**
Animal learning and memory research with emphasis on practical animal training. (Lab required)

**ABEC 250 Zoo Animal Husbandry 3 credits**
Modern practices in the management of exotic species in captivity.

**ABEC 318 Applied Animal Behavior 3 credits**
Application of scientific knowledge about animal behavior in problem solving related to human management of companion animals and zoo animals. Application to veterinary and conservation related conditions included.

**ABEC 319 Anthrozoology 3 credits**
The scientific study of mankind’s relationship with other species. Themes include companion animals, animal welfare and wildlife conservation.

**ABEC 350 Zoo Biology 4 credits**
The roles of zoos in conservation, education, and research. Environmental, genetic, nutritional and behavioral factors in the management of captive animal populations and species survival plans.

**BIO 316 Social Organization of Mammals 4 credits**
Behavior and social structure of rodents, felines, canines, cetaceans, elephants, monkeys, apes and humans. (Lab required)

**BIO 317 Sex, Evolution and Behavior 3 credits**
Reproductive behavior of diverse animal species from an evolutionary perspective. Focus is on how evolutionary accounts explain male-female differences in life style and behavior.

**BIO 320 Field Ecology with lab 4 credits**
Introduction to the flora, fauna and physical characteristics of regional ecosystems, with emphasis on field methods and application of ecological
theory. (lab required)

**BIO 325 Reproductive Biopsychology 3 credits**
Neuro-endocrine mechanisms underlying behavior associated with sex, pregnancy, and parental care. Equal focus on human and non-human behavior.

**BIO 343 Entomology 4 credits**
Introduction to the diversity and natural history of insects, with emphasis on identification of species. (lab required)

**BIO 355 Behavioral Neuroscience 3 credits**
Functions of the nervous/endocrine systems in mediating motivation, movement, sensation, ingestion, aggression, emotion, sleep, learning, memory, thought and behavior disorders.

**BIO 365 Vertebrate Zoology 4 credits**
The biology of the vertebrates, including anatomy, evolution, ecology, natural history and behavior. (lab required)

**BIO 370 Ecology 3 credits**
Focus on the complex interactions between diverse species and their environments. Adaptations and interdependency of organisms.

**BIO 371 Behavioral Ecology 3 credits**
Behavioral adaptations and interactions within and among species of animals within the context of ecological considerations.

**PHI 348 Environmental Ethics 3 credits**
Examination of various theories of environmental ethics that threaten the issue of what ethical responsibilities humans ought to have in their relationship with the natural world.

**ABEC 490 Canisius Ambassadors for Conservation 3 credits**
Field study of endangered species and ecology, followed by educational outreach to school and public audiences.

**ABEC 495 Research Seminar 3 credits**
Independent animal-focused research conducted under the supervision of a faculty member.

**ABEC 498 Internship 3 credits**
Internship in animal-related setting. Joint supervision by faculty and agency personnel. Application of classroom lessons to real-world situations.

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### Bioinformatics

**Full-Time Faculty: Debra T. Burhans**

Bioinformatics is an exciting field that involves the application of techniques from computer science, mathematics, statistics and information technology to problems in biology. Bioinformatics is a truly interdisciplinary science that teaches students both practical and conceptual tools for the understanding of biological information. Bioinformatics is important in all areas of biology, from human genetics to ecology, evolutionary biology, epidemiology and structural biology.

Bioinformatics is transforming drug discovery, medical diagnostics and other biotechnology related areas.

This major is academically rigorous, requiring challenging course work in biology, chemistry, mathematics and computer science. The major is ideal for students interested in learning about and applying mathematical and computational techniques to problem solving in biology.
The bioinformatics major provides an appropriate background for students interested in entering the job market directly after completing a B.S. degree, with positions typically found in the biotechnology industry or academic research laboratories. The program also prepares students for graduate work in such fields as bioinformatics, biology, computer science and computational biology.

**Student Learning Goals**
Bioinformatics majors will:
- Goal 1: Effectively develop and implement computational solutions to problems.
- Goal 2: Be competent with respect to biology and biotechnology
- Goal 3: Analyze legal, social and ethical considerations related to bioinformatics

**Qualifications for the Major**
There are no admission requirements for majors, but students without sufficient preparation in high school mathematics will have trouble completing the major in four years. Students must earn a grade of C or higher in all major courses. Note that a grade of B- or higher is required in CSC 111 and CSC 111 L. Students must have a cumulative grade point average of 2.0 in order to graduate.

**Curriculum:**
Students need to begin biology and computer science courses as soon as possible. The computer science sequence generally requires four years to complete due to the sequential nature of the courses, and biology requires two years to complete the core courses and a third or fourth year for upper level electives.

A minimum of 120 credit hours is required for graduation with a bachelor of science degree in bioinformatics, with the potential for as many as 137 credit hours depending on the bioinformatics electives chosen.

The program of study consists of Major Support courses that provide a solid foundation in biology, chemistry and mathematics, and Major Core courses that provide substantial background in computing and bioinformatics. Bioinformatics elective courses give the student an opportunity to engage in further study in biology, chemistry, physics, computer science or mathematics. Electives will be selected based on student interest in consultation with an advisor. The careful selection of electives will ensure that students attain sufficient expertise in a particular area of interest.

The bioinformatics curriculum is compatible with the pre-medical program. In order to minimally fulfill course requirements for medical school admission, students must elect three courses not required for the major: CHM 228 (Organic Chemistry II) and a two-semester physics sequence. These courses fit into the program of study as follows: any one of the three courses may be counted for the lower-division bioinformatics elective course, while the other two will be free electives. The additional three bioinformatics elective courses in the upper division should be selected from those most appropriate for the pre-medical program.
Students with a strong interest in mathematics are encouraged to pursue a minor in mathematics in the probability/statistics track. This level of mathematical rigor will help to prepare students for graduate study in biostatistics and mathematical biology in addition to bioinformatics.

For the mathematics minor, students will substitute MAT 112 (Calculus II) for MAT 141 (Statistics). Three of the four Bioinformatics elective courses will comprise MAT 211 (Calculus III) and MAT 351-MAT352 (Probability and Statistics). MAT 230 (Bridge to Abstract Mathematics) and MAT 219 (Linear Algebra) will count as free electives. Students with AP credit for Calculus I should, in addition, elect MAT 321 (Real Analysis I). While not required for the minor, this course is foundational for advanced study in mathematics.

Bioinformatics Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements (19 courses)
   A. BIF Support Courses (9 courses)
   BIO 101/L Introduction to Cellular/Subcellular Biology 4 credits
   BIO 102/L Organismal Biology 4 credits
   BIO 203 Cellular Biochemistry 3 credits
   CHM 111/L – 112/L General Chemistry 8 credits
   CHM 227/L Organic Chemistry I 4 credits
   MAT 111 Calculus I 4 credits
   MAT 141 Inferential Statistics and Computers for Science 4 credits
   MAT 191 Introduction to Discrete Mathematics 4 credits

   B. Major Courses (10 courses)
   BIF 101 Introduction to Bioinformatics 3 credits
   CSC 111/L Introduction to Programming 4 credits
   CSC 212/L Data Structures 4 credits
   CSC 213/L Large Scale Programming 4 credits
   CSC 310/L Information Organization and Processing 4 credits
   BIF 400 Bioinformatics Capstone course 3 credits

   Bioinformatics electives:
four courses, three of which must be at the 300/400 level from the list below: 12-20 credits

   Biology:
   BIO 404 Genetics.
   BIO 408 Biotechnology
BIO 412 Evolution and Development  
BIO 419 Cell Biology  
BIO 432 Developmental Biology  
BIO 450 Molecular Biology  

**Chemistry:**  
CHM 228 Organic Chemistry II  
CHM 236 Physical Chemistry for Health Sciences  
CHM 301-302 Classical Physical Chemistry  

**Computer Science:**  
CSC 281 Automata Theory and Algorithms  
CSC 313 Advanced Programming Topics  
CSC 325 Computer Graphics  
CSC 330 Distributed Computing  
CSC 351 Comparative Programming Languages  
CSC 360 Intelligent Systems  
CSC 380 Web Development  
CSC 395 Software Engineering  

**Mathematics:**  
MAT 112 Calculus II  
MAT 211 Calculus III  
MAT 219 Linear Algebra  
MAT 222 Differential Equations  
MAT 341 Numerical Analysis  
MAT 351-2 Probability and Statistics  
MAT 354 Experimental Design and Statistical Computing  

**Physics:**  
PHY 201-202 General Physics  
PHY 223-224 General Physics for Physical Science Majors  
PHY 360 Scientific Modeling  

3. **Free electives:**  
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.  

**COURSES: 2009-2011**  

**BIF 101 Introduction to Bioinformatics**  
3 credits  
This course introduces students to the field of bioinformatics, including on-line computational resources, basic programming concepts, genetics, sequence analysis, algorithm development and ethical issues. *Every Fall.*  

**BIF 400 Bioinformatics Capstone Course**  
3 credits  
This course covers fundamental algorithms in bioinformatics, including analysis and application. In addition, students study ethical, legal and social issues related to bioinformatics. Students design and
implement a solution to a current bioinformatics problem and evaluate the results. Documentation, software development or adaptation and oral presentation are required. *Fall 2009*

**BIF 499 Bioinformatics Internship**
3 credits

Students are strongly encouraged to take part in a bioinformatics internship, which typically would take place in a research laboratory or biotechnology firm. Application and faculty advisor approval required. *Note that this course cannot count as a bioinformatics elective.*

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**biology**

**Full-Time Faculty:** Susan M. Aronica, Chair; Sai Chidambaram, Robert J. Grebenok, Barbara A. Hanson, Elizabeth Hogan, Helen Hull-Sanders, John Kalb, Edward C. Kisailus, Susan W. Margulis, Sara R. Morris, Michael Noonan, Ann Wright.

The Biology major offers broad training in the biological sciences and balances organismal with cellular/molecular biology. This background serves as a solid preparation for:

1. future graduate level education in the biological sciences;
2. future professional education in the health-related sciences;
3. employment at the bachelors level; and
4. additional training in other disciplines that require a thorough understanding of biology, such as sports medicine and various areas of business, communications, engineering, law and social policy development.

The biology program of study combines lectures and a hands-on learning experience in both its core and elective courses. The elective courses offered within the major cover a variety of biological fields, which allow students to sample many areas of biology or to investigate more thoroughly specific areas of special interest. In addition, the opportunity to do independent research with a faculty member in the Biology Department helps develop additional skills not normally offered in undergraduate courses and enhances the total undergraduate science experience through the application of knowledge acquired in coursework.

The biology graduate may be employed in a variety of fields including research, teaching, industry, government service, sales, technical writing and environmental management. Within these fields are numerous interest areas, e.g. biotechnology, public health, forestry, agriculture, toxicology, pharmacology, wildlife and fisheries sciences, physiology, sports medicine, etc. Students interested in teaching at the secondary-school level should major in the Biology program, while those interested in the medical technology profession should major in the Clinical Laboratory program.

The department also has developed programs for students interested in: Early Assurance Acceptance into the SUNY/Buffalo Medical and Dental Schools and Syracuse Medical School; Joint Degree Programs with SUNY/Buffalo Dental School, Lake Erie College of Osteopathic Medicine, the New York and Ohio Colleges of Podiatric Medicine, and the New York College of Optometry; and dual major programs in Biology-Psychology. In addition, a series of specialized courses have been developed
for the non-science major that relate biological concepts and scientific methodologies to societal issues facing humankind as a result of technological advances.

**Student Learning Goals**

Goal 1: Biology majors will be competent with respect to knowledge.

Students will:

A. Evaluate energy transfer through biological systems;
B. Describe information transfer within cells and between generations;
C. Describe structure-function relationships;
D. Examine and evaluate hierarchical organization of biological systems.

Goal 2: Biology majors will be competent with respect to problem-solving.

Students will:

A. Solve quantitative word problems;
B. Interpret data;
C. Design experiments to test original hypotheses;
D. Critically analyze articles from the original scientific literature.

Goal 3: Biology majors will be competent with respect to technical skills.

Students will:

A. Effectively communicate scientific material in a written format;
B. Effectively communicate scientific material orally;
C. Draw graphs or design tables to accurately represent scientific information;
D. Utilize instrumentation and technology appropriate to their course of study;
E. Make correct identifications through observations.

**Qualifications for the major**

Students must earn a C- in BIO 101 lecture before enrolling in BIO 102 lecture, and a C- in BIO 102 lecture before enrolling in BIO 201. Students must earn an overall 2.0 GPA to graduate with a degree from Canisius.

**Advisement**

All biology majors are assigned advisors within the department. All majors should work closely with their advisors in discussing career expectations, choosing their biology electives and developing their total academic programs. The advisor may be changed at the student’s request.

**Biology Curriculum**

The following curriculum fulfills all requirements and prepares students well for graduate schools in the biological sciences and for schools of allopathic (MD) and osteopathic (DO) medicine, dentistry, veterinary medicine, podiatry and optometry.

1. **Core Curriculum Requirements:**

See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.
2. Major Course Requirements: (20 courses)

A. Major Courses (14 courses)

- BIO 101/101L Introduction to Cellular/Subcellular Biology     4 credits
- BIO 102/102L Organismal Biology     4 credits
- BIO 201/201L Evolution, Ecology and Population Biology   4 credits
- BIO 203 Cellular Biochemistry     3 credits
- BIO 351 Biology Seminar I     1 credits
- BIO 353 Biology Seminar II     1 credits
- CHM 111-112 General Chemistry (with labs)     8 credits
- CHM 227-228 Organic Chemistry (with labs)     8 credits
- PHY 201-202 General Physics (with labs)     8 credits
- Mathematics electives: two courses: MAT-111 and MAT 141 or PSY 201; MAT 111-112; one year of statistics     8 credits

B. Major Electives (6 courses)

Three courses and their associated laboratories must come from any three of the following four Tracks:

- I. Animal Biology (BIO 314, 315, 316, 340, 365, 366, 410, 460);
- II. Biological Diversity (BIO 305, 307, 320, 330, 335, 343);
- III. Cellular Biology (BIO 418, 419, 425, 426, 432, 435, 445, 455); and
- IV. Genetics/Molecular Biology (BIO 404, 408, 412, 450).

The remaining three biology electives may come from within these areas, or from other elective courses in biology, and at least one must include a laboratory. A student enrolled in three semesters of BIO 300 would fulfill this last laboratory requirement. Students should see their advisors to plan their selection. Prerequisites for all courses minimally include the completion of BIO 101/101L, BIO 102/102L, and BIO 203.

3. Free Electives:

Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Recommended Semester Schedule for Major Courses

Students should consult with their major advisor every semester to discuss course offerings and the courses needed to meet graduation requirements. It is particularly important that the biology major maintain the indicated required science course sequence to ensure prerequisite requirements are met for upper-level courses and to ensure that all basic requirements have been completed prior to taking standardized graduate/professional school entrance examinations (e.g. GRE, MCAT, DAT). These exams are normally taken late in spring semester of the junior year. Biology majors are required to take BIO 203 in the sophomore year, as long as they have received at least a C in CHM 227.
FALL                SPRING

Freshman Year
BIO 101/101L   4 credits    BIO 102/102L   4 credits
CHM 111        4 credits    CHM 112        4 credits
Mathematics    4 or 3 credits Mathematics   4 credits

Sophomore Year
BIO 201/201L   4 credits    CHM 228/L     4 credits
CHM 227/L      4 credits    BIO 203/L      3 credits

Junior Year
Biology elective 3 or 4 credits    PHY 202/L     4 credits
PHY 201/L       4 credits    Biology elective 3 or 4 credits
BIO 351        1 credit

Senior Year
Biology elective 3 or 4 credits    Biology elective 3 or 4 credits
Biology elective 3 or 4 credits    Biology elective 3 or 4 credits
BIO 353        1 credit

Special Programs
Biology With Distinction. This program is intended for biology majors who have a true interest in research. Upon graduation they will receive certification of completing their major “with distinction”. Program requirements include writing of a formal research proposal to be submitted to their thesis committee, completion of the research project (600 research hours minimum), writing the final thesis paper, and presentation of a departmental seminar with verbal thesis defense in front of their committee. Interested students must apply to this program by January of their junior year. See department chair for complete details.

Early Assurance Program with S.U.N.Y. Buffalo Medical School or Syracuse Medical School: Qualified students may apply to the State University of New York Medical School or Syracuse Medical School during their sophomore year. Those accepted will be admitted into the Medical School freshman class after their graduation from Canisius.

Early Assurance Program with S.U.N.Y. Buffalo Dental School: Qualified students may apply to the S.U.N.Y. Buffalo Dental School during their sophomore year. Those accepted will be admitted into the Dental School freshman class after their graduation from Canisius.

Joint Degree Program with S.U.N.Y. Buffalo Dental School, Lake Erie College of Osteopathic Medicine, the Ohio or New York Colleges of Podiatric Medicine or the New York College of Optometry. These are seven-year programs, of which the first three years are spent at
Canisius and the last four years at either the S.U.N.Y. Dental School or the N.Y. College of Podiatric Medicine. A B.S. degree will be awarded from Canisius College after completion of the first year of dental or podiatric school. The D.D.S., D.O., D.P.M., or O.D. degree will be awarded at the end of seven years. Joint degree students must meet biology major distribution requirements. Students should see an advisor to plan course selections.

**Ontario Veterinary College DVM Program.** The Ontario Veterinary College (OVC) of the University of Guelph, Guelph Ontario, has agreed to hold two (2) places per year specifically for Canisius College students that apply and meet the qualifications for their DVM program in veterinary medicine. Students interested in this opportunity must notify the pre-health advisor and/or HSARC director of their intention to apply to OVC by November 1\textsuperscript{st} of their senior year in order to be considered eligible. This opportunity is not available for Canisius students that are Canadian citizens.

Please note: In all special programs, the student, once accepted, must meet the requirements established by each professional school.

**Schedule (Joint Degree Program with S.U.N.Y. Buffalo Dental School)**

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<tr>
<td><strong>Freshman Year</strong></td>
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<td>BIO 101/101L</td>
<td>BIO 102/102L</td>
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<td>CHM 111</td>
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<td><strong>Sophomore Year</strong></td>
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<td>BIO 201/201L</td>
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<td>CHM 227</td>
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<td>4 credits</td>
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<td><strong>Junior Year</strong></td>
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<td>Biology elective w/ lab</td>
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<td>4 credits</td>
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<td>PHY 201</td>
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<td>BIO 351</td>
<td>PHY 202</td>
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**Dual Major**

The number of electives available to biology majors allows the development of dual majors with other departments. Specific programs have been developed in Biology-Psychology. The Biology-Psychology major may select those courses that are cross-listed with the Psychology Department and listed below. The advisor is Dr. Michael Noonan of the Animal Behavior, Ecology and Conservation (ABEC) program. Members of the biology faculty also frequently cooperate with other departmental faculty in the presentation of interdisciplinary courses.
Minors
The Biology Department also offers six minors: Cell and Molecular Biology, Environmental Biology, Neuroscience, Biology, Animal Behavior and Zoo Biology. Students interested in the Cell and Molecular, Environmental, Neuroscience, or Biology minors should consult with their departmental advisor to plan the proper course selections. Students interested in the Animal Behavior and Zoo Biology minors should consult with Dr. Michael Noonan, director of the Animal Behavior, Ecology and Conservation (ABEC) program. A description of the Animal Behavior and Zoo Biology minors can be located within the ABEC pages of the college catalog.

The Cell and Molecular Biology Minor is open to students who are majoring in biology or biochemistry. For students seeking employment at the B.S. level, a Departmental “Letter of Proficiency in Laboratory Skills” may be requested upon completion of the minor. This letter requires the passing of a laboratory skills competency examination, details of which are available from departmental advisors. Students select six courses from those listed below. At least four of the six courses must be taken with the laboratory, and no more than four courses and three laboratories may come from either the cell or genetics/molecular area.

- **Cell area:** BIO 418, 419, 425, 426, 432, 435, 445, 455.
- **Genetics/ Molecular area:** BIO 404, 408, 412, 450.

**TOTAL (6 courses) 22 credits**

Environmental Biology Minor The Environmental Biology minor is open to students majoring in biology. It provides a broad preparation for entry into B.S. level positions in the environmental sciences and advanced study at the graduate level. Students must complete one course from each of the following groups:

- **Diversity:** BIO 305, 335, 343, 365, 366
- **Field Methods:** BIO 320
- **Toxicology/Health:** BIO 360, 460

Three additional electives from the following group are also required: BIO 305, 315, 320, 332, 335, 343, 360, 365, 366, 430, 455, 460.

**Note:** At least four of the six courses must be taken with the laboratory.

**TOTAL (6 courses) 22 credits**

The Neuroscience Minor may be earned by any student who completes the required courses. Note that there are prerequisites for some courses that will effectively limit accessibility to Biology and Biology/Psychology majors.

- Students must take either BIO 425/425L or BIO 435/435L with its laboratory.
- Students select 4 electives from the group listed below:
  - BIO 325, 345, 355, 425; 435, PSY 397, BIO 300, PSY 495

**TOTAL (5 courses) 16-19 credits**

Biology Minor may be earned by any student who completes the required courses. Co- and/or pre-requisites for some of the required courses may effectively limit accessibility.
Students must complete 6 courses for the minor, five of which have labs. Four of these courses are required and two are electives. Required courses include: BIO101/101L, BIO 102/102L, BIO 201/201L, BIO 203. Students must choose one elective at the 300 level and one elective at the 400 level. Both of these classes must be taken with their associated laboratories.

**TOTAL (6 courses) 23 credits**

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**Animal Behavior Minor and Zoo Biology Minor**

See descriptions under the Animal Behavior, Ecology and Conservation (ABEC) entry in this catalog.

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**COURSES: 2009-2011**

**BIO 101 Introduction to Cellular/Subcellular Biology**
3 credits

Introduction to principles governing biological processes at the cellular/molecular level with emphasis on the role of experimentation in the scientific process. Three hours of lecture and one one-hour recitation per week. (Field 6)

**BIO 101L Introduction to Cellular/Subcellular Biology Laboratory**
1 credits

Examination of experimental methodologies that relate to biological processes at the cellular/molecular level.

**BIO 102 Organismal Biology**
3 credits

Introduction to principles governing biological processes at the organismal level in plants and animals. Function of organisms is stressed. Three hours of lecture and one one-hour recitation per week. **Prerequisite:** BIO 101 with at least a C- or permission of the chair. (Field 6)

**BIO 102L Organismal Biology Laboratory**
1 credits

Examination of the structure and function of living organisms.

**BIO 201 Evolution, Ecology and Population Biology**
3 credits

Intra- and inter-specific interactions between organisms, interactions between organisms and their environment, and mechanisms of evolutionary change and speciation. Requires recitation.

**BIO 201L Evolution, Ecology, Population Biology Laboratory**
1 credits

Investigative laboratories in evolution, population biology and ecology.

**BIO 203 Cellular Biochemistry**
3 credits

Combination of the structure and chemical reactions of biological molecules with the biological aspects of biochemistry. Control of metabolism. Biological membranes. Replication/transcription/translation. **Prerequisites:** BIO 101, 102, 201; C or better in CHM 227.

**BIO 351 Biology Seminar I**
1 credit

This replaces BIO 352 Junior Seminar. Learning and practicing of various methods of presenting scientific/experimental information. Attendance at faculty seminars required. **Prerequisites:** BIO 101, 102, 201, 203.

**BIO 353 Biology Seminar II**
1 credit

This course title replaces BIO 451 Senior Seminar. Student presents seminar on research of the primary biological literature. Attendance at faculty seminars required. **Prerequisite:** BIO 351 Seminar I
BIOLOGY ELECTIVES FOR MAJORS

BIO 305 Microbial Ecology         3 credits
The role of microorganisms in the environment. Microbial techniques, interactions among microbial populations, microbial communities, ecosystems, biogeochemical cycling, bioremediation, mineral and energy recovery. Lab optional. Prerequisites: BIO 101-102, 201; CHM 227.

BIO 305L Microbial Ecology Laboratory 1 credits
Techniques that allow the measurement of microorganisms in the environment, such as: microscopy, aseptic techniques, isolation and culture of specialized groups of bacteria, water quality assessment, biodegradation of wastes and pollutants. Prerequisite: Concurrent enrollment in BIO 305.

BIO 307 Microbiology          3 credits
Cell structure, genetics, biochemistry and physiology of microorganisms, with emphasis on bacteria. Medical aspects. Food and industrial microbiology. Prerequisites: BIO 101-102, 201; CHM 227.

BIO 307L Microbiology Laboratory 1 credits
Microbiology laboratory is concerned primarily with the cell structure, growth, physiology and identification of bacteria. Prerequisite: Concurrent enrollment in BIO 307.

BIO 314 Comparative Anatomy   4 credits
Intensive study of selected organ systems of lower chordates and representative vertebrates. Evolutionary modifications will provide the framework for the course. The laboratory will focus on dissection and will concentrate on structure/function relationships. Prerequisites: BIO 101-102, 201.

BIO 315 Comparative Animal Behavior 3 credits
Behavior of a wide range of species. Similarities and contrasts allow deductions regarding mechanisms and evolution. Prerequisites: BIO 101-102, 201.

BIO 315L Comparative Animal Behavior Laboratory 1 credits
Lab and field exercises illustrate concepts from class. Prerequisite: Concurrent enrollment in BIO 315.

BIO 316 Social Organization of Mammals 4 credits
Behavior and social structures of rodents, felines, canines, cetaceans, elephants, monkeys, apes and humans. Lab is required and includes observation of animal groupings at local zoos and aquariums. Prerequisites: BIO 101-102, 201.

BIO 317 Sex, Evolution and Behavior 3 credits
Reproductive behavior of diverse animal species, including humans, from evolutionary perspective. Focus on how evolutionary accounts explain male-female differences in life style and behavior. Prerequisites: BIO 101-102, 201.

BIO 320 Field Ecology       4 credits
Introduction to the flora, fauna and physical characteristics of regional ecosystems, with emphasis on field methods and application of ecological theory. Three hours of lecture and six hours of lab per week. Prerequisites: BIO 101-102, 201.

BIO 322 Conservation Biology 3 credits
Study of the plight of endangered species, the biological consequences of fragmented populations, and the scientific basis of habitat/species restoration.

BIO 325 Reproductive Biopsychology 3 credits
Neuro-endocrine mechanisms underlying behavior associated with sex, pregnancy, and parental care. Equal focus on human and non-human behavior. Prerequisites: BIO 101-102, 201.

BIO 331 Histochemical Techniques 4 credits
Theory and techniques for preparing tissue for light microscopy. Lab intensive. Prerequisites: BIO 101-102, 201.

BIO 332 Medical Veterinary Entomology 3 credits
Introduction to the arthropods that cause disease and
public health issues in humans and animals.  
Prerequisites: BIO 101-102.

BIO 335 Plant Biology 3 credits  
Critical examination of the structure, physiology and biochemistry of vascular plants. Plant taxonomy. Emphasis on the interaction of plants with their environment. Prerequisites: BIO 101-102, 201.

BIO 335L Plant Biology Laboratory 1 credits  
Investigative survey of plant structure & function. Prerequisite: Concurrent enrollment in BIO 335.

BIO 340 Physiology 3 credits  
Function of organ systems, emphasizing neuroendocrine integration and other regulatory processes. Includes animal models, clinical experience and mechanisms of drug action. Prerequisites: BIO 101-102, 201.

BIO 340L Physiology Laboratory 1 credits  
Experimental study of organ systems and components, using surgical, biochemical, and hematological techniques and electronic instrumentation. Prerequisite: Concurrent enrollment in BIO 340.

BIO 343 Entomology 4 credits  
Introduction to the diversity and natural history of insects, with emphasis on identification of species. Three hours of lecture and three hours of lab weekly. Prerequisites: BIO 101-102, 201.

BIO 345 Functional Neuroanatomy 3 credits  
Fundamentals of neuroanatomy and neurophysiology. Embryology, histology, and cellular structure as well as sensory and motor components and circuitry. Prerequisites: BIO 101-102, 201.

BIO 350 Zoo Biology 4 credits  
The roles of zoos in conservation, education and research. The interaction of environment, genetic, nutritional, and psychosocial factors in the management of captive animal populations and species survival plans. Lab is required and includes laboratory exercises in enrichment and numerous experiential field trips to nearby zoos and aquariums. Prerequisites: BIO 101-102, 201.

BIO 355 Behavioral Neuroscience 3 credits  
Functions of nervous /endocrine systems in mediating motivation, movement, sensation, ingestion, aggression, emotion, sleep, learning, memory, thought and behavior disorders. Prerequisites: BIO 101-102, 201.

BIO 360 Environmental Health 3 credits  
Environmental effects on human health, including biological, physical and chemical hazards in water, soil, and air. Course focuses on public health & epidemiological study approaches. Emerging issues also discussed. Prerequisites: BIO 101-102, 201.

BIO 365 Vertebrate Zoology and Ecology 4 credits  
The biology of the vertebrates including anatomy, evolution, ecology, natural history and behavior. Labs involve some anatomy, learning local and North American species and groups, and field trips. Prerequisites: BIO 101-102, 201.

BIO 366 Ornithology 4 credits  
Phylogenetic relationships, ecology, natural history and the behavior of birds. Laboratory focuses on world-wide diversity, local species and field techniques. Prerequisites: BIO 101-102, 201.

BIO 371 Behavioral Ecology 3 credits  
Animal behavior from an evolutionary perspective, focusing on the influences of evolutionary history and environment on behaviors including foraging, communication, reproduction, and social behavior. Prerequisites: BIO 101-102, 201.

BIO 400 Independent Study 3 credits  
Independent study under the direction of a faculty member. Arrangements made prior to registration. Prerequisite: Written permission of tutorial faculty member.

BIO 401 Independent Research 4 credits  
Independent laboratory research in biology conducted under the supervision of a faculty member. Arrangements made prior to registration.
Prerequisite: Written permission of faculty member.

BIO 404 Genetics 3 credits
Principles of Mendelian, molecular, population, human and quantitative genetics, with emphasis on inherited diseases. Formerly BIO 304. Prerequisite: BCH 301, 301L or BIO 203.

BIO 404L Genetics Laboratory 1 credits
Principles of Mendelian and molecular genetics as demonstrated by experiments with C. elegans. Prerequisite: Concurrent enrollment in BIO 404.

BIO 405 Medical Genetics 3 credits
Modes of transmission of human characteristics and diseases in families and populations; the molecular basis of human disease; the genetics of cancer and the screening, diagnosis and therapy of specific genetic diseases. Formerly BIO 318. Prerequisite: BCH 301, 301L or BIO 203.

BIO 408 Biotechnology, Theory in Practice 4 credits
Introduction to the theory and experiments that are the foundation of biotechnology through lecture and laboratory. Topics include: genetic engineering, mutagenesis, separation technology, immunobiotechnology and cell biology. Lab required. Prerequisite: BCH 301, 301L or BIO 203.

BIO 410 Histology and Histophysiology 4 credits
A systematic study of structure and function of cells and tissues as viewed by light and electron microscopes. Lab employs Kodachrome and tissue slides. Three hours of lecture and one three-hour lab per week. Prerequisite: BCH 301, 301L or BIO 203.

BIO 412 Evolution & Development 3 credits
Evolution of development, e.g. how structures arise during development of the embryo and the evolution of genetic pathways that control the process of development. Prerequisite: BCH 301, 301L or BIO 203.

BIO 412L Evolution & Development Laboratory 1 credits
Investigative lab focuses on projects designed to characterize molecular changes during development in a variety of organisms. Prerequisite: BCH 301, 301L or BIO 203.

BIO 414 Enzymes and Proteins 3 credits
The biochemical characteristics of proteins and enzymes will be examined using a modular approach to target important structural proteins and regulatory enzymes of animal and plant metabolism. Prerequisite: BIO 203 or BCH 301.

BIO 414L Enzymes and Proteins Laboratory 1 credits
Experimental techniques for the purification of proteins, the analysis of protein function and the measurement of enzyme kinetics. Prerequisite: BIO203 or BCH 301/301L.

BIO 416 Virology 3 credits
This course will discuss the types and pathogenesis of viruses that cause human and animal viral diseases. The medically important groups of DNA viruses, RNA viruses, and slow viruses (prions) will be discussed in terms of pathogenesis and epidemiology. In additional, techniques for studying the replication and quantification of viral infections will be discussed. Prerequisite: BCH 301, 301L or BIO 203.

BIO 416L Virology Laboratory 1 credits
Methods for culturing, isolating and characterizing viruses, as well as experimental methods used in the study of viruses. Prerequisite: Concurrent enrollment in BIO 416.

BIO 418 Endocrinology 3 credits
Synthesis and cellular/molecular actions of peptides and steroid hormones, growth factors, cytokines, and their roles in regulating physiological processes, maintenance of homeostasis and cancer biology. Prerequisite: BCH 301, 301L or BIO 203.

BIO 418L Endocrinology Laboratory 1 credit
Experimental laboratories researching current topics in endocrinology at the molecular, cellular and organismal levels. Prerequisite: Concurrent
enrollment in BIO 418.

BIO 419 Cell Biology 3 credits
Recent developments in cytology, including genetic information storage and retrieval, protein processing and secretion, motility, chemotaxis, energy sources and the cell in its environment. Prerequisite: BCH 301, 301L or BIO 203.

BIO 419L Cell Biology Laboratory 1 credits
Techniques of cell culture; isolation and characterization of cellular organelles and experimental analysis of cellular physiology. Prerequisite: Concurrent enrollment in BIO 419.

BIO 425 Cellular Neurobiology 3 credits
Cellular and molecular mechanisms underlying nerve function. Topics include: signaling within the nervous system, neuropharmacology and neuropathology. Prerequisite: BCH 301-301L or BIO 203.

BIO 425L Cellular Neurobiology Laboratory 1 credits
Experimental laboratories researching current topics in cell and molecular neurobiology. Prerequisite: Concurrent enrollment in BIO 425.

BIO 426 Immunochemistry 3 credits
Structural concept of antigenic determinants, immunoglobulin sequences and combining site specificity related to the diversity of the immune response and its control. Prerequisite: BCH 301-301L or BIO 203.

BIO 426L Immunochemistry Laboratory 1 credit
Current methods in immunological research and diagnosis. Designed to present available methodology and insight into the underlying principles. Prerequisite: Concurrent enrollment in BIO 426.

BIO 430 Medicinal Botany 3 credits
The importance of diverse plant life to human health; the biosynthesis, ecological significance and pharmacology of drugs derived from plants. Prerequisite: BCH 301, 301L or BIO 203.

BIO 432 Developmental Biology 3 credits
The cellular and molecular phenomena that result in the development of a complex multicellular organism from a single cell, the zygote. Prerequisite: BCH 301, 301L or BIO 203.

BIO 432 Developmental Biology Laboratory 1 credit
Examination of cellular and molecular aspects of animal development using classical model organisms. Prerequisite: concurrent enrollment in BIO 432.

BIO 435 Developmental Neurobiology 3 credits
Cellular and molecular mechanisms underlying neural development: neural determination, cell migration, axon guidance, apoptosis, synaptogenesis, myelination and nerve regeneration. The scientific methodology used in current research will be stressed. Prerequisite: BCH 301, 301L or BIO 203.

BIO 435 Developmental Neurobiology Laboratory 1 credits
Experimental studies of the development and regeneration of nervous tissue using neuronal tissue culture and digital microscopy. Prerequisite: Concurrent enrollment in BIO 435.

BIO 440 Medical Biochemistry 3 credits
Biochemistry of disease. Includes examination of pathways and regulatory enzymes that lead to normal and disease states. Prerequisite: BCH 301, 301L or BIO 203.

BIO 445 Cellular Imaging 4 credits
Use of microscopy and digital imaging technology to study living eukaryotic cells. Experimental laboratory focuses. Lab required. Prerequisite: BCH 301, 301L or BIO 203.

BIO 450 Molecular Biology 3 credits
Current approaches to recombinant DNA technology and molecular genetic research. Both conceptual and laboratory approaches will be pursued. Topics: cancer development, cell growth, chemical evolution. Prerequisite: BCH 301, 301L or BIO 203.
BIO 450L Molecular Biology Laboratory 1 credit
Exposure to electrophoresis, chromatography, bacterial transformation, restriction enzyme analysis, N13 viral propagation, in vitro packaging of viral DNA - techniques used in recombinant DNA research. Prerequisite: Concurrent enrollment in BIO 450.

BIO 454 Genomics and Proteomics 3 credits
A survey of genomic, proteomic and metabolomic techniques used in modern biological and biochemical studies. Journal articles utilizing these techniques will be used as the basis for understanding these techniques and how they fit into systems biology. Prerequisite: BCH 301, 301L or BIO 203.

BIO 455 Environmental Physiology 3 credits
Introduction to the underlying physiological mechanisms involved in organismal adaptation to various environmental conditions (e.g. temperature, salinity, dissolved oxygen, pressure). Prerequisite: BCH 301, 301L or BIO 203.

BIO 455L Environmental Physiology Laboratory 1 credits
An investigative laboratory examining organismal adaptation to various environmental parameters. Prerequisite: Concurrent enrollment in BIO 455.

BIO 460 Environmental Toxicology 3 credits
Major environmental toxicants examined from viewpoints of bioavailability, bioaccumulation, biodegradation, toxic properties, interference in metabolism. Emphasis on effects of contaminants on functioning of animals. Prerequisite: BCH 301, 301L or BIO 203.

BIO 460L Environmental Toxicology Laboratory 1 credits
Experimental laboratory researching a current topic in environmental toxicology. Prerequisite: Concurrent enrollment in BIO 460.

BIO 498 Biology With Distinction Thesis 3 credits
Requirement for any student seeking to complete the Biology with Distinction degree option. Must be taken by seniors in the fall or spring of their senior year.

NON-MAJOR BIOLOGY COURSES

BIO 109 Nutrition 3 credits
How food intake influences us as individuals and as components of society; what food is; how we get and use food; processes regulating its use. (Field 6)

BIO 116 Disease: Myth and Reality 3 credits
Exploration of causation, treatment and prevention of illness. Objective: to increase awareness and understanding of health and disease. (Field 6)

BIO 117 Plants and Human Affairs 3 credits
Various ways in which plants affect human existence. Topics include food products, building (utilitarian) applications, medicinal and poisonous plants, propagation and improvement, roles in ecology. (Field 6)

BIO 120 Biology in the News 3 credits
The biological concepts underlying science articles appearing in the current news media, examining these concepts in the context of relevant economic, social and cultural issues. Topics will vary. (Field 6)

BIO 125 Microbes and People 3 credits
The relationship between microbes and their environment as they impact human disease, through food preparation and spoilage and environmental exposure. (Field 6)
BIO 131 Biotechnology and Society  
3 credits
Relationship between biology, technology and society. Awareness of the impact of biotechnology on our society. (Field 6)

BIO 132 Genes and People  
3 credits
How human characteristics are transmitted and affect future generations. Ethical and legal ramifications of genetic advances. (Field 6)

BIO 135 Environmental Biology  
3 credits
Introduction to the complex interactions that occur between humans and their environments, and how other life forms are impacted by these activities. (Field 6)

BIO 137 Special Topics in Natural History  
3 credits
Ecological and evolutionary concepts are explored using specific examples from a particular ecosystem, specifically by focusing on the organisms of an ecosystem and their interactions with each other and the environment. (Field 6)

BIO 138 Special Topics in Natural History, Field Experience  
3 credits
Travel to a field site to study the natural history of that area. Ecology and evolution will be studied in the field by collecting observations, and developing and testing ecological hypotheses at the chosen field site.

BIO 150 Zoo Nutrition  
3 credits
Nutrition and dietary science focused on the maintenance of wildlife in captivity. Practical examples at our local zoo and aquariums are included.

BIO 221 Biology of Women  
3 credits
Biological principles applied to the human female. Structure, function, growth and development throughout the life cycle. Includes relevant social, psychological and medical information.

RST 448 Bio-Moral Problems  
3 credits
Considers a number of problem areas, such as genetic intervention, medical experimentation, behavior control, organ transplants and resource allocation, and death and dying. See course description in Religious Studies and Theology.

OTHER COURSES
(for health-related professionals and Physical Education majors; may not be used as biology electives).

BIO 107-108 Human Anatomy and Physiology  
Specialized introductory course in human biology for those students requiring a rigorous and thorough understanding of the structure and function of the human body. Three hours of lecture and one three-hour lab per week. **Prerequisite:** Exercise Science, Physical Education, and Medical Technology majors only. Students must earn a minimum grade of C in BIO 107 to advance to BIO 108.

BIO 107-108L Human Anatomy and Physiology Lab  
2 credits
Model and experiments will be used to enhance the student’s understanding of the concepts taught in BIO 107-108. Meets once a week for three hours. **Prerequisite:** Concurrent enrollment in BIO 107-108.
chemistry and biochemistry

Full-Time Faculty: Mariusz M. Kozik, Chair; Jessica L. Childs-Disney, Frank J. Dinan, Timothy M. Gregg, Mary C. O’Sullivan, Peter M. Schaber, Phillip M. Sheridan, Steven H. Szczepankiewicz.

Chemistry or Biochemistry graduates enter a variety of professions, including careers in research and industry, the health professions, teaching, technical writing, business, sales, patent law and civil service. A major in chemistry or biochemistry is an excellent preparation for entrance into medical, dental and pharmacy schools. It also prepares students to enter a range of graduate programs including chemistry, biochemistry, biotechnology, bioinformatics, medicinal chemistry, chemical engineering, environmental science, bioengineering, business and law.

The Department of Chemistry and Biochemistry offers several tracks that lead to a BS degree in Chemistry or Biochemistry. These tracks include: Chemistry and Biochemistry BS degrees that are certified by the American Chemical Society (ACS); a Health Professions track leading to a Chemistry BS; and Chemistry and Biochemistry BS tracks designed for students who intend to pursue employment in industry. Advisors in the Department will help you choose the track that best fits your interests and career plans. Students in all program tracks will gain hands-on experience with a wide variety of modern, sophisticated laboratory instrumentation; this helps provide the experience necessary to be competitive in today’s job market or to gain entrance into highly ranked graduate programs.

All Chemistry and Biochemistry BS tracks can be completed with a business minor. This option provides a very useful preparation for employment in sales, marketing, or other industrial professions, as well as preparing students for graduate studies in business or administration.

The department also offers a chemistry minor. In addition to courses for chemistry and biochemistry majors, the department provides chemistry and biochemistry courses for students in the physical and biological sciences, medical technology, pre-engineering and pre-environmental sciences. Courses designed for non-science majors communicate fundamental insights into the nature of the physical world, the development of scientific ideas and the impact of science and technology on humankind.

Student Learning Goals

Goal 1: Chemistry/Biochemistry majors will demonstrate an understanding of fundamental chemical and biochemical concepts.

Students will:
A. Demonstrate broad knowledge of chemical/biochemical concepts;
B. Analyze and predict the effects of chemical/biochemical changes;
C. Manipulate expressions of chemical/biochemical quantities to derive higher order relationships.

Goal 2: Chemistry/Biochemistry majors will be able to work effectively in a
professional or laboratory setting. Students will:
   A. Identify, access and use chemical/biochemical literature sources;
   B. Define chemical/biochemical problems then formulate hypotheses and design experiments to address them;
   C. Carry out experiments (follow directions, manipulate materials and lab apparatus, record data);
   D. Use modern instrumentation (prepare samples, operate systems, troubleshoot common problems, organize and label data);
   E. Work effectively as a member of a team.

Goal 3: Chemistry/Biochemistry majors will be proficient in the communication of chemical and biochemical information. Students will:
   A. Construct and deliver an effective oral presentation;
   B. Write an effective, properly formatted scientific report.

Goal 4: Chemistry/Biochemistry majors will demonstrate a consciousness of safe and ethical practice. Students will:
   A. Work safely in the laboratory with a safety-conscious attitude;
   B. Show an ethical regard for environmental protection, use of information sources, reporting of results, and collaboration with colleagues.

Special Programs

Early Assurance Program with SUNY Buffalo Dental School: Qualified students may apply to the State University of New York at Buffalo Dental School during their sophomore year. Those accepted will be admitted into the Dental School freshman class after their graduation from Canisius.

Pre-Medical and Pre-Dental: The Chemistry and Biochemistry BS degrees are excellent preparations for entering into medical and dental schools, and a third of our graduates from this Department are accepted into these programs. Students applying to medical or dental schools must take the Medical College Admission Test (MCAT) or Dental Admission Test (DAT).

Pre-Pharmacy: Students who are planning to enter pharmacy school after their sophomore year will be listed as biochemistry majors, since the first two years of the biochemistry program satisfy most pharmacy school admission requirements for students without BS degrees. For students who want to complete a BS degree before starting pharmacy school, we recommend the Health Professions Chemistry BS track, since students in this track can meet all pharmacy school entrance requirements. Students applying to most pharmacy schools must take the Pharmacy College Admission Test (PCAT).

Other Programs
Following their sophomore year, and sometimes earlier, chemistry and biochemistry majors are encouraged to become involved in research or other professional projects. Stipends for
qualified students are often available for students to work on these projects during the summer and school year in the department. Summer work in industrial laboratories and research institutions is also available. Our close relationship with local industries and institutions aids in job placement before and after graduation. Students may also choose to undertake industrial internships for advanced elective course credit. Chemistry and biochemistry students along with a faculty advisor are organizers of the Canisius College student-affiliate chapter of the American Chemical Society. This student club has won national recognition for its activities that include professional, volunteer and social events.

Chemistry Curriculum

Chemistry Track Certified by the American Chemical Society:

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (20 courses) 75 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 230 + lab Analytical Chemistry 4 credits
CHM 244 Inorganic Chemistry 3 credits
CHM 301-302 + lab Physical Chemistry I and II 8 credits
CHM 334 + lab Spectrometric Analysis 4 credits
CHM 430 + lab Instrumental Analytical Chemistry 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
BCH 301 Introduction to Biochemistry 3 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
MAT 111-112 Calculus I & II 8 credits
PHY 223-224 + lab General Physics for Physical Science Majors 8 credits
Chemistry or biochemistry electives: three courses, one with lab (or BCH 301 lab). CHM 450 (Research in Chemistry) can be taken instead of one advanced elective. CHM 450 is strongly recommended. 10 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is strongly recommended.

Chemistry Track:
1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements** (19 courses) 71 credits
   - CHM 111-112 + lab General Chemistry 8 credits
   - CHM 227-228 + lab Organic Chemistry 8 credits
   - CHM 230 + lab Analytical Chemistry 4 credits
   - CHM 244 Inorganic Chemistry 3 credits
   - CHM 301 + lab Physical Chemistry I 4 credits
   - CHM 334 + lab Spectrometric Analysis 4 credits
   - CHM 430 + lab Instrumental Analytical Chemistry 4 credits
   - CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
   - BCH 301 Introduction to Biochemistry 3 credits
   - BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
   - MAT 111 Calculus I 4 credits
   - MAT 112 Calculus II or MAT 141 Statistics 4 credits
   - PHY 201-202 + lab General Physics 8 credits
   - Chemistry or biochemistry electives: three courses, one with lab. CHM 450 (Research in Chemistry) can be taken instead of one advanced elective. 10 credits

3. **Free electives:**
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is recommended.

**Chemistry Health Professions Track:**

1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements** (19 courses) 70 credits
   - CHM 111-112 + lab General Chemistry 8 credits
   - CHM 227-228 + lab Organic Chemistry 8 credits
   - CHM 230 + lab Analytical Chemistry 4 credits
   - CHM 244 Inorganic Chemistry 3 credits
   - CHM 301 Physical Chemistry 3 credits
   - CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
   - BCH 301-302 Biochemistry 6 credits
BIO 101-102 + lab Introduction to Cellular/Subcellular Biology and Organismal Biology 8 credits
MAT 111 Calculus I 4 credits
MAT 112 Calculus II or MAT 141 Statistics 4 credits
PHY 201-202 + lab General Physics 8 credits
Science electives: three courses, including at least one course in chemistry or biochemistry and at least two laboratory courses. CHM 450 (Research in Chemistry) can be taken instead of one science elective. 11 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is recommended.

Chemistry Track Certified by the American Chemical Society with Business Minor:

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements (19 courses) 72 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 230 + lab Analytical Chemistry I 4 credits
CHM 244 Inorganic Chemistry 3 credits
CHM 301-302 + lab Physical Chemistry I and II 8 credits
CHM 334 + lab Spectrometric Analysis 4 credits
CHM 430 + lab Instrumental Analytical Chemistry 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
BCH 301 Introduction to Biochemistry 3 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
MAT 111-112 Calculus I & II 8 credits
PHY 223-224 + lab General Physics for Physical Science Majors 8 credits
Chemistry electives: two courses, one with lab. CHM 450 (Research in Chemistry) can be taken instead of one chemistry elective. CHM 450 is recommended. 7 credits

3. Business Requirements (7 courses) 21-22 credits
ECO 101-102 Macro- and Microeconomics 6 credits
MGT 101 Introduction to Management 3 credits
MKT 201 Principles of Marketing 3 credits
ACC 201 Financial Accounting 3 credits
FIN 201 Introduction to Finance 3 credits
MAT 141 or ECO 255 Inferential or Business Statistics 4 or 3 credits

4. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is recommended.

Chemistry Track with Business Minor:

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements (18 courses) 67-68 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 230 + lab Analytical Chemistry 4 credits
CHM 244 Inorganic Chemistry 3 credits
CHM 301 + lab Physical Chemistry I 4 credits
CHM 334 + lab Spectrometric Analysis 4 credits
CHM 430 + lab Instrumental Analytical Chemistry 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
BCH 301 Introduction to Biochemistry 3 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
MAT 111 Calculus I 4 credits
MAT 141 or ECO 255 Statistics 4 or 3 credits
PHY 201-202 + lab General Physics 8 credits
Chemistry electives: two courses, one with lab.
CHM 450 (Research in Chemistry) can be taken instead of one advanced elective. 7 credits

3. Business Requirements (6 courses) 18 credits
ECO 101-102 Macro- and Microeconomics 6 credits
MGT 101 Introduction to Management 3 credits
MKT 201 Principles of Marketing 3 credits
ACC 201 Financial Accounting 3 credits
FIN 201 Introduction to Finance 3 credits

4. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120
credit hours. MAT 211 is recommended.

Chemistry Health Professions Track with Business Minor:

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements (18 courses) 65-66 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 230 + lab Analytical Chemistry I 4 credits
CHM 244 Inorganic Chemistry 3 credits
CHM 301 Physical Chemistry I 3 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
BCH 301-302 Biochemistry 6 credits
BIO 101-102 + lab Introduction to Cellular/Subcellular Biology and Organismal Biology 8 credits
MAT 111 Calculus I 4 credits
MAT 141 or ECO 255 Inferential or Business Statistics 4 or 3 credits
PHY 201-202 + lab General Physics 8 credits
Science electives: 2 courses, including at least 1 course in Chemistry/Biochemistry and at least 1 laboratory course. CHM 450 (Research in Chemistry) can be taken instead of one advanced elective. 7 credits

3. Business Requirements (6 courses) 18 credits
ECO 101-102 Macro- and Microeconomics 6 credits
MGT 101 Introduction to Management 3 credits
MKT 201 Principles of Marketing 3 credits
ACC 201 Financial Accounting 3 credits
FIN 201 Introduction to Finance 3 credits

4. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.
Biochemistry Curriculum

Biochemistry Track Certified by the American Chemical Society

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (20 courses) 76 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
BIO 102 + lab Organismal Biology 4 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 230 + lab Analytical Chemistry I 4 credits
CHM 244 Inorganic Chemistry 3 credits
BCH 301-302 + lab Biochemistry 8 credits
CHM 301-302 + one lab Physical Chemistry (301L or 302L) 7 credits
Modern Spectroscopy or Instrumentation + lab CHM 334 or CHM 430 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
MAT 111-112 Calculus I & II 8 credits
PHY 223-224 + lab General Physics for Physical Science Majors 8 credits
Biochemistry Elective: one course (CHM 344, CHM 455, or BIO 440) 3 credits
Molecular Biology Elective + lab (BIO 450, 404, or 408) 4 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is strongly recommended.

Biochemistry Track

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (19 courses) 71 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
BIO 102 + lab Organismal Biology 4 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 244 Inorganic Chemistry 3 credits
BCH 301-302 + lab Biochemistry 8 credits
CHM 301 Physical Chemistry 3 credits
Modern Spectroscopy or Instrumentation + lab (CHM 334 or CHM 430) 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
MAT 111 Calculus I 4 credits
MAT 112 or MAT 141 Calculus II or Statistics 4 credits
PHY 201-202 + lab General Physics 8 credits
Biochemistry Elective: one course (CHM 344, CHM 455, or BIO 440) 3 credits
Molecular Biology Elective + lab (BIO 450, 404, or 408) 4 credits
Science Elective (any advanced elective in Chemistry, Biochemistry or Biology) 3 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is recommended.

Biochemistry Track Certified by the American Chemical Society with Business Minor

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (19 courses) 73 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology 4 credits
BIO 102 + lab Organismal Biology 4 credits
CHM 111-112 + lab General Chemistry 8 credits
CHM 227-228 + lab Organic Chemistry 8 credits
CHM 230 + lab Analytical Chemistry I 4 credits
CHM 244 Inorganic Chemistry 3 credits
BCH 301-302 + lab Biochemistry 8 credits
CHM 301-302 + one lab Physical Chemistry (301L or 302L) 7 credits
Modern Spectroscopy or Instrumentation + lab (CHM 334 or CHM 430) 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
MAT 111-112 Calculus I & II 8 credits
PHY 223-224 + lab General Physics for Physical Science Majors 8 credits
Molecular Biology Elective + lab (BIO 450, 404, or 408) 4 credits

3. Business Requirements: (7 courses) 21-22 credits
ECO 101-102 Macro- and Microeconomics 6 credits
MGT 101 Introduction to Management 3 credits
MKT 201 Principles of Marketing 3 credits
ACC 201 Financial Accounting                3 credits
FIN 201 Introduction to Finance            3 credits
MAT 141 or ECO 255 Inferential or Business Statistics  4 or 3 credits

4. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. MAT 211 is recommended.

Biochemistry Track with Business Minor

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (18 courses)  67-68 credits
BIO 101 + lab Introduction to Cellular/Subcellular Biology    4 credits
BIO 102 + lab Organismal Biology   4 credits
CHM 111-112 + lab General Chemistry     8 credits
CHM 227-228 + lab Organic Chemistry   8 credits
CHM 244 Inorganic Chemistry         3 credits
BCH 301-302 + lab Biochemistry       8 credits
CHM 301 Physical Chemistry I        3 credits
Modern Spectroscopy or Instrumentation + lab (CHM 334 or CHM 430) 4 credits
CHM 381-480-481 Chemistry and Biochemistry Seminar 3 credits
MAT 111 Calculus I                   4 credits
MAT 141 or ECO 255 Statistics        4 or 3 credits
PHY 201-202 + lab General Physics     8 credits
Biochemistry Elective: one course (CHM 344, CHM 355, or BIO 440) 3 credits
Molecular Biology Elective + lab (BIO 450, 404, or 408)        4 credits

3. Business Requirements: (6 courses)  18 credits
ECO 101-102 Macro- and Microeconomics      6 credits
MGT 101 Introduction to Management       3 credits
MKT 201 Principles of Marketing          3 credits
ACC 201 Financial Accounting             3 credits
FIN 201 Introduction to Finance          3 credits

4. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120
credit hours. MAT 211 is recommended.

### Recommended Semester Schedules for Major Courses

#### Chemistry Track Certified by the American Chemical Society

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**Junior Year**

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**Chemistry Track with Business Minor:**

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Biochemistry Track Certified by the American Chemical Society:

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- **BIO Elective + Lab** 4 credits
- **CHM 480** 1 credit
- **CHM 430/430L** 4 credits
- **BCH Elective** 3 credits
- **CHM 302/(302L) 3/4 credits**
- **CHM 481** 1 credit

### Biochemistry Track:

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### Biochemistry Track Certified by the American Chemical Society with Business Minor:

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<tr>
<th>Freshman Year</th>
<th>4 credits</th>
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<tr>
<td>CHM 111/111L</td>
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<td>BIO 101/101L</td>
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<td>MAT 111</td>
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<td>MAT 112 4 credits</td>
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#### Sophomore Year

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<td>CHM 227/227L</td>
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<td>CHM 228/228L</td>
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<tr>
<td>CHM 244</td>
<td>3 credits</td>
<td>PHY 223/223L</td>
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<tr>
<td>ECO 101</td>
<td>3 credits</td>
<td>MAT 141 or ECO 255 4/3 credits</td>
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<td>ECO 102 3 credits</td>
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Junior Year

BCH 301/301L  4 credits  BCH 302/302L  4 credits
CHM 301/(301L)  3/4 credits  CHM 230/230L  4 credits
PHY 224/224L  4 credits  CHM 381  1 credit
MGT 101  3 credits

Senior Year

CHM 334/334L  4 credits  CHM 430/430L  4 credits
BIO Elective + Lab  4 credits  CHM 302/(302L) 3/4 credits
CHM 480  1 credits  CHM 481  1 credit
ACC 201  3 credits  FIN 201  3 credits
MKT 201  3 credits

Biochemistry Track with Business Minor:

FALL  SPRING
Freshman Year

CHM 111/111L  4 credits  CHM 112/112L  4 credits
BIO 101/101L  4 credits  BIO 102/102L  4 credits
MAT 111  4 credits  MAT 141 or ECO 255  4/3 credits

Sophomore Year

CHM 227/227L  4 credits  CHM 228/228L  4 credits
PHY 201/201L  4 credits  PHY 202/202L  4 credits
CHM 244  3 credits  ECO 101  3 credits

Junior Year

BCH 301/301L  4 credits  BCH 302/302L  4 credits
CHM 301  3 credits  BIO Elective + Lab  4 credits
ECO 101  3 credits  CHM 381  1 credit
MGT 101  3 credits

Senior Year

CHM 334/334L  4 credits  CHM 430/430L  4 credits
CHM 480  1 credits  BCH Elective  3 credits
ACC 201  3 credits  CHM 481  1 credit
MKT 201  3 credits  FIN 201  3 credits

Chemistry Minor

Students majoring in various disciplines such as biology, mathematics, physics, bioinformatics, computer science, psychology and business can benefit from pursuing a minor in chemistry. The chemistry minor
requires a student to complete the following sequence of courses:

Two semesters of General Chemistry with laboratory:
CHM 111/111L and CHM 112/112L (8 credits)

Two semesters of Organic Chemistry with laboratory:
CHM 227/227L and CHM 228/228L (8 credits)

One semester of Analytical Chemistry with laboratory#:
CHM 230/230L or CHM 334/334L or
CHM 430/430L (4 credits)

One semester of Physical Chemistry:
CHM 301 or CHM 302 or CHM 244 (3 credits)

Chemistry Elective:
one CHM 300 or 400 level course (3 credits)

# Analytical Chemistry courses, which are used to fulfill the BCH major requirement, do not count
towards the minor in Chemistry.

COURSES: 2009-2011

CHEMISTRY COURSES

CHM 104 Energy, Environment, and Society
3 credits
Designed to provide a better understanding of energy
and our environment, including man’s interaction
with his environment and the consequences facing
society today. (Field 5) Fall

CHM 105 Chemistry: A Human Perspective
3 credits
Fundamental principles of chemical theory are
presented by examining their historical development.
(Field 5) Spring

CHM 111-112 General Chemistry
8 credits
Emphasizes physical chemical principles. Includes
atomic structure and periodicity, chemical bonding,
kinetics, equilibrium, electrochemistry and periodic
chemical properties. Laboratory includes quantitative
and qualitative analysis. Three lectures, one
laboratory and one recitation per week. Prerequisite
for CHM112: CHM 111 with a minimum grade of C-.
(Field 5) Fall - Spring

CHM 227-228 Organic Chemistry 8 credits
Fundamental treatment of organic chemistry.
Mechanisms, structure and synthetic methods.
Laboratory covers techniques of separation,
purification, analysis and organic synthesis. Three
lectures, one laboratory and one recitation per week.
Prerequisites: CHM 111-112. Fall - Spring

CHM 230 Analytical Chemistry 4 credits
Principles and methodology of modern analytical
chemistry presented with particular emphasis on
chromatographic, spectrophotometric and
electroanalytical techniques. Three lectures, one
laboratory and one recitation per week. Prerequisites:
CHM 112 with a minimum grade of C-. Spring
CHM 232 Analytical Environmental Chemistry  
4 credits  
First-level analytical course. Environmental applications. Sampling techniques and statistical analysis of data. Soil chemistry, aquatic chemistry and atmospheric chemistry. Trace analysis with electroanalytical, liquid and gas chromatography, atomic absorption spectroscopy and ion selective electrodes. Three lectures, one laboratory and one recitation per week. Prerequisites: CHM 111-112. Spring 2010

CHM 244 Inorganic Chemistry  
3 credits  
Periodic classification of the elements, electronic configuration of atoms, nature of chemical bonding, symmetry and group theory, coordination compounds and other aspects of modern inorganic chemistry. Prerequisites: CHM 111-112. Fall 2010

CHM 301 Classical Physical Chemistry  
3 credits  
Principles of thermodynamics with applications to phase and chemical equilibria. Kinetic theory of gases and chemical kinetics. Three lectures and one recitation per week. Prerequisites: CHM 111-112, MAT 111, PHY 201-202 or 223-224, or equivalent courses. Fall

CHM 301L Classical Physical  
Selected experiments demonstrating principles of thermodynamics and chemical kinetics. One four-hour lab per week. Prerequisite: CHM 301 or concurrent registration in CHM 301. Fall

CHM 302 Modern Physical Chemistry  
3 credits  
Introduction to quantum chemistry with applications to the structure of atoms and molecules. Molecular spectroscopy. Three lectures and one recitation per week. Prerequisites: CHM 111-112, MAT 111-112, PHY 201-202 or 223-224, or equivalent courses. Spring

CHM 302L Modern Physical Chemistry Laboratory  
1 credit  
Selected spectroscopic experiments with applications to molecular structure. One four-hour lab per week. Prerequisite: CHM 302 or concurrent registration in CHM 302 and CHM 230L or CHM 301L or CHM 334L or CHM 430L with the minimum grade of C-. Spring

CHM 334 Spectrometric Analysis  
4 credits  
Spectrometric methods for the elucidation of chemical structures. Includes nuclear magnetic resonance, infrared, ultraviolet and mass spectrometry. Emphasis on organic compounds. Three lectures and one laboratory per week. Prerequisites: CHM 227-228. Fall

CHM 338 Intermediate Organic Chemistry  
3 credits  
Important basic concepts in organic chemistry are reviewed at a higher level than is possible in an introductory course. New concepts are presented in the area of reaction mechanisms, physical organic chemistry, and in the use of retrosynthetic analysis to plan multi-step organic syntheses. Prerequisites: CHM 227-228. Fall 2009

CHM 344 Metal Ions in Biological Systems  
3 credits  
An interdisciplinary course taught by a chemistry and a biology professor. Intended for science majors as an elective in chemistry, biochemistry or biology. Chemical processes in biological systems, which include participation of metal ions, are covered. The course begins with the principles of coordination chemistry and structural biochemistry. The rest of the course is organized according to the functions performed by the metal centers: gene expression and signal transduction, digestion, bioenergetics and electron transfer, oxygen transport, liver functions and anticancer drugs. Prerequisites: BIO 101 and CHM 227-228. Fall 2009

CHM 381-480-481 Chemistry and Biochemistry Seminar  
1 credit each  
Student-faculty seminar for majors. To be taken for three semesters. Prerequisite: CHM 228 and Junior standing. Spring - Fall - Spring

CHM 401 Modern Synthetic Methods  
3 credits  
Structure-reactivity relationships in organometallic chemistry and the application of organometallic
compounds in organic synthesis, including industrial catalysis. *Prerequisite:* CHM 228. *Spring 2011*

**CHM 401L Modern Synthetic Methods Laboratory**  1 credits  
Designed to illustrate some of the most important synthetic and physical techniques used by modern synthetic chemists. *Prerequisite:* CHM 401 or concurrent registration in CHM 401. *Spring 2011*

**CHM 430 Instrumental Analytical Chemistry**  4 credits  
Advanced instrumental methods of analysis including optical emission, spectroscopy, gas chromatography and various electrochemical techniques. Three lectures and one laboratory per week. *Prerequisites:* CHM 111-112. *Spring*

**CHM 450 Research in Chemistry**  4 credits  
Independent research under the direction of a member of the chemistry faculty. Research and consultation times to be arranged after approval of department chair. *Fall/Spring*

**CHM 455 Medicinal Chemistry**  3 credits  
Chemical principles are used to explain the interaction of drugs with biological targets. Strategies used in the design and development of medicines are discussed. *Prerequisites:* CHM 227-228 and BCH 301. *Spring 2011*

**CHM 461 Polymer Chemistry**  3 credits  
Survey of the physical and organic principles of polymer chemistry, with special emphasis on industrial applications. *Prerequisites:* CHM 227-228. *Fall 2010*

**BCH 301 Introduction to Biochemistry**  3 credits  
Structure and function of biological molecules including proteins, carbohydrates, nucleic acids and lipids. Topics include transmission of genetic information from DNA to RNA to protein; recombinant DNA technology, catalysis and enzyme kinetics, ligand binding, signal transduction and membrane transport. *Prerequisites:* BIO 101, CHM 228 with a minimum grade of C-. *Fall*

**BCH 301L Introduction to Biochemistry Lab**  1 credits  
One four-hour lab per week. *Prerequisite:* BCH 301 or concurrent registration in BCH 301. *Fall*

**BCH 302 Cellular Biochemistry**  3 credits  
The more biological aspects of biochemistry. Topics include bioenergetics, anabolism and catabolism of carbohydrates, lipids, proteins and control of metabolism, emphasizing hormones. *Prerequisite:* BCH 301 with a minimum grade of C-. *Spring*

**BCH 302L Cellular Biochemistry Lab**  1 credits  
One four-hour lab per week. *Prerequisites:* BCH 301L and BCH 302 or concurrent registration in BCH 302. *Spring*

**BCH 450 Research in Biochemistry**  4 credits  
Independent study under the direction of the biochemistry staff. *Prerequisite:* Permission of the department chair. *Fall/Spring*
Classics, the study of the civilizations of the ancient Greeks and Romans, has always been an integral part of liberal arts education in general and of Jesuit education in particular. Classical art, literature, mythology, religion, philosophy, history, archaeology, and the Greek and Latin languages are some of the major components of the discipline.

The intrinsic interest, timeless value and immense influence of its subject matter, together with the precision of thought and clarity of expression fostered through the study of Greek and Latin, have earned international respect for Classics. The acceptance rate of Classics students into a variety of graduate programs and into schools of law and medicine consistently ranks very high. Many professions also prize the combination of intelligence and discipline identified with Classics. These considerations make Classics courses worthwhile, popular electives and distinguish the minor in Classics as an ideal complement to any academic major.

Students interested in exploring Classics may do so in several ways:

**a. All students may choose Classics courses as electives or to satisfy requirements of the core curriculum, e.g.**
- Field 1: courses in Greek and Roman religious experience;
- Field 2: a course in Greek thought and courses in which Greek and Roman philosophical texts are studied in the original;
- Field 3: courses dealing with classical literature, drama, and myth in English translation and courses in which Greek and Latin literary texts are studied in the original;
- Field 4: courses in Greek and Roman history and courses in which Greek and Roman historians and historical evidence are studied in the original;

**b. Minors. The department offers two minor programs:**
1) a **departmental minor** requiring courses in classical language, history and literature;
2) an **interdepartmental minor** combining courses from the departments of classics, art history, history, philosophy, political science and religious studies. Both minors require the completion of six courses and allow the student some choice in course selection.

Students interested in either of the Classics minors should consult with the department chair for further details.

**Student Learning Goals**

**Students with a minor in Classics will:**
- **Goal 1:** Demonstrate an understanding of the fundamental grammar and syntax of either Greek or Latin or of both languages necessary to translate ancient texts with the aid of a dictionary and grammar.
- **Goal 2:** Demonstrate an understanding of the complex relationships between religion, language, literature, philosophy, art and social structures.
- **Goal 3:** Demonstrate an understanding of the historical dimension of the human condition.
- **Goal 4:** Demonstrate an appreciation of the legacy of classical antiquity.
Classics Departmental Minor
Classical language: two semesters of Latin or Greek (CLL or CLG) 6 credits
CLS 103 Greek History or CLS 104 Roman History 3 credits
CLS 205 Mirror of the Past: Greece or CLS 206 Mirror of the Past: Rome 3 credits
Classics electives: two upper-level (200 or above, including FAH 210 and 213) CLG, CLL or CLS courses 6 credits
TOTAL (6 courses) 18 credits

Classics Interdepartmental Minor
Classical language: two semesters of Latin or Greek (CLL or CLG) 6 credits
Classics elective: one CLS course 3 credits
Interdepartmental electives: three courses (FAH 101, 210, 213; HIS 106; HON 110; PHI 351; PSC 110; RST 215, 250, 251, 321, 405) 9 credits
TOTAL (6 courses) 18 credits

COURSES: 2009-2011

CLS 103 Greek History 3 credits
Social, political, and intellectual history of the Greeks from the end of the Bronze Age to the Hellenistic period. (Field 4) Fall

CLS 104 Roman History 3 credits
Social, political, and intellectual history of Rome from the foundation of the city to Late Antiquity. (Field 4) Spring

CLS 200 The 300: Myth and Reality 3 credits
The 300 Spartans’ defense of Thermopylae and its subsequent portrayal in literature, art and film from antiquity to the present. Summers only

CLS 205 Mirror of the Past: Greece 3 credits
Fundamental social, political, moral, religious and intellectual aspects of the human condition as reflected in a variety of Greek writers. (Field 3) Fall

CLS 206 Mirror of the Past: Rome 3 credits
Fundamental social, political, moral, religious and intellectual aspects of the human condition as reflected in a variety of Roman writers. (Field 3) Spring

CLS 207 Mythology and Literature 3 credits
Major classical myths: origin, content and interpretation. Modern approaches to mythology. Influence upon literature. (Field 3) Fall/Spring

CLS 208 Epic Heroes 3 credits
Portrayal of heroes in Gilgamesh, Homer’s Iliad and Odyssey, Apollonius’ Argonautica and Virgil’s Aeneid. Influence of ancient epic heroes on literature, art and film from antiquity to the present. (Field 3) Fall 2009-2010 only

FAH 210 Ancient Egyptian and Near Eastern Art 3 credits
(accepted for Classics minor credit)
Introduction to the formal and cultural analysis and interpretation of the painting, sculpture and architecture of ancient Egypt and the Near East. (Field 3) Spring 2009-2010 only

FAH 213 Greek and Roman Art 3 credits
(accepted for Classics minor credit)
A look at the temples, tombs, pottery, painting and sculpture of the Greek and Roman worlds — what these objects meant to their creators and how they have
influenced the things we see around us and our feelings about beauty and art. (Field 3) Spring 2010-2011 only

CLS 214 Greek and Roman Tragedy 3 credits
(Accepted for WST credit)
Study of fifth-century Greek tragedy, its origins, cultural setting, staging, performance and influence. Readings from Aeschylus, Sophocles, Euripides and the Roman tragedian, Seneca. (Field 3) Fall 2010-2011 only

CLS 215 Greek and Roman Comedy 3 credits
Study of Greek and Roman comedy, its origins, cultural settings, staging, performance and influence. Readings from Aristophanes, Menander, Plautus and Terence. (Field 3) Spring 2009-2010 only

CLS 300 Roman Law and Society 3 credits
(Accepted for WST credit)
Exploration of major concepts and principles of Roman law and the society in which they developed. Studies of cases from the writings of Roman jurists. (Justice and Oral Communication Attributes) Fall 2009-2010 only

CLS 301 The Age of Cicero 3 credits
An introduction to Roman literature and society in the first century B.C., with a focus on the development of the genres of Latin literature and the relationship between politics and literature. Spring 2010-2011 only

CLS 308 Pagans and Christians 3 credits
Religious thought and action from the 3rd through 8th centuries A.D.. The idea of the holy; manifestations of the sacred; body, soul, cosmos; Christianity and classical culture; Neoplatonism. Field 1) Spring 2009-2010 only

CLS 309 Greek and Roman Religion 3 credits
Religious thought and action in ancient Greece and Rome from Homer through the 2nd century A.D. Polytheism, anthropomorphism, ritual, cult and sacrifice. (Field 1) Fall 2010-2011 only

CLS 311 Alexander the Great 3 credits
Philip II and the rise of Macedon. Alexander’s personality, his conquests, and their social, political and intellectual consequences. Hellenistic culture. Fall 2010-2011 only.

CLS 312 The Greek Enlightenment 3 credits
Greek thought from Homer to Plato. Lyric poets, Hippocratic texts, Presocratics and Sophists, Athenian tragedy, Thucydides, Aristophanes and Plato. Impact of literacy on Greek thought. Greek philosophy in its social and historical context. (Field 2) Spring 2010-2011 only

CLS 314 The Decline and Fall 3 credits
Imperial crisis and recovery of the third century, Constantine and Christianity, barbarian invasions, late Roman Empire, rise of Islam, end of Late Antiquity. Fall 2009-2010 only.

CLG = Greek Language Courses
CLG 101 Elementary Greek 3 credits
Intensive introduction to the grammar, syntax and vocabulary of classical Greek. Selected readings. Fall

CLG 102 Elementary Greek 3 credits
Intensive introduction to the grammar, syntax and vocabulary of classical Greek. Selected readings. Prerequisite: CLG 101 or instructor's permission Spring

CLG 201-206 Greek Literature 3 credits each
Selected Greek literary authors, genres, or themes. (Field 3) Prerequisite: CLG 101-102 or instructor's permission Fall/Spring

CLG 207-212 Greek Historians 3 credits each
Selected Greek historical authors, genres, or themes. (Field 4) Prerequisite: CLG 101-102 or instructor's permission Fall/Spring

CLG 213-218 Greek Philosophers 3 credits each
Selected Greek philosophical authors, genres, or themes. (Field 2) Prerequisite: CLG 101-102 or instructor's permission Fall/Spring
CLG 301-306 Readings in Greek Literature
3 credits each
Selected Greek literary authors, genres, or themes. (Field 3) Prerequisite: instructor's permission
Fall/Spring

CLG 307-312 Readings in Greek History
3 credits each
Greek historical authors, genres, or themes. (Field 4) Prerequisite: instructor's permission Fall/Spring

CLL = Latin Language Courses
CLL 101 Elementary Latin 3 credits
Intensive introduction to the grammar, syntax and vocabulary of classical Latin. Selected readings. Fall

CLL 102 Elementary Latin 3 credits
Intensive introduction to the grammar, syntax and vocabulary of classical Latin. Selected readings. Prerequisite: CLL 101 or instructor's permission Spring

CLL 201-206 Latin Literature 3 credits each
Readings in selected Latin literary authors, genres, or themes. (Field 3) Prerequisite: CLL 101-102 or instructor's permission Fall/Spring

CLL 207-212 Roman Historians 3 credits each
Readings in selected Roman historical authors, genres, or themes. (Field 4) Prerequisite: CLL 101-102 or instructor's permission Fall/Spring

CLL 213-218 Roman Philosophers
Readings in selected Roman philosophical authors, genres, or themes. (Field 2) Prerequisite: CLL 101-102 or instructor's permission Fall/Spring

CLG 313-318 Readings in Greek Philosophy
3 credits each
Readings in selected Greek philosophical authors, genres, or themes. (Field 2) Prerequisite: instructor's permission Fall/Spring

CLG 313-318 Readings in Greek Philosophy
3 credits each
Readings in selected Greek philosophical authors, genres, or themes. (Field 2) Prerequisite: instructor's permission Fall/Spring

CLL 207-312 Readings in Latin Literature
3 credits each
Readings in selected Latin literary authors, genres, or themes. (Field 3) Prerequisite: instructor's permission Fall/Spring

CLL 307-312 Readings in Roman History
3 credits each
Readings in selected Roman historical authors, genres, or themes. (Field 4) Prerequisite: instructor's permission Fall/Spring

CLL 313-318 Readings in Roman Philosophy
3 credits each
Readings in selected Roman philosophical authors, genres, or themes. (Field 2) Prerequisite: instructor's permission Fall/Spring
Clinical Laboratory Science is the study of the exciting field of laboratory medicine. Formerly referred to as Medical Technology, the field encompasses the full array of diagnostic protocols performed on blood and body fluids utilized by physicians to diagnose disease and monitor the well-being of their patients. In addition, the clinical laboratory science degree can be a stepping stone to a number of other careers in the health care field.

As of September 1, 2006, New York State requires all clinical laboratory practitioners to be licensed. The Canisius program is in full compliance with the program requirements of the New York State Office of the Professions in addition to adherence to the guidelines set forth by the American Society of Clinical Pathologists (ASCP). The field is also on the verge of a severe shortage of qualified professionals, making now a great time to become a clinical laboratory scientist.

The Canisius Clinical Laboratory Science Program incorporates a 3+1 curriculum. The student is campus-based their first three years, with the final year spent in a full year, hospital-based, accredited internship program. During this year, the student experiences and obtains proficiency in all areas of the clinical laboratory including: hematology, clinical chemistry, immunology, microbiology, histology and immunohematology.

The program is a rigorous one, with very modest flexibility. The course offerings reflect the solid background in the sciences required for the internship experience. During the student’s junior year, application is made to accredited hospital schools of medical technology. The burden of acceptance into a hospital program rests with the student.

Student Learning Goals
Goal 1: Clinical Laboratory Science majors will possess the skills necessary to be competent and contributing members of the health-care delivery system. Students will:
A. Demonstrate thorough understanding of structure and function of human body systems;
B. Possess a thorough understanding of the components of the diagnostic process and the role of the clinical laboratory;
C. Demonstrate professional attitude and conduct;
D. Maintain and comprehend the interrelationships of health care professionals with regard to patient care.

Goal 2: Clinical Laboratory Science majors will demonstrate proficiency in analytical skills (technical competency). Students will:
A. Obtain scientific data through a multitude of analytical methods;
B. Evaluate scientific data with respect to diagnosis of disease and maintenance of health;
C. Design and implement new analytical methods;
D. Critically analyze and apply methods from external sources.

**Goal 3:** Clinical Laboratory Science majors will effectively communicate medical and scientific information. Students will:

A. Effectively prepare scientific reports and procedures;
B. Deliver critical data sets to health care team members;
C. Effectively assemble and present results of scientific research to the medical community;
D. Demonstrate ethical regard and respect for the privacy of patients and their health information.

**Clinical Laboratory Science Curriculum**

1. **Core Curriculum Requirements:**
   See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements:**
   A. **Major Courses**
      - BIO 101-101L Introduction to Cellular/Subcellular Biology 4 credits
      - BIO 102-102L Organismal Biology 4 credits
      - BIO 203 Cellular Biochemistry 3 credits
      - BIO 307 General Microbiology 4 credits
      - BIO 426 Immunochemistry 3 credits
      - CHM 111-112 General Chemistry+ Lab 8 credits
      - CHM 227-228 Organic Chemistry+ Lab 8 credits
      - MAT 111 Calculus I 4 credits
      - MAT 141 Inferential Statistics and Computers for Science 4 credits
      - MDT 280-281 Seminar: Sophomore Level 2 credits
      - MDT 380-381 Seminar: Junior Level 2 credits
      - MDT 400-401 Hospital Rotation 30 credits

   B. **Major Electives (4 courses)**
      - Science electives: two to three courses to be arranged with advisor 6-12 credits
      - Business/computer elective: one to two courses to be arranged with advisor 3-6 credits

3. **Free electives:**
   Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.
COURSES: 2009-2011

MDT 280-281 Seminar: Sophomore Level
1 credits per semester
Introduction to Clinical Science Laboratory profession from variety of perspectives: history, present state of health-care delivery, job opportunities, organization of hospital laboratory.
Tour of hospital laboratory.

MDT 299 Independent Study 1 credit

MDT 380-381 Seminar: Junior Level
1 credits per semester
Advanced discussions of Clinical Science Laboratory theory and practice designed as preparation for senior-year hospital rotation. Tour of hospital laboratory.

MDT 399 Independent Study 1 credit

MDT 400-401 Hospital Rotation
15 credits per semester

communication studies

Full-Time Faculty: Barbara J. Irwin, Chair; Barry Berlin, John S. Dahlberg, Benjamin J. Dunkle, Catherine Foster, Rosanne Hartman, Przemyslaw J. Moskal, Jamie O’Neil, Melissa B. Wanzer, Charles J. Wigley III.

The Communication Studies major is grounded firmly in the liberal arts tradition. The Communication Studies curriculum reflects an equal interest in what is communicated within and between cultures and in how communication takes place in intrapersonal, interpersonal, organizational and mass contexts. The department’s curriculum addresses three major facets of the academic study of communication: theory, criticism and professional skills.

In the Communication Studies program, students examine the dynamic nature of modern communication processes and technologies by emphasizing the theory, structure, function, value systems and effects of society’s communication institutions. The program offers students a variety of opportunities to acquire professional knowledge and production competencies relevant to diverse careers in many communication-related fields.

Recognizing the need to prepare students for productive lives in a changing world, the department aims at educating its graduates to welcome change. Instead of focusing on preparation for specialized jobs that exist today but may not be viable in the future, the Communication Studies faculty provides the foundation on which to build meaningful roles in the contemporary world.

Student Learning Goals
Goal 1: Communication Studies majors will be critical thinkers who will apply communication theories and concepts in life situations.

Goal 2: Communication Studies majors will design and deliver messages that are effective and appropriate.

Qualifications for the major
Communication Studies majors must have a
cumulative G.P.A. of at least 2.00, a minimum grade of C- in all communication courses, and a minimum overall average of 2.00 in all communication coursework. The performance of all majors is subject to review relative to their continuation in the program, using such criteria as academic record, demonstration of appropriate communication skills, co-curricular activity, interdisciplinary engagement and community involvement. Communication Studies majors select an academic sequence within the Communication major. They need at least 36 hours of communication courses (or 33 hours for dual majors) but are limited to a maximum of 54 hours in communication.

**Concentration and Sequence Courses in the major**
Communication Studies majors must select an area of concentration and complete at least two courses in that concentration in order to graduate. There are three sequences, which include a total of five concentrations:
- Journalism & Media Studies
  - Journalism
  - Broadcasting & Media Studies
  - Film/Video
- Advertising & Public Relations
- Interpersonal & Organizational Communication

A concentration in integrated marketing communications is also available. Students who successfully complete this course of study will receive an award of completion from the Communication Studies Department.

**Digital Media Arts Degree Program**
The Communication Studies Department offers a second undergraduate degree in Digital Media Arts. For further details, please refer to the Digital Media Arts listing in the catalog.

**Communication Studies Curriculum**

1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major Course Requirements (12 courses) 36**
   
   A. Major Required Courses (6 courses)
      - Com 201 - Oral Communication 3
      - Com 202 - Communication Theory 3
      - Com 203 - Writing for the Public Media 3
      - Com 204 - Interpersonal Communication 3
      - Com 205 - Mass Communication and Society 3
      - Com 206 - Introduction to Research Methods 3
   
   B. Sequence Courses (2 courses)
      - Communication Sequence Core 6
   
   C. Major Electives (4 courses) 12

3. **Free electives:**
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

**Internships and Independent Study**

Internships awarding up to a maximum of 12 credit hours may be earned by qualified Communication Studies majors at approved locations in Buffalo or other cities. The internships are individually arranged, require department approval and are available only to junior or senior candidates with a cumulative G.P.A. of at least 2.50 and a Communication average of at least 2.70. Internships are taken on a Pass/Fail basis and are counted towards free elective credit. Students are encouraged to plan early to do an internship during their Junior or Senior year.

Opportunity for independent study (three credits) is sometimes available for qualified upperclass students by arrangement with the Communication Studies chair and faculty supervisor.

**Dual Majors**

Dual majors with Communication Studies are available with the permission and guidance of both chairs. Students complete a minimum of 33 credit hours of communication courses. Communication Studies dual major sequences allow several different choices; among those most frequently involved are digital media arts, political science, psychology, English, history, management/marketing and modern languages. The department participates in programs with Women’s Studies and Fine Arts, and also offers courses towards a minor in Child, Family and Community Studies. Photography courses listed in Fine Arts are limited to six credits in the Communication Studies major. Each Communication Studies and dual major is assigned a department faculty advisor for the purpose of planning an individual program that will satisfy the department’s requirements and the student’s personal goals. Course selections develop from communication major requirements, prerequisites, recommended sequences and communication electives.

Communication Studies students who are dual majors and successfully complete 3 or more credit hours in Independent Study or Internships (COM 488, COM 498 or COM 499) are required to complete 30 hours of in-class credit in order to complete the Communication Studies major (i.e., not 33 or 36 in-class hours).

**Facilities**

Four computer labs, digital video editing stations, an audio/music production studio and a television studio/control room are available for student use in Lyons Hall. HD equipment will be available for student use beginning in Fall, 2009.

The Lyons Hall third-floor Mac Lab, in Lyons 312 features 26 Macintosh iMac Flat Panel computers with DVD-RW drives. Software available includes Adobe CS4 (Photoshop, Illustrator, InDesign, Flash, Dreamweaver, After Effects), Cinema 4D and Ableton Live. A scanner and a laser printer flank the room. A touch screen in an instructor’s bunker controls a VCR, DVD player and an Elmo documentation presentation system. Ports for plug-and-go setups, such as laptops, are built into the bunker.
A Web and imaging lab in Lyons 325 provides eight Apple iMac Flat Panel computers with DVD-RW drives, two scanners, three drawing tablets, a large format color inkjet printer and a color laser printer. Software is identical to the software in LY 312.

The digital imaging lab, which is maintained by the Media Center in Lyons 413, houses: four Final Cut Pro non-linear editing stations (MAC); four iMovie non-linear editing workstations (MAC); two iMac computers for still imaging and audio editing; one scanner workstation (MAC); one audio editing workstation featuring Digital Performer, GarageBand, Ableton Live & ProTools and an audio production studio. This lab also houses the CCTV computer dedicated to their use.

An additional lab, Lyons 122, features 15 20” high-end iMacs, a laser printer and a scanner. Software includes Second Life, Maya, Modul8 and Final Cut Pro as well as all software in LY312 except Ableton. This computer lab is primarily used for advanced Digital Media Arts electives.

A design production lab in Lyons 328 features a 17” wide large format printer and mounting resources for presentations of printed digital work.

In the Media Center on the fourth floor of Lyons Hall, a 26’ x 30’ television studio features a hard cyclorama, lighting grid with dimmer control and three digital studio video cameras. The control room has custom-built consoles to house the digital video switcher with special effects, a 16-channel audio mixing board, teleprompter, DAT audio recorder, character generator and an IFB system. The digital video-mastering format is DVCAM with BetaCam SP, and S-VHS video transports. Four equipment racks and 83 consoles house the audio/video distribution, including patch panels and routers. The studio also has the capability to send video to the campus cable RF video system. The college’s Media Center provides the TV studio’s operational support.

Across from the TV studio, a screening room provides comfortable tiered seating, a video and DVD projector, as well as a professional sound system.

Students can also sign out equipment (various digital cameras, camcorders, etc.) from the Media Center on the 4th floor of Lyons Hall. Check out http://www.canisius.edu/mediacenter/equipment.asp for a complete list of available resources.

The department has co-curricular arrangements with the weekly student newspaper (The Griffin), the campus television club (CCTV), the student-operated radio station (WIRE) and campus Little Theatre. Student chapters of the American Advertising Federation, the Public Relations Student Society of America and the Association for Women in Communications, Inc. provide networking opportunities with local and national professionals.

Advisement
Communication Studies majors are assigned an advisor at the beginning of their freshman year. If you are a transfer into the Communication Studies major or you do not have an advisor, please contact the
Communication Studies departmental office at 888-2115, so that an advisor can be assigned to you. Each student should have an academic advisor. Students should meet with their advisors regularly. Canisius College requires all students to meet with their advisor and obtain their alternate PIN in order to register each semester.

**COURSES: 2009-2011**

**Note:** Additional Communication Studies courses may be offered each semester in both the day and evening. Students should consult the department.

**COM 101 Communication in Contemporary Society** 3 credits
Survey of current issues of human communication with emphasis on concerns of young adults. Topics include communication problems such as communication in difficult situations (e.g., apologizing, embarrassment, assertiveness), divorce communication and death and dying. *Spring*

**COM 201 Oral Communication** 3 credits
Study and practice of concepts, processes and techniques of effective verbal communication in face-to-face, small group and public-address contexts. Speeches required. *Fall/Spring*

**COM 202 Communication Theory** 3 credits
Fundamental forms of communication theory and perspectives are explored and related to particular lines of research in interpersonal, group, organizational, public and mass mediated communication contexts. *Fall/Spring*

**COM 203 Writing for the Public Media** 3 credits
Intensive writing assignments employing message-design principles provide opportunities to prepare news, features, press releases, advertising copy and opinion pieces. *Fall/Spring*

**COM 204 Interpersonal Communication** 3 credits
Examines the theoretical and pragmatic aspects of interpersonal communication in various contexts to enhance self-awareness and effective self-expression in relationships. *Fall/Spring*

**COM 205 Mass Communication and Society** 3 credits
Survey of mass communication processes and the mass media in terms of development, structures, functions, effects and interactive relationships with American society. *Fall/Spring*

**COM 206 Introduction to Research Methods** 3 credits
The fundamentals of the scientific method, especially, the basics of research methods, designs and hypothesis testing. *Fall/Spring*

**COM 206 Small Group Communication** 3 credits
Communication variables in small groups involving task, maintenance, leadership, conformity, shift-to-risk and development. Some emphasis on skill development. *Fall*

**COM 302 Family Communication** 3 credits
Examines contemporary family communication theories, concepts, models and research. Special emphasis on improving family communication across the lifespan.

**COM 304 Print Journalism (Newswriting)** 3 credits
What news is, how it is gathered, interviewing. Writing with accuracy, clarity, objectivity, precision and proper grammar. *Fall*

**COM 311 Principles of Advertising** 3 credits
The fundamentals of advertising, including history and development, advertising media, marketing, audiences, campaign objectives, budget, creativity and agency functions. DMA elective. *Fall*

**COM 312 Public Relations: Principles and Practices** 3 credits
Historical antecedents and contemporary practice of public relations, the nature of day-to-day tasks and communication responsibilities of practitioners in a variety of professional settings, issues in the practice and
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COM 313</td>
<td>The News Media</td>
<td>3</td>
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<tr>
<td></td>
<td>Explores the theoretical basis for a free press,</td>
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<tr>
<td></td>
<td>then how it works in practice, by analyzing the</td>
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<tr>
<td></td>
<td>operation of the news media (including free flow of</td>
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<td></td>
<td>information, accuracy, objectivity, ownership,</td>
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<tr>
<td></td>
<td>ethics, new technology, etc.).</td>
<td></td>
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<tr>
<td>COM 315</td>
<td>Advertising and the Creative Process</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Study of techniques, tools and theories for</td>
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<tr>
<td></td>
<td>generating innovative concepts and ideas.</td>
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<tr>
<td></td>
<td>Emphasize application to advertising context. DMA</td>
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<tr>
<td></td>
<td>elective.</td>
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<tr>
<td>COM 318</td>
<td>Organizational Communication</td>
<td>3</td>
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<tr>
<td></td>
<td>Communication principles and practices, including</td>
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<td>communicator style variables, communication flow</td>
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<td></td>
<td>and competent superior-subordinate communication.</td>
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<tr>
<td>COM 319</td>
<td>Training and Development</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Methods for assessing training needs within</td>
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<tr>
<td></td>
<td>organizations, and designing, implementing and</td>
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<td></td>
<td>assessing outcomes of training. Emphasis on</td>
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<td></td>
<td>principles of effective training and development of</td>
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<tr>
<td></td>
<td>training competencies. Students develop training</td>
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<td></td>
<td>skills. Prerequisite: COM 201.</td>
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<tr>
<td>COM 320</td>
<td>Advertising Writing</td>
<td>3</td>
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<tr>
<td></td>
<td>Covers a variety of ways of developing advertising</td>
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<td></td>
<td>copy (copy-writing) and creative concepts for</td>
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<td></td>
<td>persuasive advertising pieces. Includes workshop</td>
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<td></td>
<td>writing for print, television and radio commercials.</td>
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<tr>
<td>COM 322</td>
<td>Feature/Magazine Writing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Profiles and other human-interest features developed</td>
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<tr>
<td></td>
<td>for newspapers and magazines. Free-lance writing</td>
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<td>introduced.</td>
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<tr>
<td>COM 325</td>
<td>Media Literacy</td>
<td>3</td>
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<tr>
<td></td>
<td>Focuses on theoretical approaches and practical</td>
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<td></td>
<td>skills enabling students to analyze, think</td>
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<td></td>
<td>critically and produce effective mediated messages</td>
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<tr>
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<td>in a variety of formats and specialized content</td>
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<tr>
<td></td>
<td>areas.</td>
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<tr>
<td>COM 327</td>
<td>Gender Differences in Human Communication</td>
<td>3</td>
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<tr>
<td></td>
<td>Examines gender as a variable of interest in social</td>
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<tr>
<td></td>
<td>interaction with special emphasis on contemporary</td>
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<tr>
<td></td>
<td>gender theories, concepts, and research. Understand</td>
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<tr>
<td></td>
<td>the reasons why communication misunderstandings</td>
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<td></td>
<td>related to gender differences occur.</td>
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<tr>
<td>COM 328</td>
<td>Scriptwriting</td>
<td>3</td>
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<tr>
<td></td>
<td>Students develop an original idea into a teleplay or</td>
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<tr>
<td></td>
<td>screenplay. Exploration of character, story,</td>
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<tr>
<td></td>
<td>dramatic structure, dialogue and the business of</td>
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<tr>
<td></td>
<td>screenwriting.</td>
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<tr>
<td>COM 330</td>
<td>Public Relations Writing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Theoretical perspectives on various forms of public</td>
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<tr>
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<td>relations writing and the applications of each.</td>
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<tr>
<td></td>
<td>Writing and editing skills. Students produce</td>
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<tr>
<td></td>
<td>portfolio of PR writing tools and techniques.</td>
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<tr>
<td>COM 335</td>
<td>Communication and Personality</td>
<td>3</td>
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<tr>
<td></td>
<td>The role of personality in human communication (esp.,</td>
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<tr>
<td></td>
<td>argu-mentative and aggressive traits). Emphasis on</td>
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<tr>
<td></td>
<td>critical thinking and constructive arguing. Students</td>
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<tr>
<td></td>
<td>develop arguing skills.</td>
<td></td>
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<tr>
<td>COM 336</td>
<td>Sports Journalism</td>
<td>3</td>
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<tr>
<td></td>
<td>First-hand exposure and instruction on writing for</td>
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<tr>
<td></td>
<td>TV, print, and the Internet, broadcast anchoring</td>
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<td>and covering games. This course puts the student</td>
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<td></td>
<td>in front of the camera, computer, microphone and</td>
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<td></td>
<td>face-to-face with sports journalists and athletes.</td>
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<tr>
<td>COM 337</td>
<td>Constructive Uses of Humor</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Survey of classic and contemporary humor theories,</td>
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<tr>
<td></td>
<td>concepts and research. Special emphasis on research</td>
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<tr>
<td></td>
<td>that highlights the benefits of humor in education,</td>
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<tr>
<td></td>
<td>medicine, business and relational contexts.</td>
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<td>COM 350</td>
<td>Health Communication</td>
<td>3</td>
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<tr>
<td></td>
<td>Examines how communication plays a role in the</td>
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<td>health decisions people make from a variety of</td>
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<td></td>
<td>perspectives. Focuses on theoretical approaches to</td>
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<td>health communication, influence tactics, challenges</td>
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<td>associated</td>
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</table>
with medical adherence/compliance gaining, caregiver-client communication, how personality affects health decisions, nonverbal and verbal factors in the health interaction, and social-cultural factors in health.

**COM 351 Media Ethics** 3 credits
Explores ethics across mass media disciplines, through the work of professional communicators—journalists, broadcasters, advertising and public relations practitioners, as well as the new cyber-communicators. Develop practices of making crucial media decisions based on principles and idealism. *Fall*

**COM 353 Advertising Media Strategies** 3 credits
Topics include client/business strategy, marketing communication planning, media plans, media mix (TV, print, Internet, etc.), media sales and the most efficient, effective way to plan and place an ad campaign. *Spring*

**COM 354 Persuasion** 3 credits
Examines classic and contemporary persuasion and social influence theories, models, concepts, and research. Students will become more effective in designing and delivering persuasive messages.

**COM 361 Introduction to Television Production** 3 credits
Studio techniques, lighting, sound recording, set design, electronic graphics and editing, production of live and edited programs in studio. DMA elective. *Fall*

**COM 363 Editing for Print** 3 credits
Edit news and features for content and style, write headlines, design and lay out pages for newspapers and magazines.

**COM 364 Convergence Journalism** 3 credits
An emerging approach where the journalist would have facility in two or more forms of mass media, from among print, radio, TV, the Internet, mobile phones or other wireless devices.

**COM 366 Broadcast Journalism (News)** 3 credits
Learn what it is like to step inside the daily inner-workings of a TV newsroom. Act as the assignment editor, reporter, producer, director. Encounter ethical dilemmas. Learn the principles and skills to make resourceful broadcast decisions and prepare news reports. *Fall*

**COM 367 Broadcasting in America** 3 credits
Examines the history and development, regulation, operations, programming, technology and economics of broadcasting, cable and satellite pertaining to both the radio and television industries in the U.S.

**COM 369 Television Features** 3 credits
Design, write and produce special feature reports, multiple-part series, investigative stories and mini-documentaries. Emphasis on field work.

**COM 374 Film History** 3 credits
Development of film-making and cinema art from 1895 through World War II. Students study, view, and discuss classic silent and sound pictures from Hollywood and abroad. DMA elective. Also accepted for Art History major/minor credit. *Fall*

**COM 375 Film Classics** 3 credits
The development of cinema worldwide from World War II through the 1970s. Study, view and discuss films representative of major directors, genres and national cinema movements. DMA elective. Also accepted for Art History major/minor credit. *Fall*

**COM 385 Television and Children** 3 credits
Learn about the role of television in children’s lives. Course explores children’s television use, the development and content of children’s television programs (both commercial and educational), television and the family, and children’s advertising. *Spring*

**COM 411 Advertising Campaigns** 3 credits
Designed as a capstone course for advertising students, this course examines current and classic advertising campaigns for technique and effectiveness. Students also have the chance to develop their own advertising campaigns. *Prerequisite: COM 311 or permission of*
COM 412 Public Relations Case Studies  
3 credits  
Students will become familiar with a process for public relations problem-solving through analysis of a variety of PR case studies in major areas of the field, including employee relations, consumer relations, media relations and crisis communications.

COM 413 Issues in Public Relations  
3 credits  
In this seminar, students explore a range of contemporary issues surrounding the field of public relations. Course content will vary; past semesters have centered on issues related to crisis communication and the growth of social media tactics.

COM 414 Issues in Advertising  
3 credits  
In this seminar, students explore a range of contemporary issues surrounding the advertising industry including consumerism, effects, ethics, racism and sexism and trends. Prerequisite: COM 311 or permission of instructor. Fall

COM 422 Public Relations Campaigns  
3 credits  
Designed as a capstone course for public relations students, this course examines PR campaigns as the concerted efforts of an organization to build socially responsible relationships by achieving research-based goals through the application of communication strategies and the measurement of outcomes. Students produce an actual campaign. Prerequisite: COM 312 or permission of instructor.

COM 479 World Cinema  
3 credits  
Award-winning and critically acclaimed films from different countries and cultures are studied through weekly screenings and written logs. By examining cinema practices beyond Hollywood, students experience alternative ways of using the universal language of cinema to tell stories and express the human condition from other national and artistic perspectives. Also accepted for Art History major/minor credit. Spring

COM 488 Internship I Seminar  
3-12 credits  
Student experientially learns communication functions in a compatibly matched professional setting, locally or out-of-town. Faculty and on-site supervision. Seminar required. Pass/fail. May be repeated as COM 498; 12-credit limit for COM 488/498 combined. Prerequisite: Open to junior and senior majors with G.P.A. of at least 2.50 and Communication Studies average of 2.70 and approved by department faculty. Applications on Communication Studies Department website. Fall/Spring

COM 498 Internship II Seminar  
3-9 credits  
Sequel to COM 488 for students taking a second internship. Each student is limited to a combined total of 12 credit hours for COM 488 and 498. Prerequisite: Same as for COM 488. Fall/Spring

COM 499 Independent Study  
3 credits  
Student conducts original project or self-designed course of study under the tutelage of Communication Studies faculty member. Prerequisite: Open to junior and senior majors in good standing with consent of instructor and chair. Fall/Spring

NOTE: Students may also earn Communication Studies credit for the following courses offered through other programs. Please see course descriptions in the respective major/program pages in this catalog.

DMA 201 Introduction to Digital Media  
3 credits
DMA 202 Digital Media Culture  
3 credits
DMA 204 Digital Media Law/Ethics  
3 credits
DMA 205 Digital Graphics  
3 credits
DMA 206 Interactive Multimedia  
3 credits
DMA 310 Digital Audio/Music Production  
3 credits
DMA 342 Introduction to Web Design  
3 credits
DMA 387 Digital Video Production  
3 credits
DMA 394 Advanced Web Design  
3 credits
DMA 487 Advanced Digital Video Production  
3 credits
FAS 114 Introduction to Still Photography  
3 credits
FAS 131 Digital Photography  
3 credits
FAS 216 Intermediate Photography  
3 credits
computer science

Full-Time Faculty: Debra T. Burhans, Co-chair; R. Mark Meyer, Co-chair; Matthew A. Hertz, Jeffrey J. McConnell, Patricia B. Van Verth.

The Canisius College Computer Science Department, in accordance with the Canisius College mission, is committed to delivering a high quality education to its students, engaging in research and publication that advances computer science and computer science education, providing modern computer equipment to support these efforts and creating an environment that is supportive of women and men who want to study in this field.

The Computer Science Department offers two programs that prepare students for graduate study and/or entry into the industrial portion of the field. Each program gives the student a solid foundation for a current career, as well as the ability to acquire new skills and update old ones as dictated by rapidly changing technology. Course work includes programming, information organization, distributed computing, computing theory, software engineering, intelligent systems and electives covering current topics. Professionalism, ethical computing conduct, writing and communication skills are essential to all computer scientists and are emphasized throughout the curriculum. Computer science is interdisciplinary by nature, and study in other fields through the core curriculum enhances the education of majors.

The bachelor of science major is designed for students with a scientific interest who intend to continue on to graduate school or enter the profession as research or systems programmers. This program of study places a greater emphasis on mathematics and science.

The bachelor of arts major is designed to satisfy the needs of individuals who are interested in combining their studies with course work in another area. A student must complete a minor from another academic department as part of the bachelor of arts. Students in this major are also well qualified for graduate school or professional careers.

The department also offers two minors, a certificate and courses for non-majors.

Student Learning Goals

The Computer Science major will:

Goal 1: Develop a computation solution to a problem over the entire software lifecycle.
Goal 2: Know the operational details of computer languages and systems.
Goal 3: Know the theoretical foundations of computing.

Qualifications for the major

Computer Science majors and minors must have a cumulative G.P.A. of at least 2.0 in all computer science courses and labs, a B- or better grade in CSC111 and CSC111L, and an overall cumulative GPA of 2.0 for all courses taken. The performance of all majors and minors is subject to periodic review relative to their continuation in the program. Students not performing up to the necessary standards will be advised of the problem and corrective action will be recommended by the department chair.

Computing Facilities

The Computer Science department facilities
include two labs with Linux workstations and personal computers. A multiprocessor system is the main file server and computing engine for the department and its Linux workstations. The department also has a 24-node cluster computer and a robotics laboratory. Beginning with the first semester of their sophomore year, Computer Science students are granted 24/7 access to department computing labs.

Computer Science Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major Course Requirements
A. Required of all Majors
One course from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIF 101 Introduction to Bioinformatics</td>
<td>3-4</td>
</tr>
<tr>
<td>CSC 107 Computer Programming for Science</td>
<td></td>
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<tr>
<td>CSC 108 Introduction to Web Computing</td>
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<tr>
<td>CSC 111 Introduction to Programming</td>
<td>4</td>
</tr>
<tr>
<td>CSC 212 Data Structures</td>
<td>4</td>
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<tr>
<td>CSC 213 Large Scale Programming</td>
<td>4</td>
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<tr>
<td>CSC 253 Computer Hardware</td>
<td>3</td>
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<tr>
<td>CSC 281 Automata and Algorithms</td>
<td>3</td>
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<tr>
<td>CSC 310 Information Organization and Processing</td>
<td>4</td>
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<tr>
<td>CSC 330 Distributed Computing</td>
<td>4</td>
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<tr>
<td>CSC 351 Comparative Programming Languages</td>
<td>4</td>
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<tr>
<td>CSC 360 Intelligent Systems</td>
<td>4</td>
</tr>
<tr>
<td>CSC 395 Software Engineering</td>
<td>4</td>
</tr>
<tr>
<td>CSC 391-491 Computer Science Seminar</td>
<td>2</td>
</tr>
<tr>
<td>Computer Science electives: two courses (300-400 level)</td>
<td>8</td>
</tr>
<tr>
<td>MAT 111 Calculus I</td>
<td></td>
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<tr>
<td>MAT 191 Introduction to Discrete Mathematics</td>
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</table>

MAT 112 Calculus II                          4 credits
Two semesters of a lab science (BIO 101-102, CHM 111-112, or PHY 223-224) 8 credits
MAT 141 Inferential Statistics and Computers for Science 4 credits

B. Required of B.S. majors
MAT 112 Calculus II                          4 credits
Two semesters of a lab science (BIO 101-102, CHM 111-112, or PHY 223-224) 8 credits
MAT 141 Inferential Statistics and Computers for Science 4 credits

Required off B.A
A minor outside of computer science           12-21 credits
3. Free electives

Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. Science electives and MAT 219 are recommended for B.S. majors. All majors are encouraged to take courses to strengthen logical, verbal and written communication skills. In particular, COM 201, PHI 300 and PHI 340 are recommended.

Computer Science Minor

One course from:

- BIF 101 Introduction to Bioinformatics
- CSC 107 Computer Programming for Science
- CSC 108 Introduction to Web Computing
- CSC 109 Robotics Introduction to Computer Science
- CSC 110 Introduction to Computing
- CSC 127 Introduction to Game Programming

CSC 111 Introduction to Programming 4 credits
CSC 212 Data Structures 4 credits
CSC 213 Large Scale Programming 4 credits

Computer Science elective: one course at the 300 or 400 level, chosen in consultation with a departmental advisor 3-4 credits

**TOTAL (5 courses) 18-20 credits**

Computer Theory Minor

One course from:

- BIF 101 Introduction to Bioinformatics
- CSC 107 Computer Programming for Science
- CSC 108 Introduction to Web Computing
- CSC 109 Robotics Introduction to Computer Science
- CSC 110 Introduction to Computing
- CSC 127 Introduction to Game Programming

CSC 111 Introduction to Programming 4 credits
MAT 191 Introduction to Discrete Mathematics 4 credits
CSC 212 Data Structures 4 credits
CSC 281 Automata and Algorithms 3 credits

**TOTAL 19 credits**

**COURSES: 2009-2011**

CSC 107 Computer Programming for Science 4 credits
Introduction to the computer and programming using C with special emphasis on scientific and mathematical applications. *Fall 2009*

CSC 108 Introduction to Web Computing 3 credits
Introduction to computer science through web sites, web pages, web page programming, HTML, XML, XHTML, CSS and JavaScript. The history and social impact of computers, networks and the World Wide Web are included in the course. *Fall & Spring*
CSC 109 Robotics Introduction to Computer Science 3 credits
Introduction to computer science through robotics, the basics of artificial intelligence and the fundamental ideas of logic, algorithms, computer systems and programming.

CSC 110 Introduction to Computing 3 credits
Overview of computing science. Major issues in computer technology, systems software, theoretical foundations, artificial intelligence and social implications. Fall 2009

CSC 111 Introduction to Programming 4 credits
Algorithms, programming, computers, languages and language structure. Prerequisite: BIF 101, CSC 107, CSC 108, CSC 109, CSC 110, or CSC 127. Spring

CSC 127 Introduction to Game Programming 3 credits
Computer game development and underlying computer concepts necessary for game programming. Game components related to the player, game component, stories, characters, game play, graphics, the interface and audio. Fall and Spring

CSC 212 Data Structures 4 credits
Basic concepts of data structures, including lists, stacks and queues. User-defined structures and abstract data types. Prerequisites: B- or higher in CSC 111 and CSC 111L. Fall

CSC 213 Large Scale Programming 4 credits
Introductory concepts of software engineering applied to the design and implementation of larger software systems. Advanced data structures. Prerequisites: CSC 212 and CSC 212L. Spring

CSC 253 Computer Hardware 3 credits
Introduction to digital logic, Boolean algebra, hardware and computer organization. Overview of current and future architectures. Prerequisites: CSC 111 and CSC 111L. Fall

CSC 253L Computer Hardware Lab 1 credit
Self-contained laboratory experience to augment hardware and electronics concepts introduced in CSC 253. Optional but open to any Computer Science major or minor. Prerequisite: CSC 253 (may be taken during the same semester)

CSC 281 Automata and Algorithms 3 credits
Formal language theory including finite and pushdown automata, grammars, Turing Machines and the Halting Problem. Introduction to the design and analysis of algorithms, classes of problems and methods for developing an analysis. Prerequisite: CSC 212 and CSC 212L. Spring

CSC 299 Computer Practicum 0 credits
Additional practice in computer programming to enhance algorithm development, coding and debugging skills, with a view towards being a part of a team in a regional or national programming contest. May be taken 8 times total, once per semester. Prerequisite: Permission of instructor

CSC 310 Information Organization and Processing 4 credits
Databases, high-level organization and processing of information, access to and ethical use of information. Prerequisites: CSC 213 and CSC 213L. Fall 2009

CSC 313 Advanced Programming Topics 4 credits
Focuses on the practice of computer science by investigating emerging development techniques from industry. Topics include design patterns, application profiling, code optimizations and testing techniques. Prerequisites: CSC 213 and CSC 213L. Spring 2010

CSC 325 Computer Graphics 4 credits
Techniques involved in realistic image production including illumination models, object modeling, shadowing, texturing, ray tracing, radiosity, animation and advanced modeling techniques for natural phenomenon and characters. Prerequisites: CSC 212 and CSC 212L.

CSC 330 Distributed Computing 4 credits
System software and distributed applications. Modern distributed operating systems, client/server and other models, security and ethical issues. Prerequisites: CSC 212, CSC 212L and CSC 253. Spring 2010
CSC 351 Comparative Programming Languages  
4 credits  
Systematic study of programming languages and their implementations. Programming in logical and functional programming languages is included. 
*Prerequisites: CSC 212 and CSC 212L. Fall 2010*

CSC 360 Intelligent Systems  
4 credits  
An introduction to intelligent systems including expert systems, reasoning systems, neural networks, language understanding and basic robotics. Ethical, legal and social issues will be discussed. 
*Prerequisites: CSC 213 and CSC 213L and junior/senior standing. Spring 2011*

CSC 380 Web Development  
4 credits  
Web history, design principles, programming and scripting (both client-side and server-side), database access, client/server mechanisms, search engines, copyright and ethical issues, security. 
*Prerequisites: CSC 111 and CSC 111L and junior/senior standing. Spring 2011*

CSC 391-491 Computer Science Seminar  
1 credit each  
Student-faculty research-based seminar for majors. To be taken for two semesters — one in the junior year and one in the senior year. Recent topics include parallel computing, dynamic memory management, robotics and game engine evaluation.

CSC 395 Software Engineering  
4 credits  
The application of engineering principles to the design, production, use and maintenance of software is studied through readings and a team project. 
*Prerequisites: CSC 213 and CSC 213L. Fall 2010*

CSC 497 Internship  
1-3 credits  
Special projects for local institutions/businesses. Must be related to a specific focused task and involve a significant learning component. Credit is not given for part-time work. Approved project proposal and results documentation required. Does not count as a CSC elective. 
*Prerequisite: Permission of chair.*

CSC 499 Independent Study  
3 credits  
*Prerequisite: Permission of chair.*

digital media arts

**Full-Time Faculty:** Barbara J. Irwin, Chair, Barry Berlin, John S. Dahlberg, Benjamin J. Dunkle, Catherine Foster, Jamie O’Neil, Przemyslaw J. Moskal, Melissa B. Wanzer, Charles J. Wigley III.

The Communication Studies Department offers a Bachelor of Science degree through the Digital Media Arts program. As new and more powerful communication technologies in the digital age transform ways in which we communicate and interact, students will have a vast array of new career options. Students can position themselves to take advantage of these new opportunities by gaining cutting-edge practical and theoretical skills to create and design content using digital tools.

The Digital Media Arts degree in the Communication Studies Department focuses on design for web and print, video production/post-production, and 3D modeling and animation, in a 13-course, 39-credit major. State-of-the-art facilities are featured at the Digital Media Arts’ home in Lyons Hall.

**Student Learning Goals**
**Goal 1:** DMA majors will design and construct effective messages through the use of digital tools.
Students and/or student work will:
A. Show awareness of “target audience” or demographic;
B. Exhibit control of focal point and control of visual attention of audience;
C. Exhibit clarity in communication, visual impact, aesthetic appeal;
D. Exhibit understanding of how to present a portfolio and discuss his/her work.

Goal 2: DMA majors will evince technical prowess in digital media. Students will:
A. Execute a project that makes optimal use of software, coding/programming languages, and/or Platforms;
B. Carry out basic tasks in a wide variety of digital media areas, including interactive design, digital video and audio editing, graphic manipulation, digital illustration, digital typography, 3-D modeling and animation;
C. Students will understand and be able to define concepts and terminology pertaining to a wide variety of digital media areas.

Goals will be measured through the content of the student portfolio, prepared as part of the Capstone course in the senior year.

Qualifications for the major
Digital Media Arts majors must have a cumulative G.P.A. of at least 2.00, including a minimum grade of C- in all digital media arts courses. It is expected that students in the program must have a GPA much higher than 2.0 to continue as a DMA major. Because of the highly competitive nature of the program, the performance of all majors is subject to review relative to their continuation in the program. Second semester sophomore DMA majors that have accumulated 45 credits are reviewed using the following: overall GPA, GPA in DMA201 and at least two other DMA courses, and a portfolio of the students work. Transfer students and students who change their major to DMA are reviewed after they have completed three DMA courses at Canisius.

Digital Media Arts Curriculum

1. Core Curriculum Requirements
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major Requirements (13 courses) 39
A. Major Course Requirements (8 courses)
   DMA 201 Introduction to Digital Media 3
   DMA 202 Digital Media Culture 3
   DMA 203 Digital Media Design Concepts 3
   DMA 204 Digital Media Law and Ethics 3
   DMA 205 Digital Graphics 3
   DMA 206 Interactive Multimedia 3
   DMA 207 Digital Media Programming 3
   DMA 408 Capstone 3
B. Major Electives (5 courses)

DMA majors must complete major elective courses in accordance with their sequence. See your DMA advisor to select appropriate courses for major elective credit in your sequence.

3. Free electives:

Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

**DMA Electives**

- DMA 316: Intro to 2D Animation*
- DMA 317: Intro to Motion Graphics**
- DMA 340: Writing for the Digital Media
- DMA 342: Intro to Web Design*
- DMA 346: Video Games: History and Technique***
- DMA 347: Electronic Game Design
- DMA 351: 3D Modeling, Texturing & Lighting**
- DMA 352: 3D Character Animation****
- DMA 353: 3D Dynamics*
- DMA 354: 3D for Electronic Gaming***
- DMA 363: Print Design****
- DMA 384: Digital Typography**
- DMA 387: Digital Video Production*
- DMA 393: Advanced Digital Design***
- DMA 395: Advanced Illustration*
- DMA 413: Advanced Motion Graphics
- DMA 416: Advanced 2D Computer Animation****
- DMA 442: Advanced Web Design****
- DMA 480: Advanced Digital Media Programming **
- DMA 487: Advanced Digital Video Production****

**FAS Electives**

- FAS 110 - Two-Dimensional Foundations
- FAS 111 - Studio Drawing
- FAS 113 - Studio Design
- FAS 115: 3D foundations Intro Sculpture
- FAS 339 - Digital Photography
- COM 311 - Principles of Advertising (Fall)
- COM 315 - Advertising and the Creative Process (Fall)
- COM 325 - Media Literacy (Fall)
- COM 328: Scriptwriting
- COM 329: Scriptwriting
- COM 361: Introduction to TV Production**
- COM 374: Film History Fall
- COM 375: Film Classics Fall
- CSC 108: Intro to Computing
- CSC 111: Intro to Programming
- CSC 127: Introduction to Game Design
- CSC 128: Scriptwriting
- CSC 380: Web Development
- ISB 455: E-Commerce and Web Site design
- ISB 470: Special Topics in IS: Cyber security
- Phi 325: Philosophy of Art and Beauty

Additional Information

The Digital Media Arts program combines design, technical and critical approaches with intensive instruction in the use of digital tools. Dual majors are available with the permission and guidance of both chairs.

For semester-by-semester updates on courses, program news, etc., please refer to the DMA section of the Communication Studies’ web site: [http://www.canisius.edu/comm_stud/](http://www.canisius.edu/comm_stud/)
For information/news in regard to the students’ Digital Media Arts Club, please refer to the club’s blog: http://dmac.comdma.com

**Facilities**

Four computer labs, digital video editing stations, an audio/music production studio and a television studio/control room are available for student use in Lyons Hall. The Lyons Hall third-floor Mac Lab, in Lyons 312, features 26 Macintosh iMac Flat Panel computers with DVD-RW drives. Software available includes Adobe CS4 (Photoshop, Illustrator, InDesign, Flash, Dreamweaver, After Effects), Cinema 4D and Ableton Live. A scanner and a laser printer flank the room. A touch screen in an instructor’s bunker controls a VCR, DVD player and an Elmo documentation presentation system. Ports for plug-and-go setups, such as laptops and laserdisc players, are built into the bunker.

A Web and imaging lab in Lyons 325, provides eight Apple iMac Flat Panel computers with DVD-RW drives, two scanners, three drawing tablets, a large format color inkjet printer and a color laser printer. Software is identical to the software in LY 312.

The digital imaging lab, which is maintained by the Media Center in Lyons 413, houses: three Final Cut Pro non-linear editing stations (MAC); four iMovie non-linear editing workstations (MAC); two iMac computers for still imaging (MAC) and audio editing; one scanner workstation (MAC); 1 Laser printer; one audio editing workstation featuring Digital Performer, GarageBand, Ableton Live & ProTools and an audio production studio. This room also houses the CCTV and Video Institute computers dedicated to their use.

An additional lab, Lyons 122, features 15 20” high-end iMacs, a laser printer and a scanner. Software includes Second Life, Maya, Modul8 and Final Cut Pro as well as everything else in LY312 except Ableton. This computer lab is primarily used for advanced Digital Media Arts electives.

A design production lab in Lyons 328, features a 17” wide large format printer and mounting resources for presentations of printed digital work.

In the Media Center on the fourth floor of Lyons Hall, a 26’ x 30’ television studio features a hard cyclorama, lighting grid with dimmer control and three digital studio video cameras.

The control room has custom-built consoles to house the digital video switcher with special effects, a 16-channel audio mixing board, teleprompter, DAT audio recorder, character generator and an intercom/FB system. The digital video-mastering format is DVCAM with BetaCam SP, S-VHS and Hi-8 video transports. Four equipment racks and 83 consoles house the audio/video distribution, including patch panels and routers. The studio also has the capability to send video to the campus cable RF video system.

The college’s Media Center provides the TV studio’s operational support. Across from the TV studio, a screening room provides comfortable tiered seating, a video and DVD projector, as well as a professional sound system. Students can also sign out equipment (various digital cameras, camcorders, etc.) from the Media Center on the 4th floor of Lyons Hall. Check out http://www.canisius.edu/mediacenter/equipment.asp for a complete list of available resources.
COURSES: 2009-2011

Note: Some communication studies courses count as DMA courses. Please refer to the list at the end of this section. For descriptions of the Communication Studies courses, refer to the Communication Studies sections. Additional courses may be offered each semester in both the day and evening. Students should consult the department.

DMA 201 Intro to Digital Media 3 credits
Introduces the fundamentals of digital systems and technologies through class lecture and hands-on approaches. Software and hardware used for web design, multimedia, video production, graphics and audio production.

DMA 202 Digital Media Culture 3 credits
Explores how digitization impacts our personal, business, cultural, institutional and international lives. Also examines the ways in which digital media transform communication and expression.

DMA 203 Digital Design Concepts 3 credits
Introduces the conceptual, perceptual and manual skills in traditional graphic design. Topics include typography and visual communication, color theory, the principles of form, structure, spatial design and photomanipulation. Prerequisite: DMA 201 or permission of instructor.

DMA 204 Digital Media Law/Ethics 3 credits
Introduces a wide range of legal and ethical issues in cyberspace, including: the First Amendment, copyright, fair use, libel, hate speech, pornography/obscenity, privacy, commercial speech and national security. Prerequisite: DMA 201 or permission of instructor.

DMA 205 Digital Graphics 3 credits
This course will familiarize students with digital graphics techniques, file formats and applications. Students will develop digital image creation skills along with effective workflow habits Prerequisite: DMA 201 or permission of instructor.

DMA 206 Interactive Multimedia 3 credits
This course will examine the types, processes and application of Adobe Flash needed to create multimedia content. Emphasis will be on critical analysis, interface design, organization of content and manipulation of video, sound and animation elements to create interactive computer presentations. Prerequisite: DMA 201 or permission of instructor.

DMA 207 Digital Media Programming 3 credits
Students will learn Action Script 3.0, the scripting language of Adobe Flash, to build interactivity into web pages and digital applications. Students will learn how to structure and develop small online games for advertising, educational or entertainment purposes. Prerequisite: DMA 201 or permission of instructor.

DMA 309 Music Technology 3 credits
Explore music sequencing, midi, audio plug-ins and other tools used by professional musicians, sound designers and multimedia specialists. No music background required. Prerequisite: DMA 201 or permission of instructor.

DMA 310 Digital Audio/Music Production 3 credits
Learn fundamental techniques of digital audio and music production using current technologies in digital recording, software and audio post-production. Discuss current trends in audio production and the tools used for composing and producing electronic music. No music background required.

DMA 316 2D Computer Animation 3 credits
This course is an overview of all forms of digital animation. Through hands-on exercises and projects utilizing After Effects, Cinema4D and other digital animation applications, students will explore both 2-dimensional and 3-dimensional digital animation.

DMA 317 Introduction to Motion Graphics 3 credits
New methods of visual communication include sequences of digitally enhanced visual imagery. One
of the most popular methods of enhancing the appeal of these sequences of visual imagery is through the addition of computer generated motion graphics. Through hands-on projects and exercises utilizing primarily Adobe After Effects and Photoshop students will unlock the secrets of motion graphics.

DMA 340 Writing for the Digital Media 3 credits
Intensive writing assignments employing message-design principles/style guidelines for writing for the web, CDs, DVDs, etc.

DMA 342 Intro to Web Design 3 credits
Introduction to the state of the art in on-line multimedia publishing. Working individually and in teams, students learn to publish well-designed World Wide Web documents that communicate effectively. DMA elective.

DMA 346 Video Games-History/Technique 3 credits
Provides an analytical and historical approach to the advancement of entertainment software. Encompassing cultural, professional, business, and scientific and technical evolution, the History of Video Games will communicate the socio-cultural impacts of interactive entertainment on society.

DMA 347 Electronic Game Design 3 credits
Covers the art, craft and business of creating electronic games. Develop your own game concept, learn the basics of interactive authoring and produce a storyboard. Emphasis will be placed on understanding the gaming industry and the languages of game design.

DMA 351 3D Modeling, Texturing and Lighting 3 credits
This course is a hands-on overview of the broad and complex areas of 3D computer modeling, texturing and lighting. Different modeling approaches will be explored, including box modeling, lofting and sculpting. Various 3D texturing techniques and lighting approaches will also be investigated.

DMA 352 3D Character Animation 3 credits
A hands-on overview of the broad and complex areas of 3D computer character rigging and animation. The process of rigging the underlying structure of bone and muscle will be explored along with styles and techniques of character animation. Students will uncover secrets for rigging and animating bipeds, quadrupeds and other living creatures, real or fictional.

DMA 353 3D Dynamics 3 credits
In the real world, dynamics is the branch of classical mechanics that is concerned with the effects of forces on the motion of objects. In the world of 3D computer animation, dynamics is the virtual replication of these effects of forces on the motion of virtual objects, including gravity, explosions, collisions, fluids, etc.

DMA 354 3D Electronic Gaming 3 credits
This course is a hands-on overview of 3D computer-generated content creation for electronic games. Students will explore the concepts of low-poly modeling, low-poly UV texture-mapping and the interaction between the Maya 3D toolset and state-of-the-art game engines, such as Unity3D.

DMA 359 Criticism and Evaluation 3 credits
This course explores criteria for judging aesthetic quality, functionality, usability and effectiveness of digital media projects. Students will combine selected theoretical topics and research with hands-on work intended for review by real-world clients, design competitions and digital media festivals. Prerequisite: DMA 201 or permission of instructor.

DMA 363 Print Design 3 credits
Focuses on critical topics in layout, folding, binding and printing, as well as critical/creative issues in magazine, publication and high-end corporate design. Prerequisites: DMA 203 Digital Design Concepts or DMA 205 Digital Graphics.

DMA 384 Digital Typography 3 credits
Principles of typography will be presented, including popular and classic typefaces. Students can design their own typefaces for both print and screen.
DMA 387 Digital Video Production 3 credits
Focuses on the technical and creative processes involved in digital video field production and post-production. Topics include scripting, lighting, camera operation, audio, non-linear editing and video streaming for the web. Prerequisite: DMA 201 or permission of instructor.

DMA 393 Advanced Digital Design 3 credits
Advanced course demanding innovative, intellectual, design and technical skills in multimedia and cyber-communication projects. Authoring, video and sound editing computer applications, animation, as well as cyberspace file transfer and programming are emphasized. Prerequisite: DMA 203 or permission of instructor.

DMA 395 Digital Illustration 3 credits
Don’t violate copyrighted imagery off the web — create your own! You don’t have to know how to draw to create stunning graphics. Use Adobe CS to learn approaches, techniques and current trends of professional illustrators. Prerequisite: DMA 201 or permission of instructor.

DMA 408 Capstone 3 credits
Students will develop a portfolio helpful for an entry-level position in digital media. A professional-level project will be required of all majors to demonstrate specific strengths in visual communications, web-based research, interactive CDs, DVDs, web site design, traditional print materials and the like. Service learning option.

DMA 413 Advanced Motion Graphics 3 credits
Hands-on development and critical analysis of advanced techniques of creating motion graphics. Special attention to real-time rendering technologies available on the Macintosh.

DMA 416 Advanced 2D Computer Animation 3 credits
Expanding upon 2D Computer Animation, this production course will develop an entire animated feature from start to finish. Processes involve creating detailed storyboards, character design, background and stage imaging and motion studies.

DMA 487 Advanced Digital Video Production 3 credits
This course focuses on advanced techniques in non-linear editing, motion graphics and digital video production. Critical analysis of micro-media digital films, important avant-garde breakthroughs, streaming video and the development of graphic design in motion will be covered. Software: Apple Final Cut Pro HD and Adobe After Effects.

DMA 442 Advanced Web Design 3 credits
Concentrates on effective website design, practical web programming skills and the understanding of Flash for web development.

DMA 480 Advanced Digital Media Programming 3 credits
In this course students explore advanced server and client side programming using PHP, MySQL, XML, AS, and DHTML in order to create complex database-driven on-line systems and interactive art works. Examples include content management engines and procedural poetry.

DMA 487 Advanced Digital Video Production 3 credits
The project will be broken into a series of smaller scenes and re-assembled with animated titles and credits resulting in a complete 2D animated short. Prerequisite: DMA 316.

DMA 488 Internship I Seminar 3-12 credits
Sequel to DMA 488 for students taking a second internship. Each student is limited to a combined total of 12 credit hours for DMA 488 and 498. Prerequisite: Same as for DMA 488. Fall, Spring

DMA 498 Internship II Seminar 3-9 credits
Student experientially learns communication functions in compatibly matched professional setting, locally or out-of-town. Faculty and on-site supervision. Seminar required. Pass/fail. May be repeated as DMA 498; 12-credit limit for DMA 488/498 combined. Prerequisite: Open to junior and senior majors with G.P.A. of at least 2.50, Digital Media Arts average of 2.70 and approved by department faculty. Applications on Communication Studies Department website. Fall, Spring
DMA 499 Independent Study  3 credits
Student conducts original project or self-designed course of study under the tutelage of Digital Media Arts faculty member. Prerequisite: Open to junior and senior majors in good standing with consent of instructor and chair. Fall, Spring

dual degree programs

B.A./B.S. and M.B.A.

James S. Valone, Director.

This program enables a qualified student in most majors to earn an undergraduate degree and an M.B.A. within a five-year period. During the first three years, students take courses to fulfill their core curriculum and major-area requirements, saving electives for their senior year. In their senior year, they complete their undergraduate requirements and use their free electives to take a series of introductory graduate courses. They complete the M.B.A. requirements in the fifth year.

Students may have to take more than the normal 15 credit hours per semester in the fourth year in order to satisfy the requirements of their undergraduate major and complete the MBA program by the summer of their fifth year. This will depend upon the number of credit hours remaining in their undergraduate program at the beginning of the fourth year.

Waivers for MBA classes are based on equivalent courses taken at Canisius College. MBA courses in economics, statistics and accounting may be waived for students who achieve a grade of B or higher in ECO 101-102, ECO 255-256, and ACC 201-202 (or 211-212) respectively. MBA courses in organizational behavior, marketing, operations management and finance may be waived for students in those majors. However, students will not be granted more than 12 credit-hours of waivers. See an advisor for further information on waivers.

Admission
Application is made by students in the spring semester of their junior year. The Graduate Management Admission Test (GMAT) is required. Admission to the program will require meeting current M.B.A. admission standards.

Since individual programs of study are custom designed, interested students should see Dr. Valone as early as possible in their academic careers. The graduate section of the program is designed specifically for each student on the basis of his/her undergraduate experience and will vary from student to student. Hence, early and continuous advisement is important. Students in majors with relatively few free electives, e.g. business, science or education, are especially encouraged to see an advisor early in their academic careers to ensure timely completion of required courses.

For further information, students should see Dr. James Valone, Associate Dean of the Wehle School of Business.
Economics and Finance

Full-Time Faculty: Emma Bojinova, Donald Bosshardt, Chair; Larry Franz, Scott Hegerty, Patricia Hutton, Larry Lichtenstein, George Palumbo, Michael Piemonte (Executive Director, Golden Griffin Fund), Philip Pfaff, Ronald Reiber, Craig Rogers, Richard Shick, Richard Wall, Mark Zaporowski.

ECONOMICS B.A. PROGRAM
The Economics Department provides courses designed to help all Canisius students understand the national and global economy. The major in the College of Arts and Sciences provides preparation for entry-level and advanced positions in a variety of career choices through its broad based study of economic activity.

Potential career choices include sales, marketing, production, finance and banking, and at various levels of government such as municipalities, local development authorities, the Federal Reserve, the Department of Labor and the Department of Commerce. All these employers value the critical thinking and analysis skills fostered in an economics curriculum.

The Economics program has also proven to be an excellent preparation for graduate schools. Some students choose to continue the study of economics in Ph.D. and masters’ programs. Other students use the strong analytical foundations of their economics training to pursue advanced degrees in business, health, public administration or law.

Goals of the Major:
The goal of the Economics major is to provide students with the ability to apply critical thinking based upon economic principles to a wide variety of applied situations – including political, legal, governmental, not-for-profit, and business applications.

- Graduates should be able to identify problems in an economic framework, choose from the alternative solutions, and identify the information needed to evaluate outcomes
- Graduates should be able to effectively present economic arguments and critically assess economic policies.

Economics (B.A.) Curriculum:

Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements

Major course requirements
Mathematics elective: one Field of Knowledge VII mathematics course (MAT 111 or MAT 115) plus MAT 112, as an elective, is recommended for anyone considering graduate school
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
ECO 205 Intermediate Microeconomic Analysis
ECO 206 Intermediate Macroeconomic Analysis
ECO 255 Business Statistics I
ECO 256 Business Statistics II
Economics electives: five courses at the 300 or 400 level (5 courses)

Free Electives: 12 courses. Accounting and additional mathematics courses are strongly recommended for graduate school and the business world.
Other Programs
Economics majors may also obtain a concentration in Finance by using economics electives to take three to five of the following courses: FIN 201, FIN 311, FIN 312, ECO 330, ECO 411, FIN 414, FIN 454, FIN 455, FIN 460. This specialization is appropriate for students who wish to make a career in banking or finance. These students should also use free electives to acquire some training in accounting.

The Economics-Mathematics dual major is strongly recommended for the student who plans a career in the academic world in either finance or economics. Up to two mathematics courses beyond MAT 111 may be used as economics electives.

Dual majors are also available with history, urban studies, international relations and other areas. Students interested in dual majors should consult with the chair of each department or program.

Economics Minor
ECO 101 Principles of Macroeconomics (3 credits)
ECO 102 Principles of Microeconomics (3 credits)
ECO 255 Business Statistics I (3 credits)
Economics elective: four courses at the 200, 300, or 400 level (12 credits) one of which must be ECO 205 or 206
TOTAL (21 credits)

Goals and Objectives of the Minor:
The objective of the Economics minor is to provide students with helpful tools necessary to apply critical thinking based upon economic principles to their particular disciplines.

ECONOMICS B.S. PROGRAM
Business Economics Program
The objective of the Economics curriculum is to provide students with an understanding of the economic environment in which they will participate as professionals. The major in Economics requires a sequence of economics courses from which the student is expected to obtain a substantially greater understanding of the economic environment. The Business Economics major program in the Richard J. Wehle School of Business requires, in addition to the major courses, a business core curriculum that provides the student with a common body of business knowledge. It is anticipated that either Economics major will gain sufficient training in methods of economic analysis to be able to help solve the numerous economic problems of society.

Many economics graduates find rewarding and challenging employment in government and industry — positions where their specialized training is put to the test and found valuable. Other students choose to deepen their knowledge of economics by attending graduate school. Still others find professional studies in business, law and health sciences more rewarding because of their economics training.

Goals and Objectives of the Major
The objective of the Economics B.S. major parallels that of the B.A. The differentiation focuses upon a career inside a modern corporation. This requires an immersion in the Wehle School of Business core curriculum.

Business Economics (B.S.) Curriculum:

a. Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements
b. Common body of business knowledge:
MAT 105 Finite Mathematics and
MAT 106 Calculus for the Non-Sciences or
MAT 115 Calculus for Business I
MAT 115 is recommended over MAT 106. Additional mathematics is recommended if the student is preparing for a graduate program in economics or finance. The student should consult a departmental advisor.
ACC 201 Financial Accounting
ACC 202 Managerial Accounting
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
ECO 255 Business Statistics I
ECO 256 Business Statistics II
FIN 201 Introduction to Finance
ISB 101 Management Technology
MGT 101 Introduction to Management
MGT 325 Operations Analysis for Business
MGT 370 Introduction to Management
MGT 446 Managerial Policy/Strategy
MKT 201 Principles of Marketing
c. Economics major:
ECO 205 Intermediate Microeconomic Analysis
ECO 206 Intermediate Macroeconomic Analysis
Economics electives [at the 300 or 400 level] (4 courses)
d. Restricted Electives (must be liberal arts) 4 courses
e. Free Electives 3 or 4 courses

TOTAL (40 courses)

Recommended Schedule:

Recommended Schedule Economics

FALL
Freshman Year
FYS 101
MAT 105 OR MAT 115 OR MAT111
RST 101
ECO 101 MACRO (Social Sciences Field)
ISB 101

Sophomore Year
MKT 201
ACC 201
ECO 205
ECO 255 STATS 1 (Mathematics Field)
Business International Requirement
(Two semesters of language or approved regional

SPRING

ENG 101
MAT 106 or Free Elect. if
MAT 115/111

PHI 101
ECO 102 MICRO
MGT 101
FIN 201
ACC 202
ECO 206
ECO 256 STATS 2
Business International Requirement (2 semester
**Junior Year**

**ECO ELECTIVE**
Field of Knowledge
MGT 325
Field of Knowledge
Field of Knowledge

**Senior**
MGT 370
ECO Elective
Free Elective
A&S Elective
A&S Elective

**COURSES: 2009 – 2011**

**ECO 101 Principles of Macroeconomics**
3 credits
Explanation of market system through supply and demand analysis. Measurement of important macroeconomic variables and development of economic models to analyze problems of unemployment, inflation and economic growth. Efficacy of various fiscal and monetary policies. Carries Field of Knowledge II credit.

**ECO 102 Principles of Microeconomics**
3 credits
Explanation of how the market system operates in the context of limited resources. Emphasis on the manner in which consumers and firms determine what to produce, how to produce and for whom to produce. Carries Field of Knowledge II credit.

**ECO 205 Intermediate Microeconomic Analysis**
3 credits
Analysis of demand and supply under different market situations. Cost and production theory. Factor pricing. Welfare economics. Prerequisites: ECO 101-102. Fall

**ECO 206 Intermediate Macroeconomic Analysis**
3 credits
Modern macroeconomic theory developed, utilizing static and comparative static models. Examination of dynamic models and basic theories of economic growth. Prerequisites: ECO 101-102. Spring

**ECO ELECTIVE**
Field of Knowledge
A&S Elective
Field of Knowledge
Core Capstone

**ECO 222 The Apprentice**
3 credits
An experiential course in which students “learn by doing” in QuadGear, Canisius’ student-operated on-campus business. The curriculum is specifically designed around the small business and integrates all functional areas of business, from economics and finance to human resources and strategic planning. The course meets once per week, Friday afternoons. required. Students who take this course cannot also use an internship for credit toward the economics major. No prerequisites. Consent of Instructor (Dr. Hutton)

**ECO 255 Business Statistics I**
3 credits
Fundamental concepts of probability and statistics with emphasis on business and economic applications. Organizing and describing data. Probability theory, sampling, inference, hypothesis testing. Carries Field of Knowledge VII credit.

**ECO 256 Business Statistics II**
3 credits
Regression analysis, goodness of fit, contingency tables, analysis of variance, Bayesian decision theory, time series and forecasting. Prerequisite: ECO 255.

**ECO 300 Economics of Work**
3 credits
Examination of data on work-related outcomes and their economic explanation. The implications of employer policies. The course is interdisciplinary in scope, emphasizing gender differences, non-market work and institutional factors. Prerequisite: ECO 102.

**ECO 306 Labor Economics**
3 credits
Composition of the labor force; factors affecting wages,
hours of work, and unemployment; unemployment insurance; labor unions; employment discrimination; occupational safety; labor law. Prerequisites: ECO 102, ECO 256.

**ECO 311 Regional Economics and GIS**  
3 credits  
An analysis of the spatial regional economic patterns in America with an emphasis on market forces that helped determine the growth and decline of population, employment and income of small regional economics through the use of Geographics Information System tools.

**ECO 312 Spatial Economics and GIS**  
3 credits  
An analysis of the spatial patterns in urban America with an emphasis on market forces and Geographics Information System tools. Focuses on the forces that have led to urban concentrations and the process of suburbanization.

**ECO 330 Money, Banking and the Economy**  
3 credits  
The connection between financial markets, the economy and the Federal Reserve will be explored. This course will examine the nature of financial markets, the determination of interest rates, banking, money and monetary policy. Emphasis will be placed on the impact of monetary policy on the macro economy. Prerequisites: ECO 101-102.

**ECO 333 Economics of Public Issues**  
3 credits  
This course uses economic principles to analyze an array of public policy issues, providing insights into public policy, the effects of policy on the behavior of consumers and producers, the costs and benefits of specific policies and the distribution of these costs and benefits. Current policy debates, such as income inequality and poverty, pollution and environment issues, health care, international trade and education are analyzed. Prerequisites: ECO 101-102.

**ECO 360 International Trade**  
3 credits  
Theory and practice of international trade, why countries trade, what explains the patterns of trade, and what are the effects of trade on a country’s welfare and income distribution. The second part of the course covers international trade policies and their implications. Prerequisites: ECO 101-102.

**ECO 361 International Economics and Organizations**  
3 credits  
This course is intended to be a survey of international economics covering three primary themes: international trade theory, international business and international institutions. Prerequisites: ECO 101-102.

**ECO 401 Public Finance**  
3 credits  
A microeconomic analysis of the role of the public sector in resource allocation. Topics include: the theory of market failures, alternative corrective measures for market failures, efficiency/equity analysis of taxes and public expenditure programs. Prerequisite: ECO 102. Fall

**ECO 411 State and Local Finance**  
3 credits  
Municipal credit risk and municipal bonds analysis of revenue sources for state and local governments. Public/private sector interaction in urban areas; city-suburban fiscal disparity and competition; state/local government structure; inter-governmental relations. Prerequisites: ECO 101-102, ECO 256 or equivalent. Spring

**ECO 455 Econometrics**  
3 credits  
Estimation and analysis of linear and non-linear regression models using statistical inferences. Topics include: multicollinearity, heteroskedasticity, serial correlation, forecasting, dummy variables and simultaneous equations. Analysis of actual data sets and use of statistical software. Prerequisites: ECO 205, 206, 256.

**ECO 497 Internship**  
3 credits  
May be used for free elective credit only. Pass/Fail only. Prerequisite: Consent of department chair.

**ECO 499 Independent Research**  
3 credits  
Prerequisite: Consent of department chair.

Economics majors may also obtain a concentration in Finance by using economics electives to take three to five of the following courses: FIN 201, FIN 311, FIN 312, ECO 330, ECO 401, FIN 411, FIN 414, FIN 454, FIN 455, FIN 460. This specialization is appropriate for students who wish to make a career in banking or finance. These students should also use free electives to acquire some training in accounting. The Economics-Mathematics dual major is strongly recommended for the student who plans a career in the academic world in either finance or economics. Up to two mathematics courses beyond MAT 111 may be used as economics electives with prior approval of chair.
FINANCE B.S. PROGRAM
The analytical tools and problem-solving skills fostered in the Finance major will prove useful to any student who wishes to pursue a career in security analysis, business valuation, corporate management, investments, banking, real estate, insurance or small business. The program provides a concentration designed to help the student prepare for exams for licenses as Chartered Financial Analysts (CFA), Certified Financial Planners (CFP) and Insurance Brokers. Finance concentration is also available through the Economics majors. Interested students should also contact the department chair.

Goals of the Major:
The goals of the finance major is to prepare its graduates for careers in financial management. Among the specific goals are to provide students:

- The tools and training necessary to identify and gather information associated with the firm’s activities of capital budgeting and financial decision making.
- A theoretical basis and consequent tools necessary for valuing securities and firms.
- An understanding of the principles associated with diversification and the management of investor portfolios to accomplish appropriate risk and return objectives.
- Finally, an appreciation for the inter-relationships between the above objectives leading to an understanding of the general and guiding principles of modern Finance.

The Golden Griffin Fund: This is an investment fund run by Canisius students under the guidance of designated faculty members and local investment industry advisors. The fund selects students from applicants (usually Juniors) in the Spring for a year-long participation during the Senior year. The student is expected to investigate several firms (under appropriate guidance) for possible inclusion in the portfolio. The final grade depends upon the competency of the analysis rather than the particular recommendation. Students who have completed this experience have had exceptional success in securing high-profile positions.

Finance Curriculum:

a. Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements.

b. Common body of business knowledge:
MAT 105 Finite Mathematics and
MAT 106 Calculus for the Non-Sciences or
MAT 115 Calculus for Business I
MAT 115 is recommended over MAT 106. Additional mathematics is recommended if the student is preparing for a graduate program in economics or finance. The student should consult a departmental advisor.
ACC 201 Financial Accounting
ACC 202 Managerial Accounting
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
c. Finance major:
FIN 311 Corporate Finance
FIN 312 Investments
FIN 414 Portfolio Management

d. Finance electives: four courses to be selected from 300 or 400-level finance courses. FIN 455 is strongly recommended. A maximum of two of the following four accounting courses (with a minimum grade of C in each) may be substituted for finance electives: ACC 301, 302, 303, 415.*
Economics courses beyond 101, 102, 222 may also be used as finance electives.

e. Restricted Electives (must be liberal arts) 4 courses.

f. Free Electives (2 or 3 courses)

* A strong accounting background is desired by many corporations seeking job candidates with degrees in finance. For those who desire a degree in corporate financial planning, ACC 303 is strongly recommended. ACC 415 is recommended. FIN 455 is strongly recommended because many entry-level positions in finance require experience with financial modeling using personal computers.

Recommended Schedule:

FALL
Freshmen Year
FYS 101
MAT 105 OR MAT 115 OR MAT 111
RST 101
ECO 101 MACRO (Social Sciences Field)
ISB 101

Sophomore Year
MKT 201
ACC 201
History Field 4
ECO 255 STATS 1 (Mathematics Field)
Business International Requirement
(Two semesters of language or approved regional requirement)

SPRING

ENG 101
MAT 106 or free elective if MAT 115/111
PHI 101
ECO 102 MICRO
MGT 101

FIN 201
ACC 202
Field of Knowledge
ECO 256 STATS 2
Business International Requirement (2 semester sequence required)
studies His 107-108, 109-110, 131-132—when taken is flexible)

**Junior Year**

- FIN 311
- FIN 312
- MGT 325

**Field of Knowledge**

**Field of Knowledge**

**Senior**

- MGT 370
- Fin Elective
- Fin Elective
- A&S Elective
- A&S Elective

**COURSES: 2009 – 2011**

**FIN 201 Introduction to Finance  3 credits**
An introduction to financial analysis, markets, institutions and instruments. Topics covered include financial inter-mediation, interest rate determination, valuation, diversification and financial management and agency issues. Prerequisites: ECO 101-102, ECO 255 (or concurrent registration).

**FIN 311 Corporate Finance  3 credits**
The examination of the procedures and objectives of capital budgeting, the financing of the firm by means of debt and equity and short-term and long-term financial management. Prerequisite: FIN 201.

**FIN 312 Investments  3 credits**
This course introduces the student to the construction, management, and performance evaluation of investment portfolios. Primary topics include portfolio models, equilibrium in financial markets, market efficiency and the application of these concepts to the investment industry. Prerequisite: FIN 201, ECO 256.

**ECO 330 Money, Banking and the Economy  3 credits**
See ECO 330 for course description.

**ECO 401 Public Finance  3 credits**
See ECO 401 for course description.

**ECO 411 State and Local Finance  3 credits**
See ECO 411 for course description.

**FIN 412 Equity Analysis  3 credits**
The analysis and interpretation of financial information and accounting statements in order to assess security risk and return, credit worthiness, financing needs and the valuation of the firm. Prerequisites: FIN 201, FIN 312.

**FIN 414 Portfolio Management  3 credits**
An introduction to modern portfolio theory and management. The strategies underlying portfolio construction and evaluation will be examined. The implications of market efficiency on portfolio management will also be considered. Finance Major Assessment will be performed in this class. Prerequisites: FIN 311, 312.

**FIN 420 Financial Institutions and Markets  3 credits**
Examines the changing world of financial services and the role that financial intermediaries and financial markets are playing in a rapidly changing industry with new benchmarks and success factors. Universal banking as the new model will be analyzed. Finally, the changing nature of careers in the “New Industry” will be discussed from both positive and negative points of view. Prerequisite: FIN 312.

**FIN 423 Fixed Income Securities  3 credits**
This course discusses the various types of fixed income securities and the markets in which they are traded. Emphasis is placed on contact evaluation, extracting term/risk structure information from pricing, evaluating, investment opportunities and (interest rate) risk management. Prerequisite: FIN, 312.
FIN 425 Advanced Corporate Finance  
3 credits  
This course provides a more in-depth treatment of corporate financial management. Topics from the introductory course (FIN 311) are developed in greater detail with emphasis on the underlying theories and more extensive applications to financial decision making. Additional topics beyond the introductory level are presented and discussed. The class relies primarily on lectures, problems and case discussions. Prerequisite: FIN 311.

FIN 454 Financial Data Management  
3 credits  
An introduction to the collecting, organizing, and using the financial data for the firm. Includes an introduction to database management using Access and a survey of data mining techniques.

FIN 455 Computers and Financial Planning  
3 credits  
Computer-based financial modeling for the financial decision maker. Application of financial spreadsheets. Prerequisite: FIN 201.

FIN 460 International Finance  
3 credits  
Basic understanding, with illustrations, of how to apply elements of international finance to managerial policies and decision-making. Exchange rates and exchange risk. Prerequisites: ECO 101, 102, FIN 201.

FIN 480 Options  
3 credits  
Introduction to options and other derivative securities such as warrants and convertibles. Emphasis on their valuation and use in hedging. Prerequisites: FIN 311, FIN 312.

FIN 485 - FIN 486 Golden Griffin Fund  
6 credits  
This course is a two-semester program in which students become equity analysts and portfolio managers for a real money portfolio of common equity securities (the Golden Griffin Fund “GGF”). Students screen companies in the fall semester and perform detailed financial statement and valuation analyses in the spring semester. Current events in the economy and financial markets are discussed weekly; written reports regarding current GGF portfolio positions are produced by the student managers monthly beginning in the summer. Students taking FIN 485 are expected to continue into the spring semester in FIN 486. Prerequisites: FIN 201, FIN 312, FIN 414. Prerequisites or concurrent: FIN 412, FIN 420, FIN 480. NOTE: GGF students are selected during an application process, generally during their junior year.

FIN 497 Internship  
3 credits

FIN 499 Independent Research  
3 credits  
Prerequisite: Consent of department chair.

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**education**

**early childhood, childhood special education**

Full-Time Faculty: Julie Henry, Chair; Nicki Calabrese, Marya Grande, Ellen Hamm, Kelly Harper, Corinne M. Kindzierski, Kimberly Leavitt-Noble, Christopher Lopata, Michele Marable, Robert Nida, James Oigara, Marcus Thomeer, Ann Marie Tryjankowski, Nancy Wallace, George Wenner, Paul A. Young.

The Education Department offers teacher certification programs at a variety of levels. These programs include: Early Childhood Education (birth through grade 2); Childhood Education (grades 1 through 6); dual certification in Early Childhood/Childhood Education (birth through grade 6); dual certification in Students with Disabilities/Early Childhood (birth through grade 2); and dual certification in Students with Disabilities/Childhood Education (grades 1 through 6). Teacher candidates majoring in Childhood Education will be eligible to apply for a grade 7-9 certification extension in Middle
Childhood. Each of these five programs requires candidates to select a 10-course academic concentration in one of eight disciplines: English, Mathematics, Music, Science, Social Studies, French, German or Spanish.

The professional sequences in Early Childhood, Childhood, and Students with Disabilities Education give the prospective teacher a thorough foundation in the many facets of modern American education and a gradually increasing exposure to the realities of the classroom. A broad range of field experiences, from observation and tutoring to a full semester of student teaching, is an essential part of the curriculum. Each program also includes an integrated sequence of subject-area courses offered by one or more of the academic departments at the college.

Learning Goals for the Education Department

Knowledge Goals
- Candidates demonstrate a depth of knowledge in their program of study and demonstrate the skills that derive from that knowledge.
- Candidates integrate theory, research and practice in coursework and practicum settings.

Service
- Candidates engage in service in order to better understand the complexities of our educational, political and social environment and thus be better prepared to advocate for social justice.
- Candidates adapt to new environments, integrate knowledge and demonstrate cura personalis to interact effectively with students and families from diverse cultural backgrounds.

Leadership/Professionalism
- Candidates are reflective practitioners able to critically question the ends, means and contexts of teaching and learning.

Certification Requirements
5. To obtain initial teacher certification, candidates must pass the examinations required by the New York State Education Department. These include the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills-Written (ATS-W), and the appropriate Content Specialty Tests(s) (CST). The LAST should be taken in the sophomore year or early in the junior year and the ATS-W and the CTS(s) in the senior year.

6. Candidates must be cleared by the New York State Education Department through a fingerprint-supported criminal history background check.

7. Candidates in teacher certification programs are required to take three credits of foreign language to meet New York State certification regulations. Canisius College accepts high school foreign language study for the foreign language proficiency requirement for those candidates successfully completing the appropriate Regents Exam with a grade of 85% or higher. For students who graduated from high schools outside New York state, three or more full year courses in a foreign language with grades of ‘B’ or higher are acceptable for the foreign language proficiency. Your proficiency will be
evaluated during freshman orientation by the Director of Advisement. Candidates may also demonstrate the foreign language proficiency requirement by passing the appropriate CLEP test. Candidates that do not meet the foreign language proficiency through high school study are required to take a three credit foreign language course at the college level. Candidates that have no prior high school foreign language experience, should register for a 103 level foreign language course. Candidates that have prior high school foreign language experience, should register for a 115 level foreign language course.

8. **Academic Criteria for Endorsement and Completion of Program**
   - Cumulative GPA of 2.5 or higher
   - Grade of ‘C’ or higher in pedagogical courses
   - Satisfactory performance in field placements
   - Successful portfolio review

Please see the School of Education page for information about transition points in the programs and portfolio requirements.

### Curriculum

#### 1. Core Requirements
Students in all majors are expected to fulfill Core requirements. See pages 38-40 of this catalog for the Core Curriculum requirements. Please go to [http://www.canisius.edu/core_curriculum/mission.asp](http://www.canisius.edu/core_curriculum/mission.asp) for complete information about the Core Curriculum.

#### 2. Major Requirements

**Early Childhood Education (Birth to Grade 2):**

1. **Concentration:** English, Mathematics, Music, Science, Social Studies, French, German or Spanish

#### 2. Pedagogical Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDE 100 Human Growth and Social Development: Birth-Childhood</td>
<td>3</td>
</tr>
<tr>
<td>EDE 121 Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>EDU 122 Technology in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDY 208 Infant/Toddler Care and Education</td>
<td>3</td>
</tr>
<tr>
<td>EDY 209 Developmentally Appropriate Practices in EC Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>ECCH 221 Literacy I</td>
<td>3</td>
</tr>
<tr>
<td>ECCH 222 Literacy II</td>
<td>3</td>
</tr>
<tr>
<td>EDU 250 Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>EDY 306 Music, Movement, and the Arts in EC Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>EDY 310 Teaching Math/Science in EC Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>EDY 313 Family and Community Involvement in EC EDUCATION</td>
<td>3</td>
</tr>
<tr>
<td>SPE 341 Inclusive Strategies</td>
<td>3</td>
</tr>
</tbody>
</table>
EDE390 Cognition, Learning and Assessment Birth-Childhood 3 credits
EDY 433 Seminar in Teaching and Assessment-EC 3 credits
EDY 450, 451, 452 Student Teaching Seminar 1 credits
EDY 460 Student Teaching-EC 12 credits

**Childhood Education (Grade 1-6):**

1. **Concentration:** English, Mathematics, Music, Science, Social Studies, French, German or Spanish

2. **Pedagogical Core**
   - EDE 100 Human Growth and Social Development: Birth-Childhood 3 credits
   - EDE 121 Introduction to Literacy, Children’s Literature and the Arts 3 credits
   - EDU 122 Technology in Education 3 credits
   - ECCH 221 Literacy I 3 credits
   - ECCH 222 Literacy II 3 credits
   - EDU 250 Foundations of Education 3 credits
   - EDE 311 Science in the Schools 3 credits
   - EDE 317 Teaching Math in Elementary Schools 3 credits
   - EDE 331 Teaching Social Studies in Elementary Schools 3 credits
   - SPE 341 Inclusive Strategies 3 credits
   - EDE390 Cognition, Learning and Assessment Birth-Childhood 3 credits
   - EDE 412 Elementary Curriculum Development and Implementation 3 credits
   - EDE 432 Seminar in Teaching and Assessment – Elementary 3 credits
   - EDE 450 Student Teaching Seminar 1 credits
   - EDU 451 Child Abuse Seminar 0 credits
   - EDU 452 Prevention of School Violence Workshop 0 credits
   - EDE 455 Student Teaching 12 credits

**Dual Certification: Early Childhood/Childhood (Birth to Grade 6)**

1. **Concentration:** English, Mathematics, Music, Science, Social Studies, French, German or Spanish

2. **Pedagogical Core**
   - EDE 100 Human Growth & Social Development 3 credits
   - EDE 121 Introduction to Literacy, Children’s Literature and the Arts 3 credits
   - EDU 122 Technology in Education 3 credits
   - EDY 208 Infant/Toddler Care and Education 3 credits
   - EDY 209 Developmentally Appropriate Curriculum in EC: Playing to Learn 3 credits
   - ECCH 221 Literacy I 3 credits
   - ECCH 222 Literacy II 3 credits
   - EDY 310 Teaching Math/Science in Early Childhood Classrooms 3 credits
   - EDU 250 Foundations of Education 3 credits
   - EDY 306 Music, Movement and the Arts in EC Classrooms 3 credits
   - EDE 311 Science in the Schools 3 credits
EDE 317 Teaching Math: Elementary 3 credits
EDE 331 Teaching Social Studies: Elementary 3 credits
SPE 341 Inclusive Strategies 3 credits
EDE390 Cognition, Learning and Assessment Birth-Childhood 1 credits
EDE 412 Managing the Elementary School Classroom 3 credits
EDE 432 Seminar in Teaching and Assessment-CH 3 credits
EDE 450 Student Teaching Seminar 1 credits
EDU 451 Child Abuse Seminar 0 credits
EDU 452 Prevention of School Violence Seminar
EDE 465 Student Teaching-EC/CH 12 credits

Dual Certification: Students with Disabilities/Early Childhood: (Birth to Grade 2)

1. Concentration: English, Mathematics, Music, Science, Social Studies, French, German or Spanish

2. Pedagogical Core

SPE 100 Introduction to Special Education 3 credits
EDE 100 Human Growth and Social Development: Birth through Childhood 3 credits
EDE 121 Introduction to Literacy, Children’s Literature and the Arts 3 credits
EDU 122 Technology in Education 3 credits
EDY 208 Infant/Toddler Care and Education 3 credits
EDY 209 Developmentally Appropriate in EC Classrooms: Playing to Learn 3 credits
ECCH 221 Literacy I 3 credits
ECCH 222 Literacy II 3 credits
EDU 250 Foundations of Education 3 credits
SPE 281 Nature and Needs of EC Students with Learning Disabilities 3 credits
SPE 282 Remedial Strategies for Teaching in the EC Content Areas 1 credits
SPE 301 Nature and Needs of EC Students with Developmental Disabilities 3 credits
SPE 302 Multidisciplinary Assessment and EC Teaching 3 credits
EDY 306 Music, Movement and the Arts in EC Classrooms 3 credits
SPE 320 Nature and Needs of EC Students with Behavior Disorders 4 credits
SPE 325 Classroom Management in EC Classrooms 3 credits
EDE390 Cognition, Learning and Assessment Birth-Childhood 3 credits
SPE 433 Seminar in Teaching and Assessment EC 3 credits
SPE 450 Student Teaching Seminar 1 credits
EDU 451 Child Abuse Seminar 0 credits
EDU Prevention of School Violence Seminar 0 credits
SPE 460 Student Teaching EC 12 credits

Dual Certification: Students with Disabilities/Childhood (Grades 1-6)

1. Concentration: English, Mathematics, Music, Science, Social Studies, French, German or Spanish

2. Pedagogical Core

SPE 100 Introduction to Special Education 3 credits
EDE 100 Human Growth and Social Development:  
  Birth through Childhood 3 credits
EDE 121 Introduction to Literacy, Children’s Literature and the Arts 3 credits
ECCH 221 Literacy I 3 credits
ECCH222 Literacy II 3 credits
EDU 250 Foundations of Education 3 credits
SPE 291 Nature and Needs of CH Students with Learning Disabilities 3 credits
SPE 292 Remedial Strategies for Teaching in the CH Content Areas 3 credits
SPE 311 Nature and Needs of CH Students with Developmental Disabilities 4 credits
SPE 312 Multidisciplinary Assessment and Teaching in CH 3 credits
SPE 317 Teaching Math in Elementary Schools 3 credits
SPE 330 Nature and Needs of CH Students with Behavior Disorders 4 credits
SPE 335 Classroom Management of Childhood Classrooms 3 credits
EDE390 Cognition, Learning and Assessment Birth-Childhood 3 credits
SPE 432 Seminar in Teaching and Assessment-CH/SPE 3 credits
SPE 450 Student Teaching Seminar 1 credits
EDU 451 Child Abuse Seminar 0 credits
EDU 452 Prevention of School Violence Seminar 0 credits
SPE 455 Student Teaching 12 credits

3. Free Electives
Courses/credits in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 hours for graduation. Students may graduate with more but not less than 120 credit hours.

4. Concentration Requirements
Students who major in any of the early childhood, childhood, or students with disabilities programs listed above must also complete one of the concentrations listed below:

**English**
ENG 300 Intro to English Studies 3 credits
American Literature I: Pre-Civil War Period (300/400) 3 credits
American Literature II: Post-Civil War Period (300/400) 3 credits
ENG 322 or 323 Shakespeare 3 credits
One course each from 3 of 4 historical periods:
  I. Medieval - Early 17th Century  III. 19th Century
  II. Restoration - 18th Century  IV. 20th Century 9 credits
Writing CMP 405 Grammar for Teachers or
EDU 405 Teaching Writing in the Schools or
ENG 385,387, 389, 394, 401,or 403 3 credits

**French**
FRC 115 Advanced Introductory I 3 credits
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRC 116 Advanced Introductory II</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC 215 Intermediate I</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC 216 Intermediate II</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC 323 Advanced Conversation I</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC 324 Advanced Conversation II</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC 331 Substance and Style I</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC 332 Substance and Style II</td>
<td>3 credits</td>
</tr>
<tr>
<td>FRC Electives: Two courses</td>
<td>6 credits</td>
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</tbody>
</table>

**German**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>GER 103 Advanced Introductory I</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 104 Advanced Introductory II</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 215 Intermediate I</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 216 Intermediate II</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 323 Advanced Conversation I</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 324 Advanced Conversation II</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 331 Substance and Style I</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER 332 Substance and Style II</td>
<td>3 credits</td>
</tr>
<tr>
<td>GER Electives: Two courses</td>
<td>6 credits</td>
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**Mathematics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 111 Calculus I</td>
<td>4 credits</td>
</tr>
<tr>
<td>MAT 112 Calculus II</td>
<td>4 credits</td>
</tr>
<tr>
<td>MAT 211 Calculus III</td>
<td>4 credits</td>
</tr>
<tr>
<td>MAT 219 Linear Algebra</td>
<td>4 credits</td>
</tr>
<tr>
<td>MAT 222 Differential Equations or MAT elective</td>
<td>4 credits</td>
</tr>
<tr>
<td>MAT 230 Bridge to Abstract Math</td>
<td>4 credits</td>
</tr>
<tr>
<td>MAT 311 Abstract Algebra</td>
<td>3 credits</td>
</tr>
<tr>
<td>MAT 331 Intro. to Modern Geometry</td>
<td>3 credits</td>
</tr>
<tr>
<td>MAT 351 Statistics or MAT 141</td>
<td>3-4 credits</td>
</tr>
<tr>
<td>CSC 110 or 111 Intro. To Computing/Programming or BIF 101, CSC 108, CSC 109</td>
<td>3-4 credits</td>
</tr>
</tbody>
</table>

**Music**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAM 119 Masterpieces of Music</td>
<td>3 credits</td>
</tr>
<tr>
<td>FAM 210 Keyboard Musicianship</td>
<td>3 credits</td>
</tr>
<tr>
<td>FAM 230 &amp; Lab Music Theory I</td>
<td>4 credits</td>
</tr>
<tr>
<td>FAM 240 &amp; Lab Music Theory II</td>
<td>4 credits</td>
</tr>
<tr>
<td>FAM 330 &amp; Lab Music Theory II</td>
<td>4 credits</td>
</tr>
<tr>
<td>FAM 340 &amp; Lab Music Theory II</td>
<td>4 credits</td>
</tr>
<tr>
<td>Music Literature Courses (choose two from) FAM 216, FAM 217, FAM 218, FAM 219, FAM 220</td>
<td>6 credits</td>
</tr>
<tr>
<td>Music Literature Courses (choose one from) FAM 123</td>
<td></td>
</tr>
</tbody>
</table>
FAM 124, FAM 224            3 credits
Music Elective (1 course): FAM 250 recommended  3 credits

Science
GEO 325 Physical Geography (AS I)            3 credits
BIO 101, BIO 101 Lab Intro to Cellular/Subcellular Biology 4 credits
BIO 102, BIO 102 Lab Organismal Biology        4 credits
CHEM 111, CHEM 111 Lab General Chemistry I  4 credits
CHEM 112, CHEM 112 Lab General Chemistry II     4 credits
PHY 129 or 130 Intro to Astronomy/Geology   3 credits
BIO 201, BIO 201 Lab Evolution, Ecology, and Population Biology   4 credits
Science Electives (3 courses)                9-12 credits

Social Studies
HIS 107 History of Modern Europe to 1815 or HIS 111 Men and Ideas in History 3 credits
HIS 108 History of Modern Europe Since 1815 or
HIS 113 The Twentieth Century                3 credits
HIS 109 History of Asia to 1800 or
HIS 110 History of Asia Since 1800          3 credits
HIS 123 History of the U.S. to 1877         3 credits
HIS 124 History of the U.S. 1877 to Present 3 credits
PSC 103 or PSC 104 Political Science        3 credits
ECO 101 Principles of Macroeconomics or
ECO 102 Principles of Microeconomics        3 credits
History of Europe or History of Asia, Africa & Latin America (1 course) 3 credits
History of the U.S. (2 courses)
[HIS 382: New York State History strongly recommended]  6 credits

Spanish
SPA 115 Advanced Introductory I              3 credits
SPA 116 Advanced Introductory II             3 credits
SPA 215 Intermediate I                       3 credits
SPA 216 Intermediate II                      3 credits
SPA 323 Advanced Conversation I             4 credits
SPA 324 Advanced Conversation II            4 credits
SPA 331 Substance and Style I               3 credits
SPA 332 Substance and Style II              3 credits
SPA Electives: 2 courses                    6 credits

Middle Childhood Extension for Candidates in Childhood, Childhood/Early Childhood, Childhood/ Special Education Childhood Candidates wishing to obtain an extension to teach grades 7-9 in their area of concentration must take the EMC 352 and EMC 391 in addition to the courses listed above. Also, candidates must pass the CST in their concentration area.
COURSES 2009-2011

ECCH 221 Literacy I 3 credits
Examines theories of language development and implications for practice. Strategies are presented to facilitate emergent and developing literacy skills in young children and to develop fluent readers and writers throughout the elementary years. Includes twenty pages of polished prose including a literature review, literature project and lesson plans.

ECCH 222 Literacy II 3 credits
Examines effective methods for assessing children’s literacy skills and for developing targeted instruction that reinforces, remediates and/or enriches literacy learning. Issues related to the literacy learning of all children, including children with disabilities and children from linguistically and culturally diverse backgrounds are examined. Research-based early intervention programs will be examined. Includes 40 hours of field experience in grades PreK-6.

EDE 100 Human Growth and Development - Birth through Childhood 3 credits
Introduces multiple dimensions of development including influence of family, culture and society. Examines physical, cognitive, emotional and behavioral theories and emphasizes education’s role in promoting wellness. Fall/Spring

EDE 121 Introduction to Literacy, Children’s Literature & The Arts 3 credits
Focuses on the uses of children’s books across all curriculum areas. Multicultural literature, authors, illustrators, genres and age-appropriateness are explored. Discusses basic approaches to literacy and the use of children’s books in developing literacy. Emphasizes integrating the arts into the total curriculum. Fall/Spring

EDE 311 Science in the Schools 3 credits
Addresses objectives, curriculum, strategies, materials and evaluation necessary for teaching science. Emphasizes content, inquiry skills, problem solving and scientific attitude highlighting the NY State Standards. Fall/Spring

EDE 317 Teaching Math in Elementary Schools 3 credits
Addresses objectives, curriculum, strategies, materials and evaluation necessary for teaching mathematical concepts. Emphasizes content, inquiry skills and problem solving highlighting the NY State Standards. Fall/Spring

EDE 331 Teaching Social Studies in Elementary Schools 3 credits
Addresses the objectives, curriculum, strategies, materials and evaluation necessary for teaching social studies content. Emphasizes historic, geographic, economic, political and social concepts highlighting the NY State Standards. Fall/Spring

EDE 390 Cognition, Learning and Assessment - Birth through Childhood 3 credits
Investigates theories of learning, and current brain research. Integrates emotion and motivation and the neurological basis for learning. Analyzes formal and informal procedures for reporting student progress. Fall/Spring

EDE 412 Managing the Elementary Classroom 3 credits
Develops understanding of how to build classroom communities and organize the classroom for student success. Discusses the importance of a proactive approach to prevent behavior problems and investigates a variety of classroom management strategies. Strategies for collaborating with diverse families and other professionals will be exposed including strategies for co-teaching. Fall/Spring

EDE 432 Seminar in Teaching and Assessment 3 credits
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the childhood level. Requires 50 hours of field placement. Fall/Spring

EDE 450 Student Teaching Seminar 1 credits
Includes mandatory training by NY State Education
Department and professional reflection. Training includes drug abuse, tobacco health issues, child abduction, AIDS and prevention of school violence. 

**Prerequisites:** Signature; concurrent registration in Student Teaching. *Fall/Spring*

**EDE 455 Student Teaching - CH** 12 credits

Highlights knowledge, skills, and dispositions of professional educators. Two full-time 7-week placements in childhood classrooms require candidates to become the instructional leader under the supervision of cooperating teachers and college faculty. 

**Prerequisites:** Signature; concurrent registration in Student Teaching. *Fall/Spring*

**EDE 465 Student Teaching - EC/CH** 12 credits

Highlights knowledge, skills, and dispositions of professional educators. One full-time 7-week placement in each childhood and early childhood classroom requires candidates to become the instructional leader under the supervision of cooperating teachers and college faculty. 

**Prerequisites:** Signature; concurrent registration in EDE 450. *Fall/Spring*

**EDU 122 Technology in Education** 3 credits

Explores applications of technology in education. Emphasizes evaluation and selection of software, high and low-tech devices, distance learning and state of the art technologies that impact teaching. 

*Fall/Spring*

**EDU 250 Foundations of Education** 3 credits

Addresses social, philosophical, legal, historical, organizational, theoretical perspectives on education, including multicultural perspectives. Highlights rights and responsibilities of teachers, students and others involved in education. 

*Fall/Spring*

**EDY 208 Infant/Toddler Care and Education** 3 credits

This course utilizes developmental theory and research findings to examine issues of attachment, perception, motor skills, cognition, language, emotions and social skills in children birth through age three. An emphasis is placed on understanding children in the context of family and culture. Requires 15 hours of field placement: infant/toddler. (EDY 208 & EDY 209 must be taken together during the first semester of the sophomore year.) *Fall*

**EDY 209 Developmentally Appropriate Curriculum in Early Childhood Classrooms** 3 credits

Emphasizes research-supported practice for enhancing children’s physical, cognitive, social, emotional and behavioral development within the framework of the NY State standards. Focuses on developmentally appropriate learning opportunities. Requires 15 hours of field placement: Grades 1-2. (EDY 208 & EDY 209 must be taken together during the first semester of the sophomore year.) *Spring*

**EDY 306 Music, Movement and the Arts in Early Childhood Classrooms** 3 credits

Emphasizes the integration of music, movement, and the arts into the curriculum in K-6 classrooms. Explores various media and materials utilized to enrich learning and stimulate children’s creativity. 

*Spring*

**EDY 310 Teaching Math/Science in Early Childhood Classrooms** 3 credits


**EDY 313 Family and Community Involvement in Early Childhood** 3 credits

Explores theory and research to identify family and community characteristics and the many influences on them. Emphasizes skills needed to support and empower families through respectful and reciprocal teaching seminar. *Fall/Spring*
EDY 433 Seminar in Teaching and Assessment  
3 credits  
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the early childhood level. Requires 50 hours of field placement: Grades 1-2. Fall/Spring

EDY 450 Student Teacher Seminar  
1 credits  
Includes mandatory training by NY State Education Department and professional reflection. Training includes drug abuse, tobacco health issues, child abduction, AIDS and prevention of school violence. 
Prerequisite: Signature; concurrent registration in Student Teaching. Fall/Spring

EDY 460 Student Teaching - Early Childhood  
12 credits  
Highlights knowledge, skills, and dispositions of professional educators. Two full-time seven -week placements in early childhood classrooms require candidates to become the instructional leader under the supervision of cooperating teachers and college faculty. 
Prerequisites: Signature; concurrent registration in EDY 450. Fall/Spring

EMC 352 Human Growth and Social Development: Middle Childhood  
3 credits  
Major concepts, principles, theories and research related to the intellectual, emotional, physical, social and moral development of young adolescents. Fall/Spring

EMC 391 Cognition, Learning, Assessment and Diagnostic Teaching: Middle Childhood  
3 credits  
Concepts, standards and research related to middle level curriculum development stressing the importance of a curriculum that is relevant, challenging, integrative and exploratory. Interdisciplinary middle level curriculum standards and models will be introduced in addition to assessment strategies that promote the continuous intellectual, social and physical development of all young adolescents. Fall/Spring

GEO 325 Introduction to Physical Geography  
3 credits  
Physical geography focuses on the reshaping of the Earth’s surface through the many interactions that occur between the atmosphere, hydrosphere, lithosphere and biosphere. It entails an examination of the terrestrial and aquatic character of the Earth, its climate and biodiversity and the sources of energy that promote change. Ultimately, physical geography provides a panoramic view of our relationship to a physical setting that is undergoing constant modification. Fall/Spring

SPE 100 Introduction to Special Education  
3 credits  
Presents the definitions, causes, psychological and behavioral characteristics of disabilities outlined in the IDEA. Emphasizes assessment procedures, multicultural issues, family involvement and the referral process. Fall/Spring

SPE 281 Nature and Needs of EC Students with Learning Disabilities  
3 credits  
Describes the effect of mild disabilities on early childhood. Focuses on collaborative strategies for parental involvement. Highlights the CPSE process, placement options and instructional strategies through second grade. Requires 20 hours field placement. 
Prerequisite: SPE 100. Concurrent enrollment in SPE 282. Spring

SPE 282 Remedial Strategies in the EC Content Areas  
3 credits  
Describes developmentally appropriate techniques and materials for instruction to students with disabilities and those at risk of failure. Emphasizes assistive technology for students in early childhood classrooms across the curriculum. Prerequisite: SPE 100. Concurrent enrollment in SPE 281. Spring

SPE 291 Nature and Needs of CH Students with Learning Disabilities  
3 credits  
Describes the effect of mild disabilities on childhood. Focuses on collaborative strategies for parental involvement. Highlights the CSE process, placement options and instructional strategies in grades one to six. Requires 20 hours field placement. Prerequisite: SPE 100. Concurrent enrollment in SPE 292. Spring
SPE 292 Remedial Strategies in the CH Content Areas 3 credits
Describes appropriate techniques and materials for instruction to students with disabilities and those at risk of failure. Emphasizes assistive technology for students in childhood classrooms across the curriculum. 
Prerequisite: SPE 100. Concurrent enrollment in SPE 291. Spring

SPE 301 Nature and Needs of EC Students with Developmental Disabilities 3 credits
Describes the effect of Mental Retardation and other developmental disabilities on early childhood. Focuses on collaborative strategies for parental involvement. Highlights the CPSE process and placement options through second grade. Requires 20 hours field placement. Prerequisites: SPE 281 and 282. Concurrent enrollment in SPE 302. Fall

SPE 302 Multidisciplinary Assessment and EC Teaching 3 credits
Emphasizes a multidisciplinary approach to meet the assessment and learning needs of early childhood students with disabilities. Explores home-based and center-based models and strategies that promote family collaboration. Prerequisites: SPE 281 and 282. Concurrent enrollment in SPE 301. Fall

SPE 311 Nature and Needs of CH Students with Developmental Disabilities 3 credits
Describes effects of MR and other developmental disabilities on childhood. Focuses on collaborative strategies for parental involvement. Highlights instructional strategies for grades 1-6 across the continuum of services. Requires 20 hours field placement. Prerequisites: SPE 291 and SPE 292. Concurrent enrollment in SPE 312. Fall

SPE 312 Multidisciplinary Assessment and CH Teaching 3 credits
Emphasizes a multidisciplinary approach to meet the assessment and learning needs of childhood students with disabilities. Explores assessment and evaluation using the NYS Standards for Severe Disabilities and the Alternative Performance Indicators. Prerequisites: SPE 291 and SPE 292. Concurrent enrollment in SPE 311. Fall

SPE 320 Nature and Needs of EC Students with Behavioral Disorders 3 credits
Describes the effect of Emotional and Behavioral Disorders on young children and their families. Highlights CPSE, placement options, collaboration and instructional strategies to address academic and behavioral issues through second grade. Requires 20 hours field placement. Prerequisites: SPE 301, 302. Concurrent enrollment in SPE 325. Spring

SPE 325 Classroom Management in Early Childhood Classrooms 3 credits
Discusses implications of behavior management and importance of a proactive approach to prevent behavior problems. Emphasizes developmentally appropriate classroom structure that supports children with E/BD. Prerequisites: SPE 301, 302. Concurrent enrollment in SPE 320. Spring

SPE 330 Nature and Needs of CH Students with Behavioral Disorders 3 credits
Describes the effect of Emotional and Behavioral Disorders on children and their families. Highlights NYSED Regulations, collaboration and instructional strategies to address academic and behavioral issues. Requires 20 hours of field placement. Prerequisites: SPE 311, 312. Concurrent enrollment in SPE 335. Spring

SPE 335 Classroom Management in Childhood Classrooms 3 credits
Discusses implications of behavior management and importance of a proactive approach to prevent behavior problems. Emphasizes appropriate classroom structure, and individual and group contingencies to support children with E/BD in grades 1-6. Prerequisites: SPE 311, 312. Concurrent enrollment in SPE 330. Spring

SPE 341 Inclusive Strategies 3 credits
Highlights best practices in general education for students with disabilities. Illustrates current developments in special education. Emphasizes collaboration to meet the diverse needs of learners. Fall/Spring
SPE 432 Seminar in Teaching and Assessment  
**3 credits**  
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the special education-childhood level. Requires 50 hours of field placement. *Fall/Spring*

SPE 433 Seminar in Teaching and Assessment  
**3 credits**  
Includes practica and seminars that focus on professional reflection and topics related to classroom management, increasing family involvement, teaching to higher standards and assessment at the special education-early childhood level. Requires 50 hours of field placement. *Fall/Spring*

SPE 450 Student Teaching Seminar  
**1 credits**  
Includes mandatory training by NY State Education Department and professional reflection. Training includes drug abuse, tobacco health issues, child abduction, AIDS and prevention of school violence. *Prerequisites: Signature; concurrent registration in Student Teaching. Fall/Spring*

SPE 455 Supervised Student Teaching  
**12 credits**  
Highlights knowledge, skills and dispositions of professional educators. One full-time 7-week placement in each childhood and special education-childhood classroom requires candidates to become the instructional leader under the supervision of cooperating teachers and college faculty. Prerequisites: Signature; overall G.P.A. of 2.50 to date: “C” in each required subject area course (modern language majors must also pass proficiency examination); “C” in each required Education course; interview; concurrent registration in SPE 450. Some schools may require certain health tests. *Fall/Spring*

SPE 460 Supervised Student Teaching  
**12 credits**  
Highlights knowledge, skills and dispositions of professional educators. One full-time 7-week placement in each early childhood and special education-early childhood classroom requires candidates to become the instructional leader under the supervision of cooperating teachers and college faculty. *Fall/Spring*

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**english**


**English Department Mission Statement**  
The Department of English serves all students at Canisius as well as its own English majors. In keeping with the college’s Jesuit mission to educate the whole person, the English Department strives to nurture intellectual and spiritual growth through the study of literature and the practice of writing. The Department fosters academic excellence through a diverse and rigorous curriculum.

**Student Learning Goals**  
Through their work in the English major, students will:

- **Goal 1.** Demonstrate an understanding of how literary texts are organized (e.g. by genre, historical development, theme, national/transnational expression);
- **Goal 2.** Demonstrate an understanding of literary texts as works of art;
- **Goal 3.** Demonstrate an understanding of the
role of literary criticism in shaping the meaning and significance of literature;

**Goal 4.** Demonstrate writing skills commensurate with the development of a clear thesis, logical organization, appropriate use of evidence, and command of English grammar and usage.

The department offers courses at the freshman, sophomore, junior and senior levels. Prerequisites for 200-level and above English courses: FYS 101 and English 101, or permission of the department chair.

**English 101: Writing about Literature** – the study of literature as creative expression. Builds critical and analytical skills through practice of the writing process and completion of a research assignment. This is a core course required of all Canisius freshmen.

**Literature and writing courses in Field 3 of the Core curriculum** – these courses, offered at all levels, cover the genres of fiction, poetry, drama, essay and autobiography; they include multicultural and interdisciplinary topics, with emphasis on the aesthetic value of the works studied.

**English major courses** – these are offered at the introductory 200 level and the more specialized 300 and 400 levels. Acting courses (I and II) are open to freshmen. Introductory courses focus on the genres of writing and literature, and introduce students to the study of English as a discipline. More specialized 300-level courses focus on a particular period or theme or author or specialized types of writing. More advanced courses in writing are offered at the 400 level.

**English Advising**

Departmental faculty advisors work closely with students regarding course selection and career opportunities. In addition to the classroom experience, internships in local businesses, arts, non-profit and social service oriented organizations prepare majors for careers in all areas where effective communication and understanding, and empathy are essential, such as teaching, writing, law, social work, mass media and public relations.

**English Honors**

English Honors is a flexible program designed to offer interested and motivated English majors the chance to earn honors designation by participating in innovative seminars and working with a faculty mentor in the writing of an original thesis.

The program requires three courses: two seminars and a thesis. The seminars are unique courses, limited in enrollment, designed by faculty around especially engaging questions, topics, and texts. Some are interdisciplinary; some involve both critical and creative writing; others are organized around a particular period, theme, critical approach or major writer. Typically one English honors seminar is offered each semester. The honors thesis is a long paper, written on a topic of the student’s own choosing under the direction of faculty mentor, the culmination of a semester’s reading, researching and writing. To read more about the Honors program, visit the English Department website.

**Co-Curricular Activities**

Additional department activities, designed to make literature a more integral part of the academic and creative life of English majors and other members of the college community, include the Quadrangle literary magazine, the
English Council, Sigma Tau Delta (International English Honors Society) and the Canisius College Contemporary Writers’ Series. Also available for students are The Griffin college newspaper and the Little Theatre.

**English Curriculum**

1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements:** (12 courses)
   
   A. Major Courses (8 courses)
   
   - ENG 300 Introduction to English Studies 3
   - Shakespeare: one 300 level course 3
   - British Literature Distribution — one 300/400 level course from three of the following four historical periods: 9
     - I. Medieval through Early Seventeenth Century
     - II. Restoration through Eighteenth Century
     - III. Nineteenth Century
     - IV. Twentieth Century
   - American Literature Distribution — one 300/400 level course from each of the following major historical periods: 6
     - I. Pre-Civil War American Literature,
     - II. Post-Civil War American Literature
   - Writing: one 300/400 level course. 3

   B. Major Electives (4 courses)
   
   - Four 300/400 level courses 12

3. **Free electives:**

   Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

   **PLEASE NOTE:** Students entering the English major as sophomores in fall 2010 may be subject to new curricular requirements in addition to or replacing those listed here. Please consult the English Department chair or your English advisor for clarification.

**ENG 490 Senior Seminars**

Advanced study in a literary theme, genre, period, author or other topic. Seminars involve a major paper as a culminating experience in the English major. Prior to its inclusion in the major as a required course, the seminar will be offered as a free elective, strongly recommended for seniors.
Other Programs

Dual Majors: Dual majors involving English are available in a large number of areas, including biology, communication, history, modern languages, philosophy, psychology and sociology. Interested students should consult the chairs of both departments. With the permission of both chairs, inter-disciplinary courses may be used for credit toward the major requirements in both departments.

Course clusters combining English and pre-law or business are also available. In addition, three minors are offered. They are:

English Minor: For non-majors only. A six-course sequence that includes many of the basic requirements for English majors.

- ENG 300 Introduction to English Studies
- British Literature Distribution: one 300/400 level course from any period
- American Literature Distribution: one 300/400 level course from either period
- Shakespeare: ENG 322 or ENG 323
- Writing: one 300/400 level course
- English elective: one 300/400 level course

Total (6 courses)

Writing Minor: For both majors and non-majors. A five-course program that includes rhetorical theory and practice, writing in various contexts, workshops with practicing writers and an internship in writing. Students may choose among:

- ENG 385 Persuasive Writing
- ENG 388 Literary Publishing
- ENG 389 Business Communication
- ENG 394 Creative Writing
- ENG 401 Texts, Contexts, and Subtexts (Required)
- ENG 402 Creativity and Composition Theory
- ENG 494 Advanced Creative Writing: Literary Non-Fiction
- ENG 498 Internship

Total (5 courses)

Creative Writing Minor: For both majors and non-majors. A five-course program that provides interested students the opportunity to learn and practice the fundamentals of writing stories, poems, essays and plays. For more information on Creative Writing at Canisius, please visit the Creative Writing website. Students may choose among:

- ENG 312 American Women’s Poetry: Reading and Writing
- ENG 342 Reading and Writing Young Adult Fiction
- ENG 388 Literary Publishing
- ENG 394 Introduction to Creative Writing (Required)
- ENG 411 Playwriting
- ENG 494 Advanced Creative Writing: Fiction
ENG 495 Advanced Creative Writing: Poetry
ENG 496 Advanced Creative Writing: Literary Non-Fiction
ENG 498 Internship
Total (5 courses)

Theater Arts Minor: For both majors and non-majors. A five-course sequence that includes coursework in acting and production as well as in dramatic literature and playwriting. Students may choose among:
- ENG 147 Acting I or ENG 148 Acting II
- ENG 202 (formerly 345) Drama
- ENG 346 Introduction to Theatre
- ENG 350 The Theater Experience or ENG 351 Theater Arts Elective
- ENG 411 Playwriting
- ENG 498 Internship
Total (5 courses)

COURSES: 2009-2011
All courses are 3 credit hours unless otherwise noted.

LAR 100 Literacy and Reading 3 credits
A course that helps students develop literacy skills—critical thinking, reading and writing—crucial for successful learning in content area courses. Emphasizes study skills techniques, reading comprehension, sentence fluency and well-organized essays.

ENG 100 Introduction to College Writing 3 credits
Designed to help improve proficiency in English composition. Involves frequent writing, practicing strategies for gathering ideas, drafting, revising and editing, and reading/studying prose models.

ENG 101 Writing about Literature 3 credits
Introduces students to the study of literature as a creative expression of ideas. Students will sample literary work from the major genres (poetry, fiction, drama, literary nonfiction). They will develop a literary vocabulary, hone their critical and analytical skills and practice the writing process, including completion of a research assignment.

ENG 147 Acting I (Field 3) 3 credits
Introduction to the art of acting. Through lecture and practice in acting assignments in class, students gain understanding of the actor’s role in theater.

ENG 148 Acting II (Field 3) 3 credits
Continuation of Acting I.

ENG 201 Poetry (Field 3) 3 credits
Introductory survey of poetry for majors and non-majors.

ENG 202 Drama (Field 3) 3 credits
Introductory survey of drama for majors and non-majors.

ENG 206 Art of the Essay (Field 3) 3 credits
Survey of the essay as a literary form. Open to majors and non-majors.

ENG 211 Science Fiction (Field 3) 3 credits
Survey of science fiction for majors and non-majors.

ENG 212 Classic English and American Novel (Field 3) 3 credits
Novels chosen to represent main developments in form and theme. Open to majors and non-majors.

ENG 213 Word and Image (Field 3) 3 credits
Focuses on the formal and thematic elements of literary
texts, films and texts composed of both words and images. Open to majors and non-majors.

ENG 221 Hallowed Houses (American Lit II) (Field 3) 3 credits
American literature that emphasizes “place” as embodied in houses-haunted or otherwise esteemed. Open to majors and non-majors. American Lit II credit for majors.

ENG 222 Vampires in Literature and Culture (Field 3) 3 credits
The image of the vampire in English and American literature and culture, covered in a range of literary and other aesthetic genres and historical periods. Open to majors and non-majors.

ENG 223 Images of Women in Literature and Film (Field 3) 3 credits
Representations of women as major characters in literature and film. Open to majors and non-majors.

ENG 224 The Journey in Literature (Field 3) 3 credits
Explores the concept of the journey in international literature from a number of cultural and intellectual perspectives. Open to majors and non-majors. (ICD for 2009-2010).

ENG 300 Introduction to English Studies 3 credits
Introduction to the essentials of literary analysis and interpretation. Focusing on the rigorous analysis of poetry, prose narrative and drama chosen from different historical periods, the course will stress writing with critical awareness about literature. Required of all English majors.

ENG 303 Medieval Literature 3 credits
A survey of the major voices of medieval British literature centering on Chaucer.

ENG 305 Seventeenth Century Literature 3 credits
A survey of the poetry and prose of major British authors from the Renaissance to the Restoration.

ENG 306 Eighteenth Century Literature 3 credits
A survey of the poetry and prose of major British authors in the “long” eighteenth century.

ENG 307 English Gothic Novel 3 credits
Characterized by opposing forces: knowledge and mystery, good and evil, the beautiful and the sublime, light and dark, these novels often dramatize psychological, social and sexual conflict.

ENG 308 Nineteenth Century British Literature 3 credits
A survey of the major works and authors of the Romantic and Victorian periods.

ENG 309 Modern and Contemporary British Literature 3 credits
A survey of representative figures and genres in British literature of the twentieth-century and beyond.

ENG 310 Angry Artists of the Twentieth Century 3 credits
Britain’s rock culture traced back to its roots in the “Angry Young Men” writers, “Social Realism” cinema and 1960s transatlantic “British Invasion” in rock music.

ENG 311 Women Writers 3 credits
Works by women writers from all periods and backgrounds. (WST)

ENG 312 American Women Poets: Reading and Writing (Field 3) 3 credits
Practice in reading and writing poetry, as well as critical interpretation. Emphasis on women poets from 1950s to present. (WST)

ENG 313 Literature and Psychology (Field 3) 3 credits
Focuses on the convergence of the disciplines of literature and psychology, especially the ways in which psychology has drawn on literary genres, techniques and motifs. (WST)

ENG 314 Chaucer 3 credits
Studies the major works of the author sometimes called the “father of English poetry.” Includes selections from *The Canterbury Tales*, as well as other works.
ENG 315 American Literature I 3 credits
The first half of a two-semester American literature survey. The course begins with the Puritans and ends with the 19th century American Realists.

ENG 317 Heroes and Heroines in American Literature 3 credits
A study of uniquely American heroic types, including the Alger hero, the western hero and the picaresque hero. Representative texts studied in detail, in historical and cultural context.

ENG 318 Modern American Novel 3 credits
A study of representative modern and contemporary American novels.

ENG 319 Special Topics in American Literature 3 credits
The study of a particular theme, mode or period, such as the hero, the American Renaissance, or the Roaring Twenties. Topics vary semester to semester.

ENG 320 Contemporary Catholic Fiction (Field 3) 3 credits
Study of novels and short stories by Catholic American writers from 1950 to the present: writers such as Flannery O’Connor, Walker Percy, Mary Gordon and Andre Dubus.

ENG 321 Child and Adolescent Hero in American Literature 3 credits
Examines child and adolescent heroes in American literature from post-Civil War period to the present. Texts explore major themes in American literature, from Mark Twain on.

ENG 322 Shakespeare I 3 credits
Introductory survey for majors. Plays drawn from the categories of comedy, tragedy and history.

ENG 323 Shakespeare II 3 credits
Works selected with emphasis on specific themes, structures, or styles. Shakespeare I is not a prerequisite.

ENG 324 Reading and Writing in Early America 3 credits
This course explores pre-Civil War writers and the audiences of their texts in terms of the social and cultural significance of literacy and literary production. (WST)

ENG 330 The Bible as Literature (Field 3) 3 credits
A study of the Bible as literary text and cultural source, integrating film, painting and sculpture as representations of biblical images for interpretation.

ENG 331 Studies in Irish Literature 3 credits
An historical survey focused mainly on 20th century Irish writers. An aim of the course is to define Irish literature and identify its distinguishing features.

ENG 332 Literature of Anglo-Saxon England 3 credits
Covers the period from roughly 800 to 1100, with Beowulf dominating the course. Other works include “The Wanderer,” “The Dream of the Rood” and excerpts from the Anglo-Saxon Chronicle, and prose pieces.

ENG 333 James Joyce's Ulysses 3 credits
Semester-long seminar in the study of the novel.

ENG 342 Reading and Writing Young Adult Fiction 3 credits
Combines study and practice of the genre. Students study young adult novels to learn approaches and techniques, in a workshop setting, then work on YA stories of their own.

ENG 343 Comedy and Humor (Field 3) 3 credits
A course for enjoying and thinking critically about a great variety of texts, ranging from single-sentence jokes to stage plays and novels.

ENG 344 Children's Fantasy Literature 3 credits
The main purpose of this course is to give upper-level college students a mature literary experience in the study of children’s writers, among whom are Lewis Carroll, Frances Hodgson Burnett, C.S. Lewis, J.R.R. Tolkien and Russell Hoban.

ENG 346 Introduction to Theater (Field 3) 3 credits
The collaborative efforts of theater, play and audience to create the theater experience. Exploration of the development of modern theater from its ritualistic roots to modern times.
ENG 347 English Novel I  3 credits
Survey of major English novels from Defoe to Austen, including works of Sterne, Goldsmith and others.

ENG 348 English Novel II  3 credits
Major British novels from the nineteenth century.

ENG 350 The Theater Experience  3 credits
Up close and personal experience in theater production through attendance at professional plays in the city, and hands-on experience in reading and producing short works in the classroom. Intro to Theater (Eng 346) recommended as pre-requisite but not required.

ENG 351 Theater Arts Elective  3 credits
Aspects of theatrical production, performance and direction. Topics vary by semester.

ENG 361 The Literature of Service (Field 3)  3 credits
Develops connections between literary works and various forms of community service. Requires that students perform community service as part of the course. (SL)

ENG 364 Short Fiction (Field 3)  3 credits
Detailed investigation of various modes of short fiction to develop student’s ability to read, comprehend and appreciate short fiction through an understanding of its techniques.

ENG 368 Native American Literature (Field 3)  3 credits
A survey of contemporary Native American literature, covering major and lesser-known authors. The course traces the origins of traditions, both thematic and structural. (WST)

ENG 369 Contemporary Fiction (Field 3)  3 credits
Study of recently published novels and short stories, exploring the formal and thematic range of new fiction and focusing on the contemporary issues it reflects. (WST)

ENG 370 Beauties and Beasts  3 credits
Multiple versions of the beautiful and the ugly in nineteenth-century British literature, stemming from the fairy tale, and rooted in changing views of good and evil, sexuality, the growth of science and industry and other massive cultural shifts.

ENG 371 Modern Irish Drama  3 credits
Traces the course of Irish drama from its roots in the eighteenth century to the present time.

ENG 372 Charles Dickens  3 credits
An in-depth examination of the major works, life and times of one of the most important British novelists of the nineteenth century.

ENG 374 Interdisciplinary Studies  3 credits
Selected works chosen by the instructor to examine the connections between English or American literature and other disciplines.

ENG 375 Studies in Literary Criticism  3 credits
Selected works studied in the context of critical theory, aesthetics, or the history of literary criticism.

ENG 376 Film as Literature (Field 3)  3 credits
An exploration of the relationship between two distinct aesthetic forms: film and literature. The course relies heavily on the original written text and then explores the film director’s interpretation of the literary work.

ENG 378 The City in American Literature  3 credits
The city as the focus for literary representation in the American tradition.

ENG 382 African American Literature (Field 3)  3 credits
A survey of major writers and historical trends in African American literature from the time of slavery to the present.

ENG 385 Persuasive Writing  3 credits
Analysis and construction of arguments. Readings on issues in law, politics and education.
### ENG 388 Literary Publishing 3 credits
A practicum combining the study of the history of the literary magazine in America with the practical work of editing *The Quadrangle*, the Canisius College literary magazine.

### ENG 389 Business Communication 3 credits
Practice in writing letters, memos, reports, with models and strategies offered for each form.

### ENG 394 Creative Writing 3 credits (Field 3)
Workshop in the fundamentals of poetry and fiction writing, focusing on the close study and discussion of both student manuscripts and professional texts.

### ENG 396 English Honors Seminar 3 credits
Any student may take one or more of the seminars. Seminar topics vary each semester.

### ENG 401 Texts, Contexts and Subtexts 3 credits
The dynamic of rhetorical situations. Observations/practical writing in rhetorical theory, writing process theory, writing and thinking, socio-cognitive theory. Writing is both creative and analytical. (WST)

### ENG 402 Creativity and Composition Theory 3 credits
A writing theory course that addresses a variety of composing patterns and strategies found in the invention, development and revision of writing for different purposes and audiences.

### ENG 403 Playwriting 3 credits
The playwriting process. Brief review of dramatic technique and theory, followed by working through the process from germinal idea to finished playscript.

### ENG 494 Advanced Creative Writing: Fiction 3 credits
Workshop for experienced writers in fiction. *Prerequisite:* ENG 394 or permission of instructor.

### ENG 495 Advanced Creative Writing: Poetry 3 credits
Workshop for experienced writers in poetry. *Prerequisite:* ENG 394 or permission of instructor.

### ENG 496 Advanced Creative Writing: Literary Non-Fiction 3 credits
Workshop for experienced writers in literary non-fiction, the artful telling of true stories. *Prerequisite:* ENG 394 or permission of instructor.

### ENG 497 English Honors Thesis 3 credits

### ENG 498 Internship 3 credits

### ENG 499 Independent Study 3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. *Prerequisite:* Permission of the instructor, department chair and associate dean.

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**entrepreneurship**

Full-time Faculty: Ji-Hee Kim, Director; Alan G. Weinstein; Stephen C. Molloy; Ronald M. Rivas, Gregory R. Wood.

In today’s economy, one of the most exciting opportunities for building personal wealth and career fulfillment is in the area of entrepreneurship. Entrepreneurship involves the skills necessary to identify and evaluate opportunities, acquire capital and resources, and to start, develop and operate and, for some, sell a business. Virtually all the net growth in employment in the United States since 1975 has come from new ventures and small businesses. Small businesses are a rapidly growing component of American business, creating new technology, providing new products.
and services and opening the doors to financial success and career development.

**Entrepreneurship Major**
The entrepreneurship major at Canisius College includes the study of subjects traditional business programs rarely cover, such as how to start new business and run a small, growth company. The curriculum emphasizes the development of creativity, innovation, interpersonal skills and entrepreneurial leadership. The entrepreneurship major at Canisius offers an integrated curriculum which draws upon management, marketing and finance to provide students with a broad background in business while developing entrepreneurial skills and insights. Students learn to identify and evaluate business opportunities, acquire capital and other resources, and start, develop, grow and sell a business interest. Entrepreneurship majors are encouraged to develop a business and make it a reality. A key component of the curriculum is a year-long experience in which seniors develop business plans for a company — ideally one that they will eventually start and operate themselves. Real-world experience is part of the bedrock of a Canisius business education. In some courses, entrepreneurship majors act as consultants for small businesses. With faculty guidance, students work on projects for and advise practicing entrepreneurs. Students gain valuable insight by examining failure as well success, and often help their clients fix what is going wrong. The entrepreneurship major is career-oriented with courses built upon a business core but tailored to the needs of entrepreneurs.

Entrepreneurship faculty members are drawn from many disciplines. Their enthusiasm for the field inspires them not only to teach and advise students but also to mentor them as they write their business plans. And their own consulting activities keep them engaged with the business world. Our program is designed specifically to help students create their own businesses. Students discover their innate entrepreneurial potential and gain a set of tools and perspectives to capitalize on that potential. Entrepreneurs regularly make presentations in courses.

The Canisius program prepares students to: (1) acquire an existing business, franchise or start up a new venture; (2) manage an existing family business for growth; (3) engage in entrepreneurship – the development of new products or programs or evaluation and pursuit of potential merger or acquisition within a mature corporation.

**Entrepreneurship student learning goals.**
Entrepreneurship majors will demonstrate:
Goal 1: a knowledge of the history and importance of entrepreneurship
Goal 2 an understanding of the ethical challenges and concerns that face entrepreneurs
Goal 3: a knowledge of entrepreneurial principles and processes
Goal 4: an understanding of entrepreneurship in the global marketplace
Goal 5: skill in applying techniques of financial management

**Career Opportunities**
Gaining experience on their own is natural for entrepreneurship majors. Many Canisius College students start and run a business while still pursuing their degrees. A car detailing firm, a landscaping service, a small business promotional agency and a retail store are current examples. Virtually all graduates of the Canisius College entrepreneurship program are involved in their own business ventures. Many junior and senior entrepreneurship majors have actually created and run their own companies.

**Internships**
The entrepreneurship major at Canisius College strongly emphasizes hands-on experience in addition to a high-quality curriculum. There are many opportunities to put classroom learning into practice. The internship experience allows students to find out more about potential careers and make valuable networking contacts. For internships, entrepreneurship majors benefit from the college’s Women’s Business Center (WBC). Pairings of WBC clients and Canisius College students are win-win. Students see how entrepreneurship works in the real world, while WBC clients, many of whom do not have a business education, benefit from student assistance. Internships qualifying for three hours of academic credit are available to upper-division students majoring in entrepreneurship. These opportunities involve a work-and-study experience.
with faculty supervision. Many are paid and involve working with the CEO in entrepreneurial or small business. Students seeking internships for credit must meet certain departmental requirements. For further information, contact the department chair, program director, or your departmental advisor.

**Outside the classroom**

(1) Canisius Entrepreneurs Organization (CEO): Student members develop entrepreneurial leadership and professional communication skill through team building and teamwork as well as knowledge in entrepreneurship by planning and implementing educational outreach and experiential entrepreneurship projects. CEO teams are guided by faculty advisors and supported by businesses and not-for-profit organizations in the community; (2) MYLINKFACE, NexBizSolutions: Success@Business, CEO Market Place, CEO Direct Selling and Marketing Business are student-run ventures to which entrepreneurship majors contribute. MYLINKFACE is an English teaching-learning program that utilizes a dynamic and interactive online multimedia teaching-learning contents to deliver instruction. This program schedule convenient on-line video classes with Canisius College students and certified native English speaking teachers to develop conversation sills, target and support foreign students’ English learning needs. Local small business owners are invited to participate in NexBizSolutions, a CEO Market Place. This program is a bi-weekly market place that promotes small businesses whose products and services are advertised, targeted and retailed to Canisius College students, faculty, staff, and through the community; (3) Annual Empire Creativity Competition: Teams of students have an opportunity to pitch their business ideas to a panel of judges and a chance to win cash prizes. Ideas may be at any stage of development from creation of concepts or ideas to an established business; (4) Women’s Business Center (WBC): Students are encouraged to develop their own businesses, both real and simulated. This practical experience is reinforced through a working relationship with the Canisius College Women’s Business Center. We encourage students to participate in outside of classroom program such as CEO during the undergraduate careers.

**Dual Majors**

Students are encouraged to combine entrepreneurship with another discipline for dual major. The interdisciplinary nature of the entrepreneurship makes it very effective for the students to fulfill a dual major. Science and technology fields also hold great potential for entrepreneurs. Note: To ensure that all prerequisites are met, it is especially important that majors register for the indicated entrepreneurship sections of the following courses: MKT 201 (ENT Section) and FIN 201 (ENT Section). Entrepreneurship electives include: ENT 311, 312, 314, 411, 412, 414, 496, 497, 498, 499, MGT 307, 360, 364, 380, 434, 437, 472, MKT 474, 476, MKT 310, 320, 390, 396. The following courses are strongly recommended as Entrepreneurship electives: ENT 311, 312, 314, 411, 412, 414. Noncredit practica via active involvement in Canisius Entrepreneurs Organization (CEO) and practical experiences with the Canisius College Women’s Business Center are required in the Entrepreneurship major. For further information, contact the entrepreneurship program director.

**Entrepreneurship Curriculum:**

a. **Core Curriculum:** See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements.

b. **Major course requirements:** (21 or 22 courses)

   b. **Common body of business knowledge:** (14-15 courses)

   . MAT 105 Finite Mathematics
     
     AND
     
     MAT 106 Calculus for the Non-Sciences
     
     OR
MAT 111 Calculus I
OR
MAT 115 Calculus for Business I
ACC 201 Financial Accounting
ACC 202 Managerial Accounting
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
ECO 255 Business Statistics I
ECO 256 Business Statistics II
FIN 201 Introduction to Finance
ISB 101 Management Technology
MGT 101 Introduction to Management
MGT 325 Operations Analysis for Business
MGT 370 Managerial Environment
MKT 201E Principles of Marketing (ENT section)

c. Entrepreneurship Major Curriculum:
ENT 101 Experiential Entrepreneurship: Creativity, Innovation, Opportunity, and Idea Generation
ENT 201 Introduction to Entrepreneurship
ENT 401 Small Business Management and Entrepreneurship
ENT 402 New Venture Creation
Entrepreneurship electives: three courses (ENT 311, 314, 411)
ENT 312 International Entrepreneurship
ENT 314 Social Entrepreneurship and Not-for-Profit Sector Enterprise
ENT 414 Franchising and Entrepreneurship

d. Restricted Electives (must be liberal arts) 4 courses

e. Electives 2 or 3 courses.

Recommended Schedule Entrepreneurship

FALL

Freshmen Year
FYS 101
QNT 101 OR MAT 115 OR MAT111
RST 101
ECO 101 (Field of Knowledge Social Sciences)
Business International Requirement
(Two semesters of language or approved regional studies His 107-108, 109-110, 131-132–when taken is flexible)

SPRING

ENG 101
MAT 106 OR Free Elect if MAT 115/111
PHI 101
ECO 102 MICRO
ENT 101
Business International Requirement (2 semester sequence required)
Sophomore Year
ENT 201
ACC 201
Field of Knowledge
ECO 255 (Field Knowledge Math)
PHI 101

Junior Year
Ent Elective
FIN 201
MKT 201E(ENT Section)
Field of Knowledge
Field of Knowledge

Senior
ENT 401
Ent Elective
A&S Elective
A&S Elective
MGT 370

COURSES: 2009 – 2011

ENTREPRENEURSHIP COURSES REQUIRED OF ENTREPRENEURSHIP MAJORS

Complete all the specified courses in the Entrepreneurship major including the following required courses:

ENT 101 Experiential Entrepreneurship: Creativity, Innovation, Opportunity, and Idea Generation 3 credits
Provides an broad introduction to entrepreneurship and prepares students for developing a mindset for thinking creatively, using innovation, recognizing opportunities and generating entrepreneurial ideas. Other topics include strategic and tactical planning and entrepreneurial activities of an actual business enterprise. Students will be participate in the “Business Idea Pitch and Empire Creativity Competition”. Formerly ENT 202. No prerequisite, Open to business and non-business majors including students from the College of Arts and Sciences and the School of Education and Human Services. Spring only

ENT 201 Introduction to Entrepreneurship 3 credits
The foundation course in the entrepreneurship major. Examines the nature of entrepreneurs and the role of entrepreneurship in society. Investigates the entrepreneurial process in a variety of contexts. The course explores issues surrounding new venture creation, the economics of the business, determination of resources needs and acquisition of resources, marketing requirements, deal structures and technology issues. Students will engage in real entrepreneurial projects. No prerequisite, Open to business and non-business majors including students from the College of Arts and Sciences and the School of Education and Human Services. Fall only.

ENT 401 Small Business Management and Entrepreneurship 3 credits
This course focuses on the most common problems encountered by owners, managers and entrepreneurs in organizing and operating small enterprises: Topics include entrepreneurial strategy, pursuing new venture opportunities, management, marketing and financial challenges; creative small business marketing, innovative small business management and entrepreneurial financial management and legal requirements. Students will have a real entrepreneurial world through working with entrepreneurs in the small business enterprise. Formerly ENT 301. Prerequisites: MGT 101 and MKT 201 (Entrepreneurship section) or ENT 201, FIN 201 (Entrepreneurship section), ACC 202 and junior standing.
Fall only.

**ENT 402 New Venture Creation  3 credits**
This is a capstone course that all entrepreneurship majors must take at the end of the program. It is a business plan course. Student must develop an original idea for a new venture and write a comprehensive business plan for that venture. This integrative course brings together the theory and practice of entrepreneurship. The course focuses on identifying opportunities for a new venture and the process of starting and growing a new business. The business plan will apply key principles and concepts to real world situations. Formerly ENT 400. Prerequisites: ENT 401 and senior standing. Spring only.

**ENT 498 Practicum in Entrepreneurship  0 credits**
Noncredit practica via active involvement in Canisius Entrepreneurs Organization (CEO) and practical experiences with the Canisius College Women's Business Center are required in the Entrepreneurship major. Pass/Fail. Spring only in even-numbered year

**MKT 201E Principles of Marketing (Entrepreneurship Section)   3 credits**
Analytical approach to distribution of goods and services in a market economy. Product, price, promotion and channel decisions within context of overall environment. Spring only for entrepreneurship section.

**ELECTIVE COURSES IN ENTREPRENEURSHIP**
Note: Additional or different entrepreneurship electives may be offered. Students should consult the semester-specific Registration and Advisement Guide and/or their academic advisor.

**ENT 311 Entrepreneurship and Family Business  3 credits**
Designed to provide key concepts and challenges faced by family businesses. Family dynamics, succession planning, family creeds and councils, special problems of family businesses and other closely-held corporations will be explored. Formerly ENT 412. Prerequisites: MGT 101 and MKT 201 or ENT 201 and junior standing. Fall only. Elective

**ENT 312 International Entrepreneurship  3 credits**
Explores international entrepreneurship – its dimensions and importance — and how it differs from other areas of international business. Students learn to identify and analyze information available for entrepreneurs seeking to move internationally and to address the important strategic issues in international entrepreneurship. Prerequisites: MGT 101 and MKT 201 or ENT 201 and junior standing. Spring only. Elective

**ENT 314 Social Entrepreneurship and Not-for-Profit Sector Enterprise  3 credits**
This practitioner-oriented course focuses on innovative, values-driven organizations which have explicit civic missions or social purposes and which are most typically associated with the not-for-profit sector of the economy. The chief aims of the course are to help students understand and appreciate the role of the nonprofit sector in creating societal wealth in the economy; to engage participants in institutional efforts to create a good society through exposure to the work of these organization; to have students consider a variety of forms of involvement available to aspiring entrepreneurs in preparing for leadership roles in their communities. Prerequisites: MGT 101 and MKT 201 or ENT 201 and junior standing. Spring only. Elective

**ENT 411 Entrepreneurial Leadership  3 credits**
The purpose of this course is to enable potential entrepreneurs to learn about leading. The course will be focused on the development of the skills necessary to be effective entrepreneurial leaders. Prerequisites: MGT 101 and junior standing. Fall only. Elective

**ENT 414 Franchising and Entrepreneurship  3 credits**
Analytical approach to understanding the basic forms of franchising, legal agreements and requirements in franchising businesses. Explores how to fostering a new generation of independent business owners and reasons for buying a franchise. Prerequisites: MGT 101 and junior standing. Fall only. Elective
ENT 496 Internship in Entrepreneurship  3 credits
Non-routine job experiences that link specific entrepreneurship topics and academic concepts with practical experience. Require supervision by faculty and student demonstration of academic value through papers and reports.

ENT 497 Entrepreneurial Summer Internship in Korea  3 credits
Global business demands an international perspective. Student in the program are encouraged to participate in an international entrepreneurial summer internship in Korea. These may take place at one of the many international and entrepreneurial agencies and companies in the area of South Korea. Non-routine job experiences that link academic concepts with practical experience. Require supervision by Director of Entrepreneurship and student demonstration of academic value through practical work experiences, papers, and reports. This course can be used as an ENT elective, free elective, study abroad in Korea credits.

environmental science

Full-time Faculty: Sara R. Morris, Coordinator; Robert J. Grebenok, Barbara A. Hanson, Helen Hull-Sanders, Steven H. Szczepankiewicz.

The Environmental Science major provides both theoretical and applied knowledge for students interested in professional careers in the environmental sciences, e.g., environmental consulting, environmental regulation and monitoring, environmental conservation, environmental health sciences (toxicology, occupational health, health physics, industrial hygiene, water quality industry) and the ecological sciences. In addition, the curriculum facilitates entry into graduate programs in the ecological, environmental health (health physics, microbiology, occupational health, toxicology) and environmental sciences. ¹

The Environmental Science program is designed to have an interdisciplinary focus with required and recommended courses coming from biology, chemistry, geology, philosophy and social sciences. In addition, it is designed to provide needed job experiences through the completion of two required internships. For students interested in graduate study in the environmental sciences, one internship may be replaced with independent research in the environmental sciences.

Student Learning Goals
Goal 1: Environmental Science majors will have a firm grasp of the basic concepts in environmental science. Students will:
  A. Describe energy or chemical movement through systems;
  B. Describe hierarchical organization of systems;
  C. Describe separation theory;
  D. Describe structure-function relationships.

Goal 2: Environmental Science majors will solve environmentally-related problems. Students will:
  A. Critically analyze an article from the original scientific literature or a professional report;
  B. Design an experiment to address a specific hypothesis;
  C. Read and interpret data;
  D. Read and understand a word problem.

Goal 3: Environmental Science majors will be technically skilled. Students will
  A. Demonstrate an ability to prepare
dilutions;
B. Draw a graph and design a table;
C. Effectively communicate scientific material in written form;
D. Effectively communicate scientific material orally;
E. Understand the general principles and know how and when to use GC, GC-MS, ICP, AA, HPLC, QAQC, GPS, and GIS.

**Qualifications for the major**
Students must maintain an overall 2.0 G.P.A. in their major and support courses to graduate with a degree in environmental science.

**Advisement**
All Environmental Science majors are assigned advisors within the program. All majors should work closely with their advisor in discussing career expectations, choosing their major electives, developing their entire academic program and planning their internships. The advisor may be changed at the student’s request.

**Environmental Science Curriculum**

1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements**

   **(21 courses)**

   **A. Major Courses (19 courses)**
   - BIO 101/101L Introduction to Cellular/Subcellular Biology 4 credits
   - BIO 102/102L Organismal Biology and Laboratory 4 credits
   - BIO 201/201L Evolution, Ecology and Population Biology 4 credits
   - BIO 203 Cellular Biochemistry 3 credits
   - CHM 111-112 General Chemistry 8 credits
   - CHM 227/227L Organic Chemistry and lab 4 credits
   - PSY 201 Basic Statistics for Behavioral Science 4/3 credits
   - Or
   - MAT 141 Inferential Statistics and Computers 4 credits
   - Or substitute with
   - MAT 111 Calculus 4 credits
   - Or substitute with
   - MAT 109-110 Calculus with Review (2 courses) 4 credits
   - BIO 320 Field Ecology 4 credits
   - BIO 305/305L Microbial Ecology 4 credits
   - BIO 360 Environmental Health 3/4 credits
   - Or
   - BIO 460 Environmental Toxicology 4 credits
   - CHM 232 Environmental Analytical Chemistry 4 credits
   - ENV 100 Introduction to Environmental Science Seminar 1 credits
   - ENV 200 Introduction to Hydrology (lab required) 4 credits
   - ENV 352 Environmental Science Junior Seminar 1 credits
ENV 499 Environmental Science Internship (2 at 3 each) 6 credits
GEOL 120 Introductory Geology (lab required) 4 credits

B. Major Electives (2 Courses)

Of the upper level biology classes (300 and 400 level), three of the five must include laboratories (BIO 320 and BIO 305 are two of the three laboratories).

- BIO 335 Plant Biology 3/4 credits
- BIO 343 Entomology 4 credits
- BIO 360 Environmental Health 3 credits
- BIO 365 Vertebrate Zoology 4 credits
- BIO 366 Ornithology 4 credits
- BIO 371 Behavioral Ecology 3 credits
- BIO 430 Medicinal Botany 3 credits
- BIO 460 Environmental Toxicology 3/4 credits
- CHM 301 Classical Physical Chemistry 4 credits
- SCI 360 Scientific Modeling 3 credits

Total 11-12 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. Those considering graduate school are strongly encouraged to take CHM 228 and PHY 201-202 as electives in the junior year. Environmental Ethics (PHI 348) is highly recommended.

COURSES: 2009-2011

ENV 100 Introduction to Environmental Science Seminar 1 credits
Introduction to the field. Career information included. Required in freshman or sophomore year. Spring 2011 only

GEOL 120 Introduction to Geology 4 credits
Basic concepts, including uniformitarianism, the rock cycle, the hydrologic cycle, tectonics and surface processes. Also covers how humans affect and are affected by their environment. Lab required. Prerequisite: Students may not receive credit for both GEOL 120 and PHY 130. Fall 2009 only

ENV 200 Introduction to Hydrology 4 credits
Introduction to hydrologic processes, methods for quantifying hydrologic parameters and processes, and practical exposure to conducting and reporting hydrological studies. Lab required. Prerequisites: GEOL 120 and lab. Spring 201 only

ENV 352 Environmental Science Junior Seminar 1 credit
Students attend scientific talks and present information relevant to their internship experiences. Career preparations also included. Offered every fall

ENV 401 Independent Research 3 credits
Independent laboratory research in environmental science conducted under the supervision of a faculty member. Arrangements made prior to registration. Prerequisite: Written permission of faculty member. Offered every semester

ENV 499 Environmental Science Internship 3 credits
Practical experiences in the environmental sciences. Students must complete two internships in different areas of environmental sciences. Prerequisites: Junior with a G.P.A. of at least 2.0 in the major, a positive recommendation from a faculty member and a completed and approved internship application (applications are available from the program coordinator and must meet the deadlines in the advisement guide). Offered every semester
Today’s world has been shaped by Europe. In fact, the study of Europe is growing even more important as globalization intensifies and the world becomes increasingly interdependent. Meanwhile, the expanding European Union has emerged as an influential player in international diplomacy and business and represents Europe’s future in the 21st century.

European Studies is an interdisciplinary program designed to familiarize students with the politics, history, language and culture of this diverse continent. European Studies can be pursued as part of a double or triple major, as a minor, or as a certificate program. The major and minors are intended to supplement students’ majors in more traditional academic disciplines, as well as provide a “home” for courses taken while studying abroad in Europe.

European Studies helps students build their resumes when added to majors in international relations, political science, history, foreign language, fine arts, English or international business. The European Studies Program encourages students to develop fluency in a modern European foreign language and to study abroad in Europe. By guiding students in their course selection and encouraging them to develop valuable skills and experiences, European Studies helps prepare students for graduate school, apply for fellowships, such as the Fulbright Scholarship, and enter careers in international law, business, diplomacy or teaching.

**Student Learning Goals**

European Studies majors will:

Goal 1:  Apply knowledge of European government and politics to real world situations;

Goal 2:  Communicate well in a foreign language in everyday situations;

Goal 3:  Apply knowledge of European history to real world situations; and

Goal 4:  Apply knowledge of European language, literature and culture to real world situations.

**Co-Curricular Opportunities**

Students may participate in an annual international, intercollegiate simulation of the European Union, known as EuroSim, which is related to PSC 355 (European Union). This program is held in Europe and the United States in alternating years. Additional information is available on the European Studies Program website and from the Political Science department. Students may also enjoy an international living experience in the Campion residence hall.

**Requirements for the major**

Students must have a second major in a traditional academic discipline. An unlimited number of courses may be applied to the major from fields of study in the core curriculum, the All-College Honors Program or from a second, third, or fourth major. No more than four courses at the 100-level may be counted toward the European Studies major. At least one course in the major must be taught by a member of the History Department, and one must be taught by a member of the Political Science Department.
Majors in European Studies must also complete a substantial short- or long-term experience in Europe to be approved by the Program Director. For this, students must complete and submit a reflective journal. An example of an acceptable short-term experience would be EuroSim. Long-term experiences would include one of the college’s study abroad semesters in Europe or an alternative approved by the Program Director. Many courses taken abroad can be applied to the requirements of the major, minor, and/or core. 

Major or minors must demonstrate proficiency in German, French or Spanish through the 216 level, the approved equivalent, or at a lower level of proficiency for other European languages when combined with approved study abroad in a country where that language is spoken.

Jean Monnet Award
Each year, the program honors its best graduating senior, taking into account academic performance, study abroad and co-curricular activity related to Europe.

European Studies Major Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (10 courses)

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSC 150 Comparative Government &amp; Politics</td>
<td>3 credits</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Field 4 course on European history</td>
<td>3 credits</td>
</tr>
<tr>
<td>History and Politics Major Electives</td>
<td>9 credits</td>
</tr>
<tr>
<td>European Foreign Language, Literature or Culture</td>
<td>12 credits</td>
</tr>
<tr>
<td>European Studies Major Electives</td>
<td>6 credits</td>
</tr>
</tbody>
</table>

3. Requirements of second/third major (10-20 courses) 30-60 credits

4. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Courses in a modern European language or those on European literature may be counted toward the language, literature and culture or major elective categories noted above. Latin and Ancient Greek may not be used to fulfill the modern foreign language requirement, but courses in the Classics can be counted in the major. For further details and options, students should consult with their advisor and the Director of
the European Studies Program.

**Recommended Schedule**
The variety and sequence of courses for the European Studies major will vary according to the second or third academic major. Students are encouraged to fulfill their fields of study, attributes for the core curriculum and requirements of the All College Honors Program by taking courses on Europe in the social sciences, art and literature, history, religion, philosophy and foreign language. It is especially important for students to pursue a European foreign language at least through the 215-216 level and fulfill the Field 4 or Honors requirements by taking courses on European history. Students with a strong interest in European politics should take PSC 150 during their first year.

**European Studies Minor**

Total (6 courses) 18 credits
1. **European History & Politics** (3 courses) 9 credits
   - PSC 150 Comparative Government and Politics,
   - OR
   - Field 4 course on European history
   - OR
   - All College Honors course on European history
     - (1 course) 3 credits
     - History and Politics Major Electives (2 courses) 6 credits

2. **European Foreign Language, Literature and Culture**
   - (3 courses) 9 credits

3. **Courses in a European foreign language**
   - (0-8 courses) 0-28 credits

The requirements for proficiency in a modern European foreign language are the same as for the major. No more than three courses at the 100-level may be counted toward the minor. A maximum of two courses in a modern European foreign language may be counted toward the language, literature or culture category of the minor. Courses taken from a second or third major, area studies or the All-College Honors Program may be applied to the European Studies minor.

**International Business**
A special minor has been tailored to the needs and interests of students majoring in International Business. Consult the Program Director for details.
The Fine Arts Department provides opportunities for students to obtain a sound knowledge of the visual and performing arts. The department’s offerings include a major and a minor in art history, a major and a minor in music and a minor in studio art. These programs enable students to explore the arts for their own personal and professional development and to receive training in the theory and practice of the three areas involved.

**Art History Program**

**Martha Dunkelman, Director.**

**Mission**

The mission of the art history program is twofold: to instill a love of art and its history in our students in the hope that this understanding will be an on-going and sustaining part of their lives; and to create a rigorous, stimulating learning environment in which knowledge about works of art and the cultures in which they were produced, as well as the institutions that display and conserve them, is transmitted to the next generation of students. As a discipline, art history seeks to answer the big questions about how humanity has understood itself, using the record of vital aesthetic objects. Majors, minors and non-majors alike will acquire an understanding and appreciation of the cultural heritage of their own and other civilizations both past and present. In a world where ethnic and cultural clashes are commonplace, respect for the artistic heritage of all civilizations is essential. To borrow from distinguished critic Wayne C. Booth’s phrase, the cross-disciplinary nature of art historical study provides students with “the knowledge worth having.”

Majors in art history study a wide range of works of art and cultural objects: paintings, drawings and prints of all kinds, including photographs; film and video; sculpture; architecture and monuments; parks, gardens, and land art; rare books and manuscripts; and installation and performance art. The art history program seeks to represent this richness of subject matter through an array of art history coursework and related activities.

The program faculty consider it essential that students encounter art in person to engage in the pleasure and challenge posed by aesthetic works. To encourage this, writing assignments are often based upon objects held in local collections, such as the Buffalo Science Museum and the Albright-Knox Art Gallery. Art history majors learn how to explain their insights, observations and findings on these non-verbal objects in words. In addition, many students have the opportunity to gain practical experience in an art institution through the Museum Internship course. Art history majors and minors have interned at the Albright-Knox Art Gallery, the Darwin Martin House, the Roycroft Campus, the Buffalo Central Terminal Restoration Corporation, Hallwalls, the Castellani Art Museum, CEPA and Big Orbit Gallery.

A number of professional options are open to the art history student, especially when coupled with graduate training. Students interested in specific
careers as art historians may go on to become academic faculty, museum curators, archaeologists, or art conservators, or they may pursue careers in historical preservation, library science, interior design, art journalism, arts management and many other fields. Because the study of art often leads to an increased ability to observe and analyze, a number of students choose to co-major in art history while completing the requirements for the Pre-Medical Program. Similarly, Pre-Law students often opt to co-major in art history because they learn to analyze and critique methodological approaches from various historical perspectives.

Majors in art history graduate with a truly liberal, humanistic education that prepares them for work in any profession where critical thinking, analysis, research and writing skills are essential, and where cultural understanding and sensitivity are required. Art history courses also benefit students who plan to work in any field that deals with foreign cultures.

All art history students are encouraged to take courses in a foreign language, since jobs and graduate programs in the field often require some familiarity with languages. Students interested in studying abroad are strongly encouraged to pursue two years of foreign language study in advance of their time abroad.

**Student Learning Goals:**
The Art History major will:
Goal 1: Develop and refine the skills needed to understand and analyze works of art.
Goal 2: Understand how works of art are embedded in and reflective of specific cultural-historical contexts.

**Qualifications for the major**
There is no minimum grade requirement in the major but students must have a cumulative 2.0 in order to graduate.

**Art History Curriculum**

1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements:** (12 courses) 36 credits
   A. Major Courses (8 courses)
      - FAH 101 Introduction to Art History I 3 credits
      - FAH 102 Introduction to Art History II 3 credits
      - Ancient and/or medieval art: one course 3 credits
      - Renaissance and/or Baroque art: one course 3 credits
      - Art since 1800: one course 3 credits
      - Non-Western or non period-based topic: one course 3 credits
      - One 300 level Art History course 3 credits
      - FAH 450: Senior Seminar 3 credits
   B. Major Electives (4 courses)
      - Art History Electives 12 credits
3. **Free electives:**

Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

*Dual Majors:* Dual majors are required to complete two art history electives rather than four for a total of ten rather than twelve courses to complete the Art History major.

**Art History Minor (6 courses)**

- **FAH 101 Introduction to Art History I** 3 credits
- **FAH 102 Introduction to Art History II** 3 credits
- Ancient and/or medieval art: one course 3 credits
- Renaissance and/or Baroque art: one course 3 credits
- Art since 1800: one course 3 credits
- **FAH 450: Senior Seminar** 3 credits

In addition to the FAH courses listed below, the following courses may be used towards the art history major and minor: COM 374, COM 375, COM 376, COM 479, FAS 100, HON 320, HON 321, HON 322, HON 326, HON 328, PHI 325, RST 314.

**COURSES: 2009-2011**

- **FAH 101 Introduction to Art History I  3 credits**
  Introduction to formal and cultural analysis of major works of art from Antiquity and the Middle Ages. Covers prehistoric through Gothic art. (Field 3) *Fall, Spring, Summer*

- **FAH 102 Introduction to Art History II  3 credits**
  Introduction to formal and cultural analysis of major works of Western art from the Renaissance through the twentieth century. (Field 3) *Fall, Spring, Summer*

- **FAH 103 Survey of Pre-Columbian and Native American Art  3 credits**
  Formal and cultural analysis of the arts of Native American Indian peoples, Pre-Columbian cultures of Central and South America, and indigenous peoples of the Pacific Islands. (Field 3)

- **FAH 107 Introduction to African and Asian Art  3 credits**
  Introduction to the art of Africa, India, Japan and China. Examines works from various time periods, geographic areas, religious orientations and historical circumstances. (Field 3)

- **FAH 108 African-American Art in Context  3 credits**
  A history of the development of African-American art, from its beginnings in African cultures to contemporary African-American artists working today. (Field 3)

- **FAH 109 History of Architecture  3 credits**
  Formal and cultural analysis of major monuments of global architecture from antiquity to the present. (Field 3)

- **FAH 110 History of Photography  3 credits**
  Introduction to artistic and technical origins and subsequent developments of photographic processes from their invention in 1839 to global contemporary practices. (Field 3)

- **FAH 159 Women and Art  3 credits**
  Selected women artists in western culture, and the analysis of issues involving the relationships among...
gender, representation and art in western culture. (Field 3)

FAH 210 Ancient Egyptian and Near Eastern Art 3 credits
(Accepted for Classics minor credit) Introduction to formal and cultural analysis and interpretation of the painting, sculpture and architecture of ancient Egypt and the ancient Near East.

FAH 213 Greek and Roman Art 3 credits
(Accepted for Classics minor credit) Formal and cultural analysis of the painting, sculpture and architecture of Greece and Rome.

FAH 224 Medieval Art 3 credits
Visual analysis, cultural analysis, and interpretation of the major works of Early Christian, Byzantine, Islamic, Carolingian, Ottonian, Romanesque and Gothic periods.

FAH 245 Renaissance Art 3 credits
Formal, cultural, and iconographic analysis of painting, sculpture, architecture and art theory in Europe from the fourteenth through the sixteenth centuries.

FAH 248 Baroque and Rococo Art 3 credits
Formal, cultural and iconographic analysis of painting, sculpture and architecture during the 17th and 18th centuries in France, Italy, England, Spain and the Netherlands.

FAH 261 Monet and the Age of Impressionism 3 credits
Formal and cultural analysis of major works from Western Europe and the United States, from early 19th century through Post-Impressionism.

FAH 262 Modern Art 3 credits
Formal and cultural analysis of major works from Western Europe and the United States, from late 19th century through 1960.

FAH 265 Contemporary Art 3 credits
Formal and cultural analysis of major works from the United States and Western Europe, from 1940 to the present.

FAH 266 Modern Architecture 3 credits
Introduction to the architectural history of the modern world, focusing on major works in western architecture from the Industrial Revolution to Modernism.

FAH 267 Frank Lloyd Wright 3 credits
Introduction to the influential, iconic work of American architect Frank Lloyd Wright. Presents his major works and considers American and Modern architecture as a whole. Visits to major Wright buildings in Western New York.

FAH 271 Art in Buffalo 3 credits
Examination of the artistic and historical resources in the Greater Buffalo region, including prominent examples of architecture, museum collections and artists in Western New York. Lecture and field trip format.

FAH 340 Topics in Early Modern European Art 3 credits
Varying topics in the art of Europe from 1400 to 1800. Major or minor status or permission of the instructor.

FAH 350 Topics in Modernism 3 credits
Varying topics in art from 1800 to the present day. Course offerings will center primarily on 19th-century France and 20th-century America. Course will run as a seminar. Major or minor status or permission of the instructor.

FAH 352 Museum Studies 3 credits
Research, curatorial and administrative aspects of museum management. Includes researching works of art, cataloging a collection, exhibits, budgets, long-range planning. Major or minor status or permission of the instructor.

FAH 450 Senior Seminar 3 credits
For advanced art history students, to tie together experiences in the field and formalize their understanding of the discipline. Explores the history of art history and the status of institutions and professions within the art world. Junior and senior majors and minors.

FAH 460 Museum Internship 3 credits
Research, curatorial and administrative internship at selected Buffalo area art galleries. Junior and senior majors and minors or permission of internship director.
FAH 499 Independent Study in Art History
3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement.
Prerequisite: Permission of the instructor, department chair and associate dean.

Music Program
Jane Cary, Director.

Canisius College offers a major and a minor in music. Music courses introduce students to the literature and performance of music, as well as its theory and technology. Music appreciation courses cover a wide range of musical styles within a cultural and historical context. Through lectures, videos, listening to music examples in class and attendance at concerts, majors, minors and non-majors are provided with the basic musical vocabulary and listening skills needed to analyze and intellectually critique music and to develop a clear understanding and appreciation of the music of different cultures and periods.

Music theory courses stress creative and analytical skills, and music technology courses take an in-depth look at current digital music technologies used by musicians and sound designers. In keeping with the most recent technology in music, current software programs are used in theory classes and music technology courses, which are taught in a state-of-the-art MIDI lab equipped with Macintosh computers and Roland keyboards.

For students interested in the performance of music, the department offers music ensembles for academic credit. Private instruction can also be taken for credit in voice, piano, guitar, strings, woodwinds, brass and percussion.

Courses are designed for students of all levels, including majors, minors and non-majors. Classes give students opportunities to think clearly, speak articulately and perform confidently. By careful choice of electives, the major can be integrated with other areas of study, with the option of taking a second major or a minor in another department.

For majors, courses provide them with the skills necessary to pursue music related careers and/or graduate studies in professions including music history, music theory and composition, music performance, musical theater, arts management, music merchandizing, music production, church music and many other fields.

For education majors, a music concentration is offered through the School of Education and Human Services in the following teacher certification programs: Early Childhood; Childhood; Dual Early Childhood / Childhood; Dual Students with Disabilities / Early Childhood; Dual Students with Disabilities / Childhood.

To accommodate individual goals and career objectives, students must choose electives carefully in consultation with the Music Program Director.

Student Learning Goals
Goal 1: Music majors will be able to analyze the musical elements of a piece of music.
Students will:
A: Identify the elements of melody, rhythm, harmony, organizational patterns and form in Western art or world music through
aural analysis of recordings;
B: Identify the elements of melody, rhythm, harmony, organizational patterns and form in Western art or world music through visual analysis of musical scores;
C: Analyze a musical performance and accurately describe it using appropriate musical terminology.

Goal 2: Music majors will be able to demonstrate proficiency in vocal or instrumental performance. Students will:
A: Demonstrate the technical and interpretive skills necessary for artistic self-expression in a variety of repertory through solo performance in the student’s primary area of vocal or instrumental performance;
B: Demonstrate the technical and interpretive skills necessary for artistic self-expression in a variety of repertory through ensemble performance in the student’s primary area of vocal or instrumental performance.

Goal 3: Music majors will be able to analyze the musical style of a piece of music. Students will:
A: Describe the compositional and stylistic aspects of musical works with regard to specific musical periods or cultures;
B: Identify aurally the musical period or culture of a piece of music;
C: Identify the musical period or culture of a piece of music through score reading.

Goal 4: Music majors will be able to integrate knowledge in music theory, music history, and performance appropriate to the individual’s sequence of study. Students will:
A: Exhibit the integration of musical knowledge through the presentation of a written paper or a musical performance.

Qualifications for the major
A vocal or instrumental performance audition should be completed during the freshman year to be a music major. Music majors must have a cumulative G.P.A of at least 2.0 and a grade of C- or better in all major courses.

Special Note on Free Elective Credit for Non Majors
A non-major has the option of taking performance courses as free electives. A student may take a maximum of 8 credits of lessons and/or ensembles with no more than 6 of these credits in lessons.

Music Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements:
A. Major Courses
   FAM 230 Music Theory I + lab 4 credits
   FAM 240 Music Theory II + lab 4 credits
   FAM 330 Music Theory III + lab 4 credits
   FAM 340 Music Theory IV + lab 4 credits
FAM 210 Keyboard Musicianship 3 credits
FAM 119 Masterpieces of Music 3 credits
FAM 450 Senior Seminar 3 credits
FAM 225 Music Performance (4 semesters x 2 credits) 8 credits
Choose one of the following: FAM 216, FAM 217, FAM 218, FAM 219, FAM 220 3 credits

B. Music Electives
Choose from one of the following sequences: 9-11 credits
- History and Literature Sequence (3 music literature electives)
- Performance Sequence (4 additional semesters FAM 225 taken in the junior and senior years, plus 1 music elective)
- Music Technology Sequence (DMA 309, DMA 310, plus 1 music elective)
- Music Education Sequence (FAM 250, FAM 350, plus 1 music elective)

Music majors may take DMA 309, DMA 310, HON 323 or HON 324 as FAM (Music) electives.

C. Music Ensembles 8 semesters 0-8 credits
Choose from FAM 171, 172, 174, 175, 181, 182, 184, 185.

Majors must take the same ensemble for all 8 semesters. A student can opt to take music ensemble for zero (0) or one (1) credit. If total credit hours for a semester exceed 18 credits, overload tuition will apply.

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. **Note on free electives:** With the permission of the chair, music majors may take an additional 8 credits of lessons and/or ensembles for free elective credit.
- Students following the History and Literature, Music Technology or Music Education sequences may continue to take FAM 125 or FAM 225 in addition to the required four semesters of FAM 225. These additional credits are applied as free electives in the music major.
- Students following the History and Literature sequence are strongly urged to take at least two semesters of French, German or Italian.

**Recommended Schedule**
In selecting courses for the major, students should consult carefully with their advisors each semester about the best selection of courses for the coming semesters. In addition, students will want to consult the on-line advisement guide, which is published each semester and contains valuable information about course offerings for the coming semester.

**Dual Majors**
Common dual majors involving Music are Digital Media Arts, English, History, Psychology and Education.
Music Concentration in the School of Education

Students can take music as a concentration in the School of Education early childhood, childhood or students with disabilities programs. (See School of Education requirements.) A music concentration enhances the skills of a classroom teacher but does not count as formal certification in music.

Music Concentration in the School of Education

Course Requirements: (10 courses with associated labs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAM 230 Music Theory I + lab</td>
<td>4</td>
</tr>
<tr>
<td>FAM 240 Music Theory II + lab</td>
<td>4</td>
</tr>
<tr>
<td>FAM 330 Music Theory III + lab</td>
<td>4</td>
</tr>
<tr>
<td>FAM 340 Music Theory IV + lab</td>
<td>4</td>
</tr>
<tr>
<td>FAM 210 Keyboard Musicianship</td>
<td>3</td>
</tr>
<tr>
<td>FAM 119 Masterpieces of Music</td>
<td>3</td>
</tr>
<tr>
<td>Choose two of the following:</td>
<td></td>
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<tr>
<td>FAM 216, FAM 217, FAM 218, FAM 219, FAM 220</td>
<td>6</td>
</tr>
<tr>
<td>Choose one of the following:</td>
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<tr>
<td>FAM 123, FAM 124, FAM 224</td>
<td>3</td>
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<tr>
<td>Music Electives (1 course) FAM 250 recommended</td>
<td>3</td>
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</tbody>
</table>

Music Minor (18 credits)

The Music minor enables students majoring in other academic departments to complement their studies with the study of music. The six-course sequence includes courses in theory, literature and the option of performance.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FAM 115 Fundamentals of Music</td>
<td>3</td>
</tr>
<tr>
<td>If the student has sufficient theory background (as demonstrated by a placement test), a music elective may be substituted for FAM 115.</td>
<td></td>
</tr>
<tr>
<td>FAM 119 Masterpieces of Music</td>
<td>3</td>
</tr>
<tr>
<td>Music Literature Courses: Choose two of the following</td>
<td>6</td>
</tr>
<tr>
<td>FAM courses; 123, 124, 212, 213, 214, 216, 217, 218, 219, 220, 224</td>
<td>6</td>
</tr>
<tr>
<td>Music electives: Total of six credits of FAM courses, ensemble and/or lessons.</td>
<td></td>
</tr>
<tr>
<td>Music minors may take DMA 309, DMA 310, HON 323 or HON 324 as FAM (Music) electives.</td>
<td>6</td>
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COURSES 2009-2011

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FAM 115 Fundamentals of Music</td>
<td>3</td>
</tr>
<tr>
<td>Basic elements of music as perceived and notated, and the styles and forms of music derived from them. Practical theory applications include ear training, keyboard playing and composition. (Field 3) <em>Fall and Spring</em></td>
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<tr>
<td>FAM 119 Masterpieces of Music</td>
<td>3</td>
</tr>
<tr>
<td>A survey of Western art music from medieval</td>
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<tr>
<td>Gregorian chant to the present, including the study of musical elements, historical background, musical style and masterworks of various periods. (Field 3) <em>Fall, Spring, Summer</em></td>
<td></td>
</tr>
<tr>
<td>FAM 123 World Musics</td>
<td>3</td>
</tr>
<tr>
<td>Survey course, including folk, traditional and art musics of Europe, Asia, Africa, Australia, North and South America. Classes include listening and videos,</td>
<td></td>
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</tbody>
</table>
with the study of instruments, dances, songs and rhythms of these cultures. (Field 3) Spring

**FAM 124 America’s Music** 3 credits
Music made or continuously used by Americans from beginnings to present. Sacred congregational music, vernacular music, African-American music and cultivated traditions. Historical and sociological development of folk, jazz and popular music as uniquely American. (Field 3) *Fall and Spring*

**FAM 125 Music Performance** 1 credit
Half-hour private lessons, designed for all levels of experience, are offered in piano, voice, classical guitar, woodwinds, brass, strings and percussion.

**FAM 171 Chorale** 0 credits
A mixed-voice singing group that performs repertoire in both the classical and popular styles. (Same as FAM 181 except for "0" credit.)

**FAM 172 Jazz Ensemble** 0 credits
Jazz ensemble that plays a wide range of music from Count Basie to Maynard Ferguson and everything in between. (Same as FAM 182 except for “0” credit)

**FAM 174 Chamber Orchestra** 0 credits
String orchestra that performs a wide range of orchestral literature from the Baroque period through the 20th century. Concert programs provide students with wide experiences in the orchestral arts. (Same as FAM 184 except for “0” credit)

**FAM 175 Concert Band** 0 credits
Campus-wide instrumental ensemble performing a wide variety of standard concert band literature. Performances include a formal concert each semester. (Same as FAM 185 except for “1” credit.)

**FAM 181 Chorale** 1 credit
A mixed-voice singing group that performs repertoire in both the classical and popular styles. (Same as FAM 171 except for “1” credit)

**FAM 182 Jazz Ensemble** 1 credit
Jazz ensemble that plays a wide range of music from Count Basie to Maynard Ferguson and everything in between. (Same as FAM 172 except for “1” credit)

**FAM 184 Chamber Orchestra** 1 credit
String orchestra that performs a wide range of orchestral literature from the Baroque period through the 20th century. Concert programs provide students with wide experiences in the orchestral arts. (Same as FAM 174 except for “1” credit)

**FAM 185 Concert Band** 1 credit
Campus-wide instrumental ensemble performing a wide variety of standard concert band literature. Performances include a formal concert each semester. (Same as FAM 175 except for “1” credit.)

**FAM 210 Keyboard Musicianship** 3 credits
Class instruction in practical keyboard applications including basic keyboard proficiency, harmonization of folk melodies and songs and sight-reading. *Fall 2010*

**FAM 212 Canisius and the BPO Experience** 3 credits
Classes meet at both Canisius College and Kleinhans Music Hall as students study music on stage, behind the scenes and in literature with Canisius College faculty, BPO conductors, soloists and managers. (Field 3) *Fall and Spring*

**FAM 213 Women in Music** 3 credits
Roles of women composers and performers in “art music” from the time of ancient Greece through the present as they struggle to break the confines of traditional gender roles to gain equal representation and recognition. (Field 3)

**FAM 214 Music in Film** 3 credits
Functions of music in silent film, animation and the golden age of American cinema as an extension of European musical practices through the rise of the Hollywood studio system. (Field 3)

**FAM 216 Medieval and Renaissance Music** 3 credits
Traces Western art music from its origins in Gregorian chant through the development and refinement of more complex compositions such as
the mass setting and motet. (Field 3)

**FAM 217 Music of the Baroque Period  3 credits**
A study of Western art music of the Baroque period (1600-1750) beginning with the early operatic works of Monteverdi and concluding with the mature masterpieces of Bach and Handel. Many different instrumental and vocal genres are covered in this course, including concerto, sonata, suite, opera, cantata and oratorio. (Field 3) *Spring*

**FAM 218 Music of the Classical Period  3 credits**
A study of European art music c.1750- 1809 and the historical and cultural forces that helped to shape it. Focus on the lives and works of Haydn, Mozart, Beethoven, their contemporaries and immediate predecessors. (Field 3) *Fall and Spring*

**FAM 219 19th Century Music  3 credits**
Great composers of the Romantic period, including their life, selected works, musical style and influence. (Field 3) *Fall, Spring and Summer*

**FAM 220 Art Music from 1900 to the Present  3 credits**
Impressionism in music which ushers in the twentieth century. European music 1910-1945. American music. New music since 1945. (Field 3) *Fall and Spring*

**FAM 221 Opera Workshop  3 credits**
The study and performance of scenes from operatic literature, including stage movement, acting and historical background of operas. Perfect for students who enjoy singing and acting. *Prerequisite: Permission of instructor.* (Field 3) *Spring 2011*

**FAM 222 Opera Workshop II  3 credits**
The study and performance of scenes from operatic literature, including stage movement, acting and historical background of operas. Perfect for students who enjoy singing and acting. *Prerequisite: Permission of instructor.* (Field 3)

**FAM 224 Afro-Centric Music  3 credits**
Music of West Africa and how, due to the African Diaspora, this music has come to influence both “Art” and “Pop” music on a worldwide basis. (Field 3) *Fall, Summer*

**FAM 225 Music Performance  2 credits**
Hour-length private lessons, designed for the experienced musician, are offered in piano, voice, classical guitar, woodwinds, brass, strings and percussion.

**FAM 230 Theory I  3 credits**
A study of diatonic harmonic progressions typical of 18th and 19th century music. The course includes the analysis of melodic, harmonic, rhythmic and formal aspects of music by composers such as Bach, Mozart, Beethoven and Schubert. *Prerequisite: FAM 115 or permission of instructor. Theory I Lab required.* (Field 3) *Fall*

**FAM 230L Theory I Lab  1 credit**
Weekly lab instruction in sight-singing and ear-training. Development of aural skills in melodic, harmonic and rhythmic dictation. Includes computer-assisted instruction. Course to be taken concurrently with FAM 230 Theory I. *Fall*

**FAM 240 Theory II: Fundamentals of Four-Part Writing  3 credits**
A study of four-part composing as developed in Europe, particularly tonal music associated with Bach, Mozart and Beethoven, which also forms the basis of modern popular music. *Prerequisite: FAM 230 or permission of instructor. Theory II Lab required.* (Field 3) *Spring*

**FAM 240L Theory II Lab  1 credit**
Weekly lab instruction in sight-singing and ear-training. Development of aural skills in melodic, harmonic and rhythmic dictation. Includes computer-assisted instruction. Course to be taken concurrently with FAM 240 Theory II. *Spring*

**FAM 250 Music for Children  3 credits**
Course provides the backgrounds, models and skills necessary to create musical experiences for the elementary-age child.
FAM 330 Theory III 3 credits
19th century styles and analysis of chromatic harmony with the study of works by Beethoven, Schubert, Franck, Wagner and Mahler. Focus on counterpoint skills. Continuation of notation and sequencing software applications. Prerequisite: FAM 240. Theory III Lab required. Fall

FAM 330L Theory III Lab 1 credit
Weekly lab instruction in sight-singing and ear-training. Development of aural skills in melodic, harmonic and rhythmic dictation. Includes computer-assisted instruction. Course to be taken concurrently with FAM 330 Theory III. Fall

FAM 340 Theory IV 3 credits
Musical styles, forms and techniques of the 20th century, including impressionism, atonality, serialism, minimalism and electronic applications. Study of selected works by Debussy, Ravel, Stravinsky, Schoenberg, Messiaen, Boulez, Glass and Varese. Prerequisite: FAM 330. Theory IV Lab required. Spring

FAM 340L Theory IV Lab 1 credit
Advanced lab instruction in sight-singing and ear-training. Includes computer-assisted instruction. Course to be taken concurrently with FAM 340

FAM 350 Basic Conducting 3 credits
Development of students’ basic conducting skills of beat, pattern and gesture, leadership of musical activities and musicianship including applied ear training and score analysis.

FAM 350L Basic Conducting Lab 1 credit
Advanced lab instruction in sight-singing and ear-training. Includes computer-assisted instruction. Course to be taken concurrently with FAM 350.

FAM 340 Theory IV 3 credits
Musical styles, forms and techniques of the 20th century, including impressionism, atonality, serialism, minimalism and electronic applications. Study of selected works by Debussy, Ravel, Stravinsky, Schoenberg, Messiaen, Boulez, Glass and Varese. Prerequisite: FAM 330. Theory IV Lab required. Spring

FAM 340L Theory IV Lab 1 credit
Advanced lab instruction in sight-singing and ear-training. Includes computer-assisted instruction. Course to be taken concurrently with FAM 340

FAM 450 Senior Seminar 3 credits
An integration of the diverse areas of music into a coherent whole. Course includes supervised reading and research culminating in a writing and/or performance project. Prerequisite: Music majors or permission of program director. Spring

FAM 498 Internship 3 credits
Students taking music as a major or minor are matched in local professional settings including performing organizations and theaters. Prerequisite: Consent of the instructor and permission of the chair.

FAM 499 Independent Study in Music 3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. Prerequisite: Permission of the instructor, department chair and associate dean.

Studio Art Program
Michael F. Tunney, S.J., Director.

Canisius College offers a minor in studio art that prepares serious art students for further undergraduate study at an art school. The minor is also an option for students who would like to experiment in visual media for their own personal enrichment. All course offerings will improve students’ conceptual, perceptual and technical art making skills. Studio art minor students will develop a body of work and portfolio alongside a faculty comprised of professional artists. Students’ art works are displayed throughout the academic year in the Peter A. and Mary Lou Vogt Art Gallery on Lyons Hall’s fourth floor. Students who complete the studio art minor will have the knowledge, experience and portfolio necessary for further studies in the visual arts. They will also have a deeper understanding of themselves as human beings.

Departmental Learning Goals
Goal 1: Studio Art students use visual design terminology. Students will:
  Objective A: Define the elements and principles of design in visual art through discussion and critique.
Objective B: Write an artist’s statement using terms describing the elements and principles of design.

Goal 2: Studio Art students develop technical skills. Students will:
  Objective A: Utilize hand/eye coordination when rendering from life, still life, or nature.
  Objective B: Utilize skills specific to different studio disciplines such as woodworking, printmaking, carving, sculpting or photography.

Goal 3: Studio Art students articulate, verbally and in writing, conceptual approaches used in studio art while making, discussing, and observing art. Students will:
  Objective A: Explicate the rationale behind the art they make, materially, conceptually and formally.

Goal 4: Studio Art students describe broad developments and trends in art history and contemporary art. Students will:
  Objective A: Position their work within a contemporary art framework and compare their work within larger art historical themes.
  Objective B: Evaluate any given piece of art within a contemporary framework and find its fundamental art historical significance.

Goal 5: Studio Art students experience placing work on public display. Students will:
  Objective A: Locate galleries or venues appropriate for the display of their work.
  Objective B: Curate and hang their work for exhibition.

Studio Art Minor (6 courses)
The heart of the studio art minor consists of four required courses:

- FAS 110 Two-Dimensional Design 3 credits
- FAS 130 Three-Dimensional Design 3 credits
- FAS120 Drawing I 3 credits
- FAS 250 Studio Art Capstone 3 credits
- Studio Art Electives: 2 courses 6 credits

Students further explore and deepen their art making skills through a combination of two elective courses in computer design, drawing, painting, photography, printmaking and/or sculpture.

Prospective minors should consult the Studio Art program director.

COURSES: 2009-2011

Freshman Seminar:
FYS 101 Special Topics Writing Intensive 3 credits
This writing-intensive studio art class requires students to look at, write about and create art works based on contemporary issues in art. Students will be exposed to local gallery exhibitions and will engage in the production and revision of 15 pages of polished prose that will be followed by the creation of art in a hands-on studio environment.

FAS 110 Two-Dimensional Design 3 credits
Investigation of the formal elements and principles of design in two dimensions. Hands-on studio environment with computer-based assignments will involve students in practical and creative solutions to design problems. (Field 3) Fall, Spring

FAS 120 Drawing I 3 credits
Investigation of the formal, material and historical fundamentals of drawing. Exercises with dry and wet
media progress through perceptual rendering, collage, narrative and imaginative drawing. (Field 3) Fall, Spring, Summer

FAS 130 Three-Dimensional Design 3 credits
Investigation of the formal elements and principles of design in three dimensions and their relationship with the space they occupy. Particular emphasis is placed on material and presentation. (Field 3) Fall, Spring, Summer

FAS 131 Sculpture I 3 credits
Emphasis on traditional techniques. Assignments cover specific materials (plaster, wood, styrofoam, metal, paper) and particular techniques (armature construction, wood working, riveting, mold making, papier mache). (Field 3) Prerequisite: 3D Design or portfolio review by instructor. Fall, Spring, Summer

FAS 140 Introduction to Still Photography 3 credits
Basic techniques of photography explored through the use of 35mm cameras and film. Emphasis on the development of black and white film and the visualization process of taking pictures. Prerequisite: 35mm camera with manual controls. (Field 3) Fall & Spring

FAS 141 Digital Photography 3 credits
Review basic photo skills as they relate to the operation of digital cameras. Students are introduced to the digital workflow using Photoshop to develop a personal style that is reflected in a printed and digital portfolio. Prerequisites: No prior photo experience, students must have a D-SLR camera (digital single lens reflex camera) (Field 3) Fall, Spring, Summer

FAS 142 Travel Photography 3 credits
Learn how to navigate location shoots and capture the spirit of the specific culture in front of you. Find the right location shots, maximize the light situations regardless of climate or time of day and learn proper ethical behavior for photojournalists. Review basic camera operations for both film and digital picture taking. (Field 3) Summer

FAS 150 Color 3 credits
Combines in-depth color theory with actual design and composition making learned through traditional studio set-ups and contemporary computer applications. (Field 3) Fall

FAS 151 Personal and Political Art 3 credits
Course engages students in the interplay between personal modes of artistic expression and political concerns in art. Contemporary mixed media and installation art will be primary considerations. Drawing, painting and collage will be the principal media. (Field 3)

FAS 160 Printmaking I 3 credits
Introduction to the history and processes of basic printmaking including relief printing, monoprints, pronto plate lithography, ‘image-on’ intaglio and other photo-sensitive and non-toxic processes. Prerequisite: Drawing I or permission of instructor. (Field 3) Fall

FAS 161 Experimental Printmaking Techniques 3 credits
Introduces students to the history of printmaking as an art form. Students will explore alternative methods of mark-making and hand-printing without the use of toxic chemicals, acids or presses. This process incorporates drawing and design skills while exploring color relationships via the intrinsic nature of printmaking. (Field 3) Summer

FAS 162 Monotype Techniques 3 credits
Introduction to and concentration on monotype, a combination of printmaking and painting. This process utilizes drawing, painting and design skills. Prerequisite: Drawing I or permission of instructor. (Field 3) Spring

FAS 170 Painting I 3 credits
Investigation of the formal, material and historical fundamentals of painting. Exercises in watercolor and acrylic paint progress through grisaille, monochromatic, limited palette and full palette treatments of subject matters. (Field 3) Spring, Summer

FAS 220 Drawing II 3 credits
Deals with conceptual and perceptual issues of representation. Emphasis is on finding a more personal and creative vision. Artwork, readings, gallery visits,
critiques and discussions included. **Prerequisites:** Drawing I. (Field 3) *Fall, Spring*

**FAS 222 Figure Drawing I** 3 credits
In-depth work with human figure as primary subject matter. Students work from model for half the semester. Emphasis on anatomical structures and expressive use of figure in composition-making. Work in range of media. Students also work on independent, personal projects using figure. (Field 3) *Fall*

**FAS 231 Clay Studio** 3 credits
Course emphasizes the basic process of clay modeling and mold making in plaster. Beginning with hand-built sculptural forms, students progress to realistic clay modeling that will be completed by making a mold and casting in plaster. (Field 3)

**FAS 240 Color Photography** 3 credits
Explores the basic concepts and techniques of color photography using both traditional silver-based media and the digital studio. **Prerequisite:** Intro Photo or approval of instructor, digital or 35 mm. camera w/ manual controls. (Field 3)

**FAS 241 Intermediate Photography** 3 credits
In-depth study of advanced digital photographic workflow including color management, visual interpretation of the digital negative and the application of artificial light in the studio and field. **Prerequisite:** Intro Photo or portfolio review with instructor; 35mm digital single lens reflex camera with manual controls. (Field 3)

**FAS 250 Studio Art Capstone** 3 credits
The culmination of a studio art minor, students put together a portfolio and create a body of work or installation for exhibit in the gallery. The portfolio includes work from the other three required minor courses and new work created for the capstone project. **Prerequisite:** 2D Design, Draw I and 3D Design or permission of instructor. *Spring*

**FAS 260 Printmaking II** 3 credits
A continuation of printmaking processes learned in Printmaking I. Students experience a more self-guided studio environment where they are expected to build upon the techniques and processes learned in Printmaking I and expand on them in the form of practice and experimentation. Personal style and conceptual direction begin to develop alongside process. **Prerequisite:** Printmaking I (Field 3) *Spring*

**FAS 270 Painting II** 3 credits
Students consider further technical and conceptual issues of representation and abstraction. Goal is a more personal and creative vision. Artwork, readings, gallery visits, critiques and discussions included. **Prerequisites:** 2D Design and Painting I (Field 3) *As needed.*

**FAS 271 Landscape Painting** 3 credits
Photo-based and open air painting will be the focus of this course. Students will also consider critical issues and trends in landscape painting and representation. Issues will include urban vs. natural scenes, panoramic and close-up composition making, and imagined, abstracted and perceptually observed subject matter. **Prerequisite:** 2D Design, Drawing I or Painting I preferred (Field 3)

**FAS 322 Figure Drawing II** 3 credits
Further work with human figure as primary subject matter. Students work from model for half the semester. Review anatomical structures and continue with expressive use of figure in composition-making. Work in range of media. Students also work on independent, personal projects using figure. **Prerequisite:** Figure Drawing I (Field 3)

**FAS 370 Figure Painting III** 3 credits
Students work primarily from models for portrait and full figure painting compositions. Formal, technical issues are stressed. Conceptual and contemporary issues concerning the human figure are also significant considerations. **Prerequisite:** Figure Drawing II or Painting II preferred. (Field 3) *As needed.*

**FAS 499 Independent Study in Studio Art** 3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. **Prerequisite:** Permission of the instructor, department chair and associate dean.
The History Department offers a varied series of courses at both the introductory and advanced levels. These wide-ranging courses are designed to acquaint students with the richness of human historical experience and to introduce them to the historian’s craft. Through this intellectual endeavor, students will gain an appreciation of the inter-relatedness of human activity in social, political, economic, cultural and intellectual affairs. They will become aware of the impact of change over time and escape the tyranny of present-mindedness.

Courses at the 100 and 200-level serve as introductory courses for the major, and also satisfy Field 4 requirements in the Core Curriculum. These lower-level courses assume no prior college-level study. 100-level courses are broad surveys which furnish students with a general knowledge of the history and traditions of various regions and periods. 200-level courses are somewhat more specific in approach, focusing on the history of individual nations outside the United States, specific populations, or particular themes. Both 100- and 200-level courses provide the student with an intellectual and chronological framework within which study in other disciplines can be placed. They provide an appreciation of the fundamental trends that shape the world in which we live.

Courses at the 300 level deal with a wide variety of specialized areas of historical inquiry, including American, European and non-Western developments both ancient and modern. Some courses focus on major national or geographic areas, while others emphasize period, topical or thematic approaches. These upper-level courses provide the student with an opportunity for further development of their historical understanding and critical thinking. 300-level courses are appropriate for history majors and minors and for non-majors who have completed the Field 4 requirement and wish to continue their study of history at a more advanced level.

The History Department offers a departmental honors program consisting of four sequential seminars at the advanced level: HIS 401, HIS 402, HIS 410 and HIS 411. These courses are specifically designed to develop the research, writing and analytical skills necessary for success in graduate school or law school. Students who complete these four courses with a 3.25 average and a 3.00 average in all of their history courses graduate with Honors in history. The departmental honors program is appropriate for both history majors and students majoring in Social Studies Education. It is compatible with the All-college Honors Program, as well as the Core Curriculum.

History offers pre-professional experience for students through training in the evaluation of evidence, critical thinking and clarity of oral and written expression. The content and skills of the history major program are useful for those anticipating careers in law, communications media, journalism, library science, government service, teaching or managerial positions in business or industry.
Student Learning Goals
The History major will:

Goal 1: Develop knowledge of historical content characterized by both breadth and depth.
Goal 2: Learn to think historically.
Goal 3: Develop skills in historical writing.

History Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major Requirements (12 courses)
   
   American history: two courses 6 credits
   European history: two courses 6 credits
   History of Africa, Asia or Latin America: two courses 6 credits
   History electives (6 courses) 18 credits

   One of the 12 courses must focus on the period before 1800.
   The 36 credits in history may not include more than 12 credit hours in 100-level courses, and must include 12 credit hours in 300-level courses.

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Recommended Schedule
In planning their schedules, students should consult their advisors each semester about course selections and requirements. In addition, students will want to consult the on-line advisement guide, which is published each semester and contains valuable information about course offerings for the coming semester.

Note: Students majoring in history or in Social Studies education are strongly encouraged to study either an ancient or a modern foreign language. Foreign language study is essential for those who plan to study history at the graduate level; at the undergraduate level, it plays a vital role in achieving the Core goal of global awareness, and the history program’s objective of developing historical knowledge which is characterized by geographical and cultural breadth.

Dual Majors
It is possible to combine the history major with many other programs to complete a dual major. History is a multifaceted discipline, and its students find connections with nearly other discipline. It is not surprising
that our students pursue double majors in a wide variety of fields, including Anthropology, Communications, English, European Studies, International Relations, Mathematics, Modern Languages, Philosophy, Political Science, Psychology and Urban Studies.

**History Minor**
The History minor complements majors in other academic departments by providing students with exposure to the study of history that is both comprehensive and intensive.

Students majoring in various disciplines such as English, communications, psychology, political science and philosophy can often benefit from pursuing a minor in history. Those students who hope to pursue graduate studies in the aforementioned disciplines, as well as law, would be well-advised to consider a history minor.

**The History Minor (7 courses)**

**Survey courses:** two or three 100-level courses in American, European, Ancient, Asian or Latin American history 6 or 9 credits  
**Upper-level courses:** four or five history courses (200-499). 12 or 15 credits  
**Distribution:** The seven courses must include at least one course in American history, one in European history, and one in the history of Africa, Asia or Latin America. At least one of the seven courses must concentrate on the period before 1800.

Note: With the chair’s permission, transfer students and students with an exceptional secondary background in history may be allowed to substitute upper-level courses for the 100-level requirement.

**COURSES: 2009-2011**

Note: History courses satisfying the field requirements are noted below. Some history courses may also satisfy knowledge and skills attributes in the Core Curriculum. Lists of courses satisfying field and attribute requirements will be available online.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CLS 103 Greek History</td>
<td>3</td>
<td>See CLS 103 for course description. <em>Fall</em></td>
</tr>
<tr>
<td>CLS 104 Roman History</td>
<td>3</td>
<td>See CLS 104 for course description. <em>Spring</em></td>
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<tr>
<td>HIS 106 The Medieval World</td>
<td>3</td>
<td>The development of a distinctive European civilization between 500 and 1500. Emphasis on Europe’s contacts and conflicts with the “competing” cultures of Byzantium and Islam. <em>(Field 4) Fall and/or Spring</em></td>
</tr>
<tr>
<td>HIS 107 History of Modern Europe to 1815</td>
<td>3</td>
<td>The major political, economic, social and intellectual currents in Western Civilization from 1500 to 1815. <em>(Field 4) Fall and/or Spring</em></td>
</tr>
<tr>
<td>HIS 108 History of Modern Europe since 1815</td>
<td>3</td>
<td>The major political, economic, social and intellectual currents in Western Civilization from 1815 to the present. <em>(Field 4) Fall and/or Spring</em></td>
</tr>
<tr>
<td>PSC 110 Western Political Tradition I</td>
<td>3</td>
<td>See PSC 110 for course description.</td>
</tr>
<tr>
<td>PSC 111 Western Political Tradition II</td>
<td>3</td>
<td>See PSC 111 for course description.</td>
</tr>
</tbody>
</table>
HIS 109 History of Asia to 1800  3 credits
Comparative study of civilizations, cultures, religions and institutions of the Far East, and South Asia. (Field 4) Fall

HIS 110 History of Asia since 1800  3 credits
The various independence and revolutionary movements and their evolution into the modern nation-states of Asia. (Field 4) Spring

HIS 123 History of the United States: The Colonial Period to Reconstruction  3 credits
Introduction to major themes of American history through the Civil War including: the Columbian Exchange and colonization, American Revolution, paradox of freedom and slavery, emergence of a market economy, secession and Reconstruction (Field 4) Fall and/or Spring

HIS 124 History of the United States: 1877 to the Present  3 credits
Industrialization and urbanization of the United States with the accompanying social, economic and political problems; America’s emergence as a major power in world affairs. (Field 4) Fall and/or Spring

HIS 131 Latin American History to 1830  3 credits
Pre-Columbian Indian civilizations. Conquest and colonization. Economy, society, and the Church. Eighteenth century reforms and independence. (Field 4) Fall

HIS 132 Latin American History since 1830  3 credits
Overview of economy and society. Upheavals and revolutions in Argentina, Brazil, Colombia, Cuba, Chile and Mexico (Field 4) Spring

HIS 211 Women in the Western World  3 credits
Comparative history of women in Europe, Britain and America from Renaissance to present. Deals with changing role of women in society, politics and the economy and on the development of feminism as an intellectual and political force. (Field 4) Fall and/or Spring

HIS 212 Men and Ideas in History  3 credits
Role of ideas in historical change. Relationship between the ideas of a particular period and the social, political and economic forces that helped to shape them (Field 4) Fall and/or Spring

HIS 213 Twentieth Century Europe  3 credits
Major political, economic, social and intellectual currents in Europe since 1900. (Field 4) Fall and/or Spring

HIS 214 History of the United States: The Colonial Period to Reconstruction  3 credits
Introduction to major themes of American history through the Civil War including: the Columbian Exchange and colonization, American Revolution, paradox of freedom and slavery, emergence of a market economy, secession and Reconstruction (Field 4) Fall and/or Spring

HIS 226 History of Ireland  3 credits
Examines political, social and cultural developments from medieval origins through invasion, conquest, colonization and finally independence from Great Britain. Special emphasis on the development of Irish nationalism and on the emergence of Eire as a modern European state. (Field 4) Spring

HIS 228 World War II in Films  3 credits
A survey history of World War II using films to examine military, political, cultural and psychological dimensions of the war. (Field 4) Summer

HIS 229 The Violent Century in Films 3 credits
The major events of the 20th century, including World Wars I and II, the Russian Revolution, the Great Depression, the rise of Fascism and the Vietnam War. (Field 4) Summer

HIS 230 The Holocaust in Historical Perspective  3 credits
A historical survey of the Holocaust that places Nazi Germany’s campaign to exterminate European Jewry during World War II (1939-45) in a broader historical context by tracing the history of anti-Semitism from its origins in late antiquity to the emergence of racial anti-Semitism in the nineteenth and twentieth centuries. (Field 4) Fall and/or Spring

HIS231 The Holocaust in History and Literature  3 credits (Field 4)

HIS240 Women in American History, Colonial Times to 1880  3 credits (Field 4)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIS241</td>
<td>Women in American History, 1880 to the Present</td>
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<td>(Field 4)</td>
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<tr>
<td>HIS 242</td>
<td>The Family in American History</td>
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<tr>
<td></td>
<td>This course explores the social history of American</td>
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<td>families from colonial times to the present. By looking</td>
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<td>at the experiences of a variety of families – colonial</td>
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<td>Puritan, slave, middle-class Victorian, frontier, immigrant, 20th century suburbanite — it examines themes such as work, childhood, marriage and gender roles. (Field 4)</td>
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<tr>
<td>HIS 243</td>
<td>The City in American History</td>
<td>3</td>
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<tr>
<td></td>
<td>This course surveys the social, political, economic, and</td>
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<td></td>
<td>cultural history of American urban life in the</td>
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<td>nineteenth and twentieth centuries. We will focus on the</td>
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<td></td>
<td>changing face of the cities as well as on the people</td>
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<td>who lived, worked and played there. (Field 4)</td>
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<tr>
<td>HIS 245</td>
<td>US Social History: The Nineteenth Century</td>
<td>3</td>
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<td></td>
<td>(Field 4)</td>
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<tr>
<td>HIS 246</td>
<td>US Social History: The Twentieth Century</td>
<td>3</td>
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<td>(Field 4)</td>
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<td>HIS 248</td>
<td>The War of 1812</td>
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<td>This course concentrates on the nature of American</td>
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<td>society before the War of 1812; the political, ideological, and social origins of the conflict; the course of the War of 1812; and its lasting political, economic, cultural and social consequences. (Field 4)</td>
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<tr>
<td>HIS 250</td>
<td>American Political Campaigns</td>
<td>3</td>
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<td>(Field 4)</td>
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<tr>
<td>HIS 251</td>
<td>Sports in American History</td>
<td>3</td>
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<tr>
<td></td>
<td>The historical development and impact of sports,</td>
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<td>especially spectator sports, in the United States. (Field 4)</td>
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<tr>
<td>HIS 254</td>
<td>First Peoples</td>
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<td>The story of the first peoples of the Americas from their initial appearance 20,000 years ago down to the present, with a special emphasis on native North America. Includes a survey of the histories and cultures of the indigenous peoples of the Americas, employing the latest findings from archaeology, anthropology, genetics, ethno botany as well as history. (Field 4)</td>
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<tr>
<td>HIS 255</td>
<td>African American History</td>
<td>3</td>
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<tr>
<td></td>
<td>Overview of African American history from African roots</td>
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<td></td>
<td>and American enslavement to today’s hip-hop music.</td>
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<td>Emphasis is on black survival and strategies for liberation. (Field 4)</td>
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<tr>
<td>HIS 259</td>
<td>Environmental History of the US</td>
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<tr>
<td></td>
<td>This course introduces students to the field of</td>
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<td>environmental history through an in-depth examination of</td>
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<td>the relationship between humans and the natural world in</td>
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<td>the United States. The course begins with Native American ecological practices and ends with the modern environmental movement. Students will read an array of primary and secondary sources relating to land development, western expansion, national parks, the timber industry, regional ecology and environmental policy. (Field 4)</td>
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<tr>
<td>HIS 260</td>
<td>Canada and the World</td>
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<tr>
<td></td>
<td>A survey of Canada’s place in world history from the</td>
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<td>colonial period to the present. Among the topics examined are Native-Canadians, the British-French rivalry for North America, Canada’s emergence as a nation within the British empire, Canada-US relations and the modern multicultural Canadian state (Field 4)</td>
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<tr>
<td>HIS 263</td>
<td>Wars of Latin America</td>
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<td></td>
<td>Wars of independence and major conflicts of the</td>
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<td>nineteenth century. Military history of Mexican, Cuban</td>
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<td>and Nicaraguan revolutions. Border clashes and guerilla insurgencies of the twentieth century. Argentina’s war with England. (Field 4)</td>
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<tr>
<td>HIS 280</td>
<td>The Making of Modern Africa</td>
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<td>Development of modern Africa from the diverse societies of</td>
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<td>pre-colonial Africa through the impact of imperialism to an examination of the problems facing modern African states. (Field 4)</td>
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<tr>
<td>HIS 300</td>
<td>Historical Geography</td>
<td>3</td>
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<td>Examines the interaction between the historical process</td>
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and human, physical and cultural geography. 
Required for double-major in history and social studies education.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CLS 300</td>
<td>Roman Law and Society</td>
<td>3</td>
</tr>
<tr>
<td>CLS 301</td>
<td>Age of Cicero</td>
<td>3</td>
</tr>
<tr>
<td>CLS 308</td>
<td>Pagans and Christians</td>
<td>3</td>
</tr>
<tr>
<td>CLS 311</td>
<td>Alexander the Great</td>
<td>3</td>
</tr>
<tr>
<td>CLS 312</td>
<td>The Greek Enlightenment</td>
<td>3</td>
</tr>
<tr>
<td>CLS 314</td>
<td>The Decline and Fall</td>
<td>3</td>
</tr>
<tr>
<td>HIS 305</td>
<td>Disorderly Sisters and Mothers: Women in American Religious History</td>
<td>3</td>
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<tr>
<td>HIS 306</td>
<td>The American Religious Experience</td>
<td>3</td>
</tr>
<tr>
<td>RST 325</td>
<td>Early Christianity</td>
<td>3</td>
</tr>
<tr>
<td>RST 326</td>
<td>Medieval, Renaissance and Reformation Christianity</td>
<td>3</td>
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<tr>
<td>RST 327</td>
<td>Modern Global Christianity</td>
<td>3</td>
</tr>
<tr>
<td>HIS 309</td>
<td>World War I</td>
<td>3</td>
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<tr>
<td>HIS 316</td>
<td>Reformation Europe</td>
<td>3</td>
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<tr>
<td>HIS 319</td>
<td>The Enlightenment</td>
<td>3</td>
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<tr>
<td>HIS 320</td>
<td>The French Revolution and Napoleon</td>
<td>3</td>
</tr>
<tr>
<td>HIS 332</td>
<td>Medieval and Early Modern England</td>
<td>3</td>
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<tr>
<td>HIS 333</td>
<td>Britain in an Age of Revolution</td>
<td>3</td>
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<tr>
<td>HIS 334</td>
<td>Britain in the Age of Victoria</td>
<td>3</td>
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<tr>
<td>HIS 335</td>
<td>Britain in the Era of Total War</td>
<td>3</td>
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</tbody>
</table>

See CLS 300 for course description
See CLS 301 for course description
See CLS 308 for course description
See CLS 311 for course description
See CLS 312 for course description
See CLS 314 for course description
See RST 325 for course description
See RST 326 for course description
See RST 327 for course description

See RST 327 for course description

A study of the origins, conduct and aftermath of the Great War from a global perspective. Emphasis on the diplomatic, social and military aspects of the War.
The Reformation from Luther to the 30 Years War.
Intellectual, cultural and social history of 18th century enlightenment with specific emphasis on Voltaire, Diderot, Montesquieu and Rousseau.
The transformation of aristocratic Europe into a modern society controlled by a bourgeoisie and oriented toward scientific and industrial progress.

Growth of English society and government from 1154 to 1688. Topics include the evolution of parliamentary government and the social effects of reformation and revolution.
Social and political history of eighteenth century Britain. Emphasis on responses to the American, French and Industrial revolutions.
Social and political history of 19th-century Britain. Topics include the transition from rural to urban society, the evolution from aristocratic to democratic politics, and the emergence of characteristically ‘Victorian’ social and cultural patterns.
Investigates the social and political history of Britain from 1901 to the present. Topics include the impact of two
world wars, the loss of Empire and Britain’s changing relationship with Europe. Emphasis will be placed on Britain’s transition from a hierarchical society to a theoretically classless one, and from a United Kingdom defined by “Englishness” to one which is increasingly multinational and multiethnic.

**HIS 336 Modern Mexico  3 credits**

**HIS 337 The History of Globalization  3 credits**
A survey of the cultural, institutional, economic and historical origins and nature of today’s global economy.

**HIS 338 The British Empire  3 credits**
The growth and character of the British Empire from 17th century throughout the 20th. Emphasis in social, cultural and political impact of colonization and decolonization in such regions as India, Africa, the Caribbean and Australia.

**HIS 339 Nazi Germany, World War II and the Holocaust, 1933-45  3 credits**
An intensive study of the Third Reich from Hitler’s appointment as chancellor in 1933 to the defeat of Nazi Germany in 1945. Course will focus on the political, diplomatic and military history of the Third Reich with special attention on the mass murder of European Jewry.

**HIS 340 Decade of War: 1936-48  3 credits**
The course will examine in detail the Spanish Civil War, the Rise of the Radical Right in Central and Eastern Europe, Soviet Totalitarianism, World War II and its aftermath.

**HIS 344 Imperial Russia  3 credits**
From Peter the Great to the Russian Revolution.

**HIS 345 Twentieth Century Russia  3 credits**
Political, economic and foreign policies of the Communist regime and after.

**HIS 346 The Age of European Fascism, 1919-1945  3 credits**
A comparative analysis of fascist movements and regimes in Europe between the two world wars with particular attention devoted to fascist Italy and Nazi Germany.

**HIS 347 The History of Marxism  3 credits**
History of Marxism as an intellectual tradition, with emphasis on writings of Marx and Lenin, from the nineteenth to the twentieth century.

**HIS 350 20th Century Eastern Europe  3 credits**
Ethnic, linguistic and geographic origins. Emphasis on social, political, economic and cultural developments since 1918.

**HIS352 Cuban Revolution  3 credits**

**HIS 354 Chinese Culture and Civilization before 1900  3 credits**
The course traces the roots of Chinese culture and civilization from the ancient period to the end of the Imperial era. Among the topics considered are Confucianism, the Dynastic cycle, and intellectual and scientific advances.

**HIS 356 Twentieth Century China  3 credits**
Examines the evolution of Chinese society from the imperial era, through the world wars, the Communist Revolution and the re-emergence of China as a major economic and political power.

**HIS 357 The Old South  3 credits**
Investigation of the American South from colonization to the Civil War. Special attention will be paid to those factors which seem to make the South a distinct region, especially the peculiar institution of slavery.

**HIS 358 Traditional Japan  3 credits**
This course examines the roots of Japanese history and culture from ancient times. Among the topics studied are early Japanese religion and society, the court culture of
the Heian era, Japanese feudalism and the transition to the modern world in the Tokugawa period.

**HIS 359 History of Japan: 1868 - Present**  
3 credits  
Development of modern Japan from Restoration of 1868 to the present.

**HIS 361 Origins of American Constitutionalism**  
3 credits  
Sources of American political ideology and constitutional theory in the American experience from the 17th century beginnings until the Civil War. Recommended for pre-law students.

**HIS 362 The Constitution in an Age of Crisis**  
3 credits  
American Constitutional theory and practice from Civil War to present. Emphasis on Supreme Court development, economic relationships, civil liberties, civil rights and criminal justice.

**HIS 363 The Early Republic: 1787-1848**  
3 credits  
This course will investigate a number of topics in the Early American republic including: westward expansion and Indian removal, industrialization, immigration, the development of political parties, the nullification crisis and moral reform. We will also concentrate on larger themes, particularly the growth of an American identity, the origins of market capitalism, and the growing tensions between North and South.

**HIS 365 U.S. - Latin American Relations Since 1898**  
3 credits  
Occupations of Cuba, Dominican Republic, Haiti, Central America; interventions in Columbia, Mexico, Panama, Guatemala. Response to Cuban and Nicaraguan revolutions and South American military dictatorships.

**HIS 366 Race in Early America**  
3 credits  
This course focuses on the interaction of Americans of various ethnicities and backgrounds: the social, economic, religious and cultural implications of these interactions, and the development and evolution of racial identities as a result of such encounters from the exploration and contact of the sixteenth and seventeenth centuries through the mid-nineteenth century.

**HIS 367 Slavery in America**  
3 credits  
An overview of the 500-year African diaspora to the New World. Considers African origins, the Middle Passage, slavery in the Americas, abolitionism and the Civil War. Special opportunities will include nationally known speakers, a theatrical performance, instruction in African drumming and out-of-town travel.

**HIS 368 Native American History**  
3 credits  
History of Native Americans from Pre-Colonial era to the present day.

**HIS 370 Murder and Madness Since 1900**  
3 credits  
Focuses on murder cases and episodes of madness in 20th century America. Considers why American society has long had the highest murder rate in the industrialized world. Examines different kinds of murders including assassinations, ideological killings, serial killings, spree killings, contract murders and garden variety household murders. Examines the ways in which murderers have been punished, and the ways in which Americans have been preoccupied by murder in popular culture, e.g. crime TV shows, novels and films.

**HIS 371 Colonial America**  
3 credits  
Ex!amination of British North America including the nature of the colonists, their contact with other peoples, the origins of slavery and the creation of a distinct American society.

**HIS 372 American Revolution**  
3 credits  
Exploration of the political, social and constitutional issues in the era of American Independence. In particular we will try to answer the question, “Was the American Revolution truly revolutionary?”

**HIS 373 Urban Portraits: Topics in American Urban History**  
3 credits  
HIS 376 The American Military Tradition 3 credits
Examination of major conflicts from the Revolutionary War to the Gulf War. Nature of warfare in the Civil War and in World War II. The citizen soldier and the rise of the professional army. Defense consolidation of the three services. Spring 2009

HIS 379 Recent American History 3 credits
This course covers the United States from the early 1970s to today. Topics include the Reagan Revolution, the culture wars, the AIDS epidemic, Generation X, the birth of the VCR and the Internet, and the rise of terrorism.

HIS 380 America and the Cold War 3 credits
This course explores the tense Cold War period (1945-1991) when the two superpowers dominated the entire world. Topics include hysteria over the atom bomb, chilling espionage, political witch-hunts, international diplomacy, “wars” (Korea and Vietnam), race relations from a foreign perspective, popular culture (comic books, films, rock & roll) and the collapse of the “evil empire.”

HIS 381 History of Buffalo 3 credits
Development of Buffalo as a city through its 150-year history. Emphasis on social and cultural aspects of Buffalo’s history.

HIS 382 New York State History 3 credits
History of the Empire State will stress social and cultural development from the Iroquois background to the present.

HIS 383 The Gilded Age and the Progressive Era 3 credits
Explores American social and political reform around the turn of the century (1890-1920) with particular emphasis on: conflicts that accompanied rapid urbanization and industrialization, debates on democracy, freedom and the role of government, the rise of the “New Woman,” modernism in art and literature and World War I.

HIS 386 The Civil War Era 3 credits
Covers the events leading up to the War, including abolitionism and Bleeding Kansas. There will also be an in-depth examination of the military strategies and tactics of the War as well as the process of modernization that War engendered. The course will conclude with an analysis of the successes and failures of Reconstruction.

HIS 388 The Age of Rock n’ Roll 3 credits
Covers the supposedly “quiet” period after World War II. Topics include the baby boom, the Soviet Menace, atomic espionage, the Hollywood blacklist, the rise of television, Elvis Presley and teen culture, desegregation and the Beats.

HIS 389 The 1960s 3 credits
Treats one of the most tumultuous decades in American history. Topics include the Kennedys and Camelot, the civil rights movement, the drug culture, “free love,” race riots and domestic terrorism.

HIS 390 The Civil Rights Movement 3 credits
Examines the African-American movement to end racial injustice. Focus is on dramatic events since World War II, black leaders and organizations, white resistance, and the federal government’s response. The impact and the legacy of the movement will be considered.

HIS 392 Historical Archaeology 3 credits
An exploration of the history of native peoples in the Americas from an archaeological perspective. Will begin with the basics of archaeological research and include presentations by experts in the field, and visits to archaeological collections and sites.

HIS 394 Contemporary Middle East 3 credits
History of Middle East from the last days of the Ottoman Empire through mandate system established by Versailles Peace Conference to struggle for independence during and after World War II.

HIS 395 Topics in American Women’s History 3 credits
Examines the social experiences of American women from colonial times to the present with particular emphasis on work, marriage and the family, politics, and reform.
HIS 396 Politics and Society in American Film  
3 credits  
Explores how film illuminates American social and political life with attention to the origins of the motion picture industry, the struggle over censorship and the challenges of political radicalism. Focus on classic films that reflect immigration and urbanization, women and the family, civil rights and political leadership.

HIS 399 History of U.S. Foreign Relations  
3 credits  
An overview of American foreign policy from the Revolutionary War to the Gulf War. Emphasis on the imperial period since 1898.

HIS 401 Seminar: Introduction to Historical Research  
3 credits  
Methods of historical research and criticism, including consideration of basic bibliographical and reference works, note-taking, and evaluation of sources. Research paper required. Prerequisite: History honors students and others with permission of chair. Spring

HIS 402 Seminar: Historiography  
3 credits  
A study of the major historians of Western civilization, emphasizing the student’s development of a meaningful personal philosophy of history. Prerequisite: History honors students and others with permission of chair. Spring

HIS 410 Senior Honors Colloquium  
3 credits  
Reading course organized around central theme that varies from semester to semester. Deals with American and European history and occasionally with history of Third World. Satisfies requirement for graduation with departmental honors in history. Prerequisite: Consent of instructor or department chair. Spring

HIS 411 Seniors Honors Thesis  
3 credits  
Research and writing of a thesis to satisfy requirements for graduation with Honors in History. Prerequisite: Consent of the instructor and/or permission of the chair. Fall

HIS 413 Representations of the Holocaust in Film and Literature, Art and Music  
3 credits  
A multi-disciplinary study of how the Holocaust has been represented in works of art, film literature and music in Europe, America and Israel. Examines the literary works and first-person testimony of Holocaust survivors, as well as cinematic representations of the Holocaust from 1945 to the present.

HIS 468 Reservation Experience  
3 credits

HIS 498 Internships  
3 credits  
Internships may be arranged with a variety of organizations including, the Theodore Roosevelt Inaugural Site Foundation and the Buffalo and Erie County Historical Society, Prerequisite: Consent of the instructor and permission of the chair.

HIS 499 Independent Study  
3 credits  
Offers the opportunity to conduct a program of independent readings and/or research on a topic of the student’s choice under the supervision of a member of the History Department. Prerequisite: Consent of instructor and permission of chair.
The Humanities major includes those branches of learning that are concerned with human thought and experience in history, language and literature, philosophy, religious studies, fine arts and music. Its goal is to lead the student to appreciate those aspects of his or her own culture, as well as their relationship to the cultures of other times and places. Although the humanities major is not oriented toward a particular career, its emphasis on critical understanding and disciplined reflection prepares a student for later training in many fields of employment including law, government, journalism, teaching and human services.

**Humanities Curriculum**

1. **Core Curriculum Requirements:**
   See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements (19 courses)**
   - **English:** two 200 level courses plus two 300 - 400 level courses in a major literary genre
   - **History:** two 300/400-level courses
   - **Philosophy:** four 200/400-level courses
   - **Religious Studies:** two 300/400-level courses
   - **Modern Language:** two courses in Modern Language or Literature in Translation and/or Civilization
   - **Humanities:** two courses to be selected from Fine Arts, History, Music, Religious Studies, PHI 300 Concentration: three additional 300/400-level courses in one of the following departments: Fine Arts, English, History, Modern Language, Religious Studies, Philosophy.

3. **Free electives:**
   Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

**Associate of Arts Degree**
The associate of arts degree in humanities program requires the completion of 60 credit hours of coursework. The program has two basic purposes: (1) It offers an immediate goal for students seeking a general introduction to the humanities (history, languages, literature, philosophy, religious studies, fine arts and music); and (2) It provides a basic foundation for those who wish to go on for a bachelor’s degree.

The program contains a second track designed for the prospective business major. Students who plan baccalaureate studies in the future are encouraged to choose the track that fits their individual goals. If a
student remains at Canisius College, all of the coursework in the associate degree program is transferable and applicable to the bachelor’s program.

**Humanities Curriculum: (Associate Degree)**

**1. Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

**2. Major Course requirements (6 courses)**

**Humanities Track** (6 courses)
- English: two 200 level courses
- Religious Studies: two courses
- Humanities: two courses, to be selected from Fine Arts, English, History, Modern Language, Music, Religious Studies, or PHI 300

**Business Track (6 courses)**
- Art and Literature: two courses
- Religious Studies: two courses
- Business Electives: two courses

**3. Free electives:**
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 60 credit hours for graduation with an Associates degree.

**Other Associate’s Degree Regulations**
The basic residency requirements for A.A. degrees is 30 credit hours, at least 15 of which must be completed in traditional classroom situations. No more than 30 hours may be transferred from another institution. Not all courses at other institutions are applicable to the associate degree, and transfer students are required to have a transfer evaluation completed by the college registrar.

1. It is recommended that students in the Business Track who plan to major in business take courses in the Business Core as electives.
2. It is recommended that students in the Business Track who plan to pursue a bachelor’s degree with a major in accounting take ACC 211 and ACC 212 as electives.
information systems

Full-Time Faculty: Edward J. Garrity Chair, Edward J. Szewczak, Linda Volonino.

The degree in Information Systems (IS) prepares students for leadership careers in business and provides technical skills for the current job market that is characterized by increasing reliance on information technology, data networks, computer security and telecommunications.

The IS curriculum provides its majors with:

- Technical and managerial skills in systems analysis, design and implementation.
- A comprehensive overview of telecommunication systems, including data and voice networks.
- The ability to design and develop interactive E-Commerce Web sites.
- The knowledge to design and develop database systems, including databases for (interactive) Internet applications.
- Knowledge and skills in application development.

Learning Goals for IS Majors

Student Learning Goal 1:
Students will understand principles of systems analysis and design including the appropriate application of techniques to elicit and document user requirements of an information system.

Student Learning Goal 2:
Students will understand information technology (IT) project management principles in order to be able to apply these principles to a practical situation.

Student Learning Goal 3:
Students will understand the design principles of computer network architectures in order to be able to apply these principles to a business problem.

Student Learning Goal 4:
Students will apply concepts for effectively retrieving information from relational databases using ANSI structured query language (SQL).

Student Learning Goal 5:
Students will apply principles of database design and effectively design database schemas based on conceptual business models.

Majors in the IS program, within the School of Business Administration, also learn the functional areas of business and international commerce-accounting, marketing, management, human resources, economics and finance. Focusing on internships and electives can help students develop expertise in the IT area of their choice.

Majors will be prepared for a variety of positions as information systems analysts, Internet programmers or website designers, and computer network analysts. IS majors also have the freedom to take classes for careers in the fast-growing area of computer security. Computer security has job growth in both the private and public sectors.
Information Systems Curriculum
Please visit http://is.canisius.edu/ for updated course information.

a. Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements.

b. Common body of business knowledge:
   Mat 105 Finite Mathematics
   AND
   MAT 106 Calculus for the Non-Sciences
   OR
   MAT 111 Calculus I
   OR
   MAT 115 Calculus for Business I
   ACC 201 Financial Accounting
   ACC 202 Managerial Accounting
   ECO 101 Principles of Macroeconomics
   ECO 102 Principles of Microeconomics
   ECO 255 Business Statistics I
   ECO 256 Business Statistics II
   FIN 201 Introduction to Finance
   ISB 101 Management Technology
   MGT 101 Introduction to Management
   MGT 325 Operations Analysis for Business
   MGT 370 Managerial Environment
   MGT 446 Managerial Policy Strategy
   MKT 201 Principles of Marketing

c. Information Systems majors:
   ISB 205 Management Software
   (includes Project Management credits)
   ISB 211 Computer Programming for Business
   ISB 340 Data Base Management Systems
   ISB 350 Telecommunications and Networking
   ISB 455 E-Commerce and Web Site Design
   ISB 475 Systems Analysis and Design
   IS Electives
d. Restricted Electives (must be liberal arts) 4 courses

e. Free Electives 3 or 4 courses

Recommended Schedule Information Systems

FALL
Freshmen Year
FYS 101 3
MAT 105 OR MAT 115 OR MAT111 3 or 4
ISB 101 3
**ECO 101 MACRO Social Sciences Field** 3
Business International Requirement 3
(Two semesters of language or approved regional studies His 107-108, 109-110, 131-132—when taken is flexible)

SPRING
ENG 101 3
MAT 106 OR FREE ELEC 3
IF MAT 115/111
ECO 102 MICRO 3
**Business International Requirement** (2 semester sequence required)
RST 101 3

Sophomore Year
ISB 205 (Management Software) 3
ACC 201 3
**ECO 255 STATS 1 Mathematics Field** 3
PHI 101 3
MGT 101 3

ISB 211 (Programming for Business) 3
ACC 202 3
ECO 256 STATS 2 3
**Field of Knowledge** 3
Field of Knowledge 3

Junior Year
ISB 340 (Database) 3
FIN 201 3
MKT 201 3
**Field of Knowledge** 3
Field of Knowledge 3

ISB Elective 3
MGT 325 3
**Field of Knowledge** 3
Core Capstone 3
MGT 370 3
Field of Knowledge 3

Senior
ISB 350 (Telecommunications) 3
ISB 455 (E-Commerce) 3
A&S Elective 3
A&S Elective 3
A&S Elective 3

MGT 446 3
ISB Elective 3
ISB 475 (Systems Analysis – Capstone) 3
A&S Elective 3
Free Elective 3

Information Systems Minor
The IS minor consists of 5 courses, in addition to ISB 101. There are two required ISB courses; the other three ISB courses are selected by the student. For Criminal Justice, Psychology and Digital Media majors who are interested in a custom-designed IS minor that allows a specialization, please contact Dr. Linda Volonino.

Two required courses:
- ISB 205 Management Software OR ISB 211 Computer Programming for Business
- (2) ISB 340 Database Management Systems
Select three of the following ISB Courses:
- ISB 302 System Dynamics
- ISB 350 Telecommunications & Networking
- ISB 455 eCommerce and Web Design
- ISB 460 Computer Forensics
- ISB 470 Cyber Security
- ISB 480 IT Project Management

Inter-Disciplinary Minor in Computer Forensics
Computer forensics is the science of acquiring, preserving, retrieving and presenting data that has been processed electronically and stored on electronic media. Computer forensics refers to E-mail and instant message (IM) forensics, cellular phone and digital camera forensics, PDA and iPod forensics, GPS and Internet forensics.

Computer forensics is appropriate for students interested in a career in information security, criminal justice, forensic accounting, law enforcement, or federal investigations—as well as computer forensics investigations for defense and plaintiff lawyers.

This is a multi-disciplinary minor designed for students who have chosen any academic major in either the School of Arts & Sciences or School of Business, but who may have an academic or career interest in computer forensics.

Required courses (all 3 credit courses):
- CRJ 227 Criminal Justice I
- CRJ 228 Criminal Justice II
- ISB 350 Telecommunications and Networking
- ISB 460 Computer Forensics
- ISB 470 Cyber Security
- An ethics course: MGT 370 or CRJ 482 (SOC 482)

Information Systems COURSES: 2009 - 2011

**ISB 101 Management Technology 3 credits**
Introduction to information systems, hardware and software; information systems concepts in business; telecommunications; Ecommerce; enterprise systems; ethics, crime and security. Hands-on development of business applications.

**ISB 205 Management Software 3 credits**
Project management using MS Project; advanced data analysis and graphics with MS Access; database concepts and design; presentation graphics.

**ISB 211 Computer Programming for Business 3 credits**
Introduction to the Visual Basic programming language and fundamentals of software design. Database programming, interface design and general problem solving with an emphasis on business applications. Prerequisite: ISB 101.

**ISB 302 System Dynamics 3 credits**
An introduction to systems thinking and system dynamics. Uses tools and computer models to help solve interdisciplinary problems. Using computer-based models or virtual worlds, one can then test the consequences of actions before making actual decisions. (Field 5 of Core Curriculum)

**ISB 340 Database Management Systems 3 credits**
Design and application of database management systems. Topics include structured query language (SQL); data structures; querying and report writing; database design and administration; data mining and security. Prerequisite: ISB 101 or equivalent.

**ISB 350 Telecommunications and Networking 3 credits**
Digital (data) and voice networks; network hardware, software and protocols. Wired and wireless communication. Prerequisite: ISB 101 or equivalent.
ISB 455 E-Commerce and Web Design  
3 credits  
Fundamentals of E-commerce applications and technologies. Interactive website and/or consumer shopping e-commerce design and development. Prerequisite: ISB 340.

ISB 460 Computer Forensics  
3 credits  
Introducing forensics tools to investigate computers, networks, Internet activities, Email, cell phones and other digital media devices to recover electronic evidence, even if it's been deleted. Skills to investigate crimes involving computers or Internet. Prerequisite: ISB 101 or equivalent.

ISB 470 Cyber Security  
3 credits  
Technical, legal and policy defenses to protect databases and information systems. Topics considered include intrusion detection, malware, host- and network-based vulnerabilities and countermeasures, database security, identity theft and privacy. Prerequisite: ISB 451.

ISB 471 Information Systems Topics  
3 credits  
The specific course coverage changes from semester to semester as new developments in IS arise. Timely and important topics in the Information Systems field that have been covered include: Enterprise design, Java programming and IS security.

ISB 475 Systems Analysis and Design  
3 credits  
In-depth coverage of information systems development. Topics include the systems development life cycle, analysis methods, data flow diagramming, design tools, and project management techniques and concepts. Prerequisite: ISB 340, ISB 350, and senior standing.

ISB 480 IT Project Management  
3 credits  
Lab course using MS Project. Topics include managing risk, cost overruns, schedule delays and resource allocation of IT projects; meeting customer requirements; budgeting; successful teamwork; and political issues.

ISB 499 Internship  
3 credits  
international business

Full-Time Faculty: Coral Snodgrass, Director. Part-time Faculty: Emma Bojinova (ECO), Michael Braunscheidel (MGT), Lynn Fish (MGT), Guy Gessner (MKT), Ji Hee Kim (ENT), Stephen Molloy (MGT), Ronald Rivas (MGT), Paul Sauer (MKT), Girish Shambu (MGT), David Snyder (MKT), Raymond Vegso (MGT), Richard Wall (FIN).

Affiliated Faculty: Eileen Angelini (Chair, Modern Languages), Larry Jones (Director, International Relations), John Occhipinti (Director, European Studies).

The forces of globalization have had a dramatic impact on the business world. There have been so many global changes in the business world that people now often say that “doing business” is really doing “international business.” The sheer volume of business that is being addressed is massive in scale. As an example, over $1 billion worth of goods and services are traded each day between the United States and Canada! It is easy to see why companies today are in great need of people who know how to move money around the world, how to find new customers or where in the world to find the best suppliers. These are the skills that you will acquire by studying within the International Business major.

International Business Major  
The International Business major at Canisius is unique in the Western New York area because it combines the study of international business topics with those in the realms of modern language studies and international experience. The goals of the program are to help students to understand: (1) what happens in business when an international border is crossed; (2) how business changes when a language other than English is being used; and (3) how to
cross an international border when doing business.

**International Business Learning Goals:**

Students will demonstrate:
1. an understanding of the elements of business decision making that must be modified when going from a domestic to an international market.
2. the ability to analyze, comprehend and apply the knowledge of the elements of societal culture – especially ethics and social responsibility – as it impacts managerial decision making in cultures outside the United States.
3. knowledge and skill in the acquisition and application of international trade data and market screening techniques to the development of international business opportunities.
4. an understanding of the nature of international competition and the ability to incorporate models for the analysis of internal and external factors impacting competitive positioning.

The program consists of three parts. The international business component is composed of four core courses and three electives. The core courses cover the fundamentals of international business and the international dimensions of management, marketing, and finance. This concentration will provide students with a solid background in a broad number of international business topics. The electives are chosen from a long list of choices. Students have the option to cluster these electives to concentrate on a topic, such as “Global Supply Chain Management,” or a region, such as “European Studies.”

The language requirement within the major recognizes the fact that much of what happens in international business takes place outside of the English-speaking world and that it is always an advantage to speak the language of your customer. The program requires that students complete a modern language through the 215-216 level. Most students entering Canisius are placed directly into the 215 level if they follow through on the language that they studied in high school, meaning students can easily fulfill this component when they fulfill the School of Business two semester culture requirement. However, students are encouraged to continue their language courses beyond this level in order to take advantage of our study abroad opportunities or to accomplish a dual major.

The third component of the program is the requirement to participate in an “international experience.” We know that students who go on to work in international business will quite likely need to travel. We also know that crossing international borders can sometimes be a daunting task, both logistically and emotionally. Therefore, all of our students will have to cross an international border during their field experience. Students have the option to participate in short study tours sponsored by the college, including three week international business seminars, two week European Union simulations and four week immersion programs in Mexico. The most intensive experience, of course, comes from living and studying abroad for more than just a few weeks. We therefore encourage students to participate in one of our study abroad programs during the summer or for one or two semesters during the undergraduate careers.

**Career Opportunities**

Virtually any company doing business today would benefit from having an employee who understands how business is conducted globally, has some experience with a foreign language and is a seasoned international traveler. Graduates of the program will find careers in such fields as international banking, importing and exporting, and international sales and marketing. Students can also find jobs with companies that support international transactions, such as global logistics firms and freight forwarders. In addition to private firms, many economic development agencies need people who understand international business. The program will also be a good foundation for students who want to go on to graduate school to study international business, international relations or law.

**Internships**

Students in the program are encouraged to participate in an internship. These may take place at one of the many international agencies in the area, such as the World Trade Center of Buffalo-Niagara,
or various public and private firms with an international clientele, such as Rich Products. Students can also participate in one of our international projects combined with a study abroad program in England or Australia. Students with sufficient language proficiency can also participate in an internship in Mexico, France, Germany or Spain.

Study Abroad
All students in the major must complete an international experience. Although this can be fulfilled with a short program, students are encouraged to participate in one of the study abroad programs that the college facilitates. The programs take place at the Catholic University of Lille (France), The University of Dortmund (Germany), The University of Oviedo (Spain), London Metropolitan University (England), The University of the Sunshine Coast (Australia), The University of Galway (Ireland), The University of Antwerp (Belgium), Sophia University (Japan), The Beijing Center (China), The Berlin School of Economics (Germany), Lorenzo De’Medici (Italy), and the University of Strasbourg (France). In all of these programs, Canisius faculty and staff are closely involved so that the credits accumulated by the student transfer back as Canisius credits. Students who participate in one of these programs through the college generally do not increase the length of their undergraduate programs.

Atlantis Scholar Program Double Degree
The College has entered into a unique arrangement with the University of Strasbourg (France) and the University of Antwerp (Belgium) that provides our students the opportunity to earn a European Bachelor’s degree in International Business from one of these two European partners. Canisius International Business majors spend one full academic year in Europe at either partner university. The course work fulfills the requirements for an International Business degree from both Canisius and the European university. Students do not increase the length of their undergraduate programs. This option is available only to International Business majors.

Dual Majors
Because the International Business program is already interdisciplinary, it is very easy for students to fulfill a dual major. Students are encouraged to consider this option. The International Business major can easily be combined with one of several other business majors. Students can also form a dual major with French, German, Spanish or International Relations, especially when combined with a study abroad semester.

International Business Curriculum

a. Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements.

b. Common body of business knowledge:
MAT 105 Linear Algebra
AND
MAT 106 Calculus for the Non-Sciences
OR
MAT 115 Calculus for Business I
ACC 201 Financial Accounting
ACC 202 Managerial Accounting
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
ECO 255 Business Statistics I
ECO 256 Business Statistics II  
FIN 201 Introduction to Finance  
ISB 101 Management Technology  
MGT 101 Introduction to Management  
MGT 325 Operations Analysis  
MGT 370 Managerial Environment  
MGT 446 Managerial Policy Strategy  
MKT 201 Principles of Marketing  

**c. International Business majors:**  
IBS 301 Fundamentals of International Business  
MGT 472 Comparative Management Systems  
MKT 475 International Marketing  
FIN 460 International Finance  
International Business Electives (3 courses)  

**d. Electives (2 or 3 courses)**  

**e. Restricted Electives (must be liberal arts) 4 courses**  

**Recommended Schedule:**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
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<tbody>
<tr>
<td><strong>Freshmen Year</strong></td>
<td><strong>ENG 101</strong></td>
</tr>
<tr>
<td>FY 101</td>
<td>MAT 106 or free elective if Mat. 111 115/111</td>
</tr>
<tr>
<td>MAT 105 OR MAT 115 OR MAT 111</td>
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<tr>
<td>RST 101</td>
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</tr>
<tr>
<td>ECO 101 MACRO (Social Sciences Field)</td>
<td>PHI 101</td>
</tr>
<tr>
<td>Modern Language 215</td>
<td>ECO 102 MICRO</td>
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<tr>
<td></td>
<td>Modern Language 216</td>
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<tr>
<td><strong>Sophomore Year</strong></td>
<td><strong>Field of Knowledge</strong></td>
</tr>
<tr>
<td>MKT 201</td>
<td>FIN 201</td>
</tr>
<tr>
<td>ACC 201</td>
<td>ACC 202</td>
</tr>
<tr>
<td><strong>Field of Knowledge</strong></td>
<td><strong>Field of Knowledge</strong></td>
</tr>
<tr>
<td>ECO 255 STATS 1 (Mathematics Field)</td>
<td>ECO 256 STATS 2</td>
</tr>
<tr>
<td>ISB 101</td>
<td>MGT 101</td>
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</tbody>
</table>

| **Junior Year** | **Field of Knowledge** |
| ISB 301 | MGT 472 |
| MGT 325 | MKT 475 |
| ECO 360 | IBUS ELECTIVE |
| **Field of Knowledge** | **Field of Knowledge** |
| **Field of Knowledge** | Core Capstone |
Senior

MGT 370
IBUS Elective
Free Elective
A&S Elective
A&S Elective

IBUS Core:

**IBUS 301 Fundamentals of International Business:** Study of the international dimensions of the basic functional areas of business. The course begins with a study of the comparative advantage of nations; progresses through the functional areas of accounting, finance, management and marketing; ending with the design of strategies for success in international markets.

MGT 472 Comparative Management: International business emphasizing differences in systems. Context and traditions in different countries and regions: social, political, governmental, business, labor, ethical, cultural analysis. Different management and business practices. Managing and doing business within and across many countries.

MKT 475 International Marketing: Issues involved in marketing products in global markets. The focus is on identifying opportunities in world markets and adapting strategies to fit specific national market needs.

FIN 460 International Finance: Basic understanding, with illustrations, of how to apply elements of international finance to managerial policies and decision-making. Exchange rates and exchange risk.


Double Major in International Business and International Relations

The director of the International Business Program has worked closely with the International Relations Program to develop a double major in the two disciplines. To complete the major in International Business, a student must take IBUS 301 (Fundamentals of International Business), FIN 460 (International Finance), MGT 472 (Comparative Management) and MKT 475 (International Marketing), plus three international business electives. In order to receive International Business major elective credit, a course must be approved by the director of the International Business Program. Of those courses offered under the auspices of the International Relations Program, the following — HIS 300 (Historical Geography), HIS 331/PSC 355 (European Union) and PSC 442 (Seminar in International Relations) — are among those that have been approved for International Business major credit.

A student pursuing a double major in International Business and International Relations must also complete the core curriculum in the School of Business consisting of: QNT 101 (Quantitative Methods for Business, MAT 106 (Calculus for the Non-Sciences) or MAT 115 (Calculus for Business), ACC 201 (Financial Accounting), ACC 202 (Managerial Accounting), ECO 101 (Macroeconomics), ECO 102(Microeconomics), ECO 255 (Business Statistics I), ECO 256 (Business Statistics II), FIN 201 (Introduction to Finance), MGT 101 (Introduction to Management), ISB 101 (Management Technology), MGT 325 (Management Science), MGT 370 (Managerial Environment), MGT 446 (Managerial Policy) and MKT 201 (Principles of Marketing).
**Recommended Schedule for a Double Major in International Business and International Relations:**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
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<tr>
<td>FYS 101</td>
<td>ENG 102</td>
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<tr>
<td>Mat 105 Field of Knowledge (Math)</td>
<td>MAT 106, MAT 111 OR MAT 115</td>
</tr>
<tr>
<td>ECO 101 Field of Knowledge (Social Science)</td>
<td>MGT 101</td>
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<tr>
<td>HIS 107 OR</td>
<td>HIS 108 OR</td>
</tr>
<tr>
<td>HIS 109 OR HIS 131 Field of Knowledge</td>
<td>HIS 110 OR HIS 132</td>
</tr>
<tr>
<td>Modern Language 215</td>
<td>Modern Language 216</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>PHI 101</td>
<td>RST 101</td>
</tr>
<tr>
<td>ACC 201</td>
<td>ACC 202</td>
</tr>
<tr>
<td>MKT 201</td>
<td>ECO 255</td>
</tr>
<tr>
<td>ISB 101</td>
<td>ECO 102</td>
</tr>
<tr>
<td>PSC 140</td>
<td>PSC 150</td>
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<tr>
<td></td>
<td>FIN 201</td>
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<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IBUS 301</td>
<td>MGT 472</td>
</tr>
<tr>
<td>ECO 256</td>
<td>MGT 370</td>
</tr>
<tr>
<td>FIN 460</td>
<td>PSC 345 OR HIS 399</td>
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<tr>
<td>MGT 325</td>
<td>Field of Knowledge</td>
</tr>
<tr>
<td>Field of Knowledge</td>
<td>Field of Knowledge</td>
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<tr>
<td>Language 300 level</td>
<td>MKT 475</td>
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<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>IR/IB elective HIS 300</td>
<td>MGT 446</td>
</tr>
<tr>
<td>IR Major elective</td>
<td>IR/IB elective-PSC 442</td>
</tr>
<tr>
<td>Field of Knowledge</td>
<td>IB/IR Elective</td>
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<tr>
<td>IR Major Elective</td>
<td>IR Major elective</td>
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<tr>
<td>IR Major Elective</td>
<td>Core Capstone</td>
</tr>
</tbody>
</table>

Students pursuing a double major in International Business and International Relations will most likely have to take two or three additional courses to satisfy core curriculum requirements and the requirements of the two majors. The number of additional courses will depend upon the level of the student’s math and language skills when entering Canisius and upon the award of AP credit.

A double major in International Business and International Relations must also fulfill the International Experience requirement.
Double Major in International Business and Modern Languages
Students interested in a dual major with a Modern Language must complete all the requirements of the International Business Major and 8 language courses beyond 216. The language courses may be fulfilled using Free Electives and Field Knowledge 3 courses. The remainder of the requirements can be fulfilled by taking 6 courses per term and by transferring courses from Study Abroad programs. Students with this dual major are advised to stay in close contact with the director of the International Business program and the chair of Modern Languages.

1 Area II is automatically fulfilled because this program is in the social sciences. Area VII is fulfilled by the mathematics courses required in this program.

international relations

Full-Time Faculty: Larry Eugene Jones, Department of History, Director; Eileen Angelini (French), Peter Böhm (German), Emma Bojinova (Economics/Finance), David R. Costello (History), Jack D’Amico (English), René De La Pedraja (History), David R. Devereux (History), Jonathan DiCicco (Political Science), Julie S. Gibert (History), Scott Hegerty (Economics/Finance), Christopher R. Lee (Religious Studies), Steven M. Maddox (History), John D. Occhipinti (Political Science), LaVerne M. Seales-Saley (Spanish), Coral R. Snodgrass (International Business), Margaret K. Stefanski (Polish/Spanish), Julia L. Wescott (Spanish).

The International Relations program at Canisius College is a multidisciplinary program that is anchored in the Departments of History, Modern Languages and Political Science but also includes courses in international business, economics, religious studies, philosophy and other academic disciplines. The goals of the program are to provide the International Relations major with a basic understanding of the issues, functions and theories of the international system and to cultivate skills in research, writing, critical thinking and oral presentation that are necessary for success in a career in the fields of international affairs, international business, law, education and academia. Students majoring in International Relations must also satisfy a requirement for an International Educational Experience. Each student’s program is structured to maximize options after graduation. Completion of the major program will lead to a bachelor of arts degree in International Relations.

Student Learning Goals
International Relations majors will:
A. Demonstrate a basic knowledge of the components and dynamics of the international system.
B. Develop competence in the skills that are appropriate to the discipline and that are necessary for success.
C. Demonstrate the attainment of values that refer not to what they learn in terms of measurable content but in terms of their view of the world in which they live and the people that populate it.

Qualifications for the major
The International Relations major and minor must have a cumulative G.P.A. of 2.0 in all courses taken for the major or minor, a grade of C or better in
PSC 140 (Introduction to International Relations), and an overall GPA of 2.0 for all courses taken.

**International Relations Requirements**

All International Relations majors must take a core of eight courses in history, political science and economics and eight electives that have been approved by the International Relations Program Advisory Council for major credit. These electives must include at least one course in the field of international business. In addition, all International Relations majors must demonstrate proficiency in a modern foreign language through the Intermediate High level according to guidelines established by the American Council of Teachers of Foreign Languages and take at least one 300-level foreign language course beyond the advanced level. All International Relations majors must also satisfy an international experience requirement that includes but is not limited to study abroad in a foreign university or an approved short-term program.

All students majoring in International Relations must satisfy a requirement for International Education Experience. The most popular, but by no means the only way in which this requirement is satisfied is by studying abroad. The International Relations Program strongly encourages its majors to fulfill the international experience requirement by spending at least one semester abroad studying at a foreign university. The director of the International Relations Program works closely with the director of International Student Programs at Canisius College to set up and monitor study abroad programs for Canisius students at a wide range of universities throughout the world. Canisius students may study at the following institutions under articulation agreements that have been approved by Canisius College and the host university abroad: the University of the Sunshine Coast in Queensland, Australia; the University of Antwerp in Belgium; the Beijing Center in Beijing, China; La Casa in San Salvador, El Salvador; the Catholic University of Lille in France; the University of Dortmund and the University of Eichstätt in Germany; the National University of Ireland in Galway, Lorenzo De’Medici in Florence and Rome in Italy, Sophia University in Japan, the University of Oviedo and the Universidad Pontificia Comillas in Madrid, Spain, and London Metropolitan University in the United Kingdom. Students may also study at an accredited university abroad other than those listed above. Students doing this have recently studied at universities in Egypt, New Zealand, Poland, Senegal and the Ukraine.

Students who spend a semester abroad at a foreign university may count up to three courses as International Relations major electives as long as these courses have been pre-approved by the director of the International Relations Program. Students who spend a year studying at a foreign university may be able to count more than three courses as International Relations major electives, but this will require special permission from the director of the International Relations Program. As a general rule, students must complete the International Relations Core of eight courses at Canisius College. Exceptions to this rule must be approved by the International Relations Program Advisory Council.

**Co-Curricular Opportunities**

Students majoring in International Relations, International Business, European Studies, or a foreign language will have ample opportunity to attend guest lectures and special cultural events together, enjoy social activities with an international theme and, most importantly, live and learn with individuals who share a global perspective. In the spring semester the Canisius College Office of
International Student Programs hosts an International Fest that provide the Canisius community with an opportunity to sample the cuisine and culture from different parts of the world.

The International Relations Program at Canisius College organizes a Model United Nations Conference for area high school students in the fall semester of each year. Students from the Canisius College International Affairs Society play an important role in planning, organizing and conducting the conference. Members of the International Affairs Society also attend Model UN Conferences for college students at different sites during the year and sponsor an annual Human Rights Conference in the spring of each year.

Every spring the International Affairs Society hosts the Human Rights Student Conference. The conference, which normally lasts three days, provides students with a forum from which they may present the results of their research on a variety of human rights issues and thus help educate the community about the threats to human rights in today's world. The conference is open to participation by any student, undergraduate or graduate, who wishes to present his or her human rights-related research in a conference setting. For further information contact 888-2190 or ias@canisius.edu

Awards
Each year the International Relations Program makes two awards, the Award for Academic Excellence to the graduating International Relations major with the highest cumulative grade point and the Award for Global Understanding to the graduating International Relations majors who have distinguished themselves by their commitment to promoting international understanding at home and abroad.

International Relations Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements (17 courses)
   A. Major Requirements (8 courses)
      Choose one of the three course groupings 6 credits
      
      Group 1
      HIS 107 History of Modern Europe to 1815
      HIS 108 History of Modern Europe since 1815
      or
      Group 2
      HIS 109 History of Asia to 1800
      HIS 110 History of Asia since 1800
      or
      Group 3
HIS 131 Latin American History to 1830  
HIS 132 Latin American History since 1830  
ECO 101 Principles of Macroeconomics 3 credits  
PSC 140 Introduction to International Relations 3 credits  
PSC 150 Introduction to Comparative Politics and Government 3 credits  
HIS 300 Historical Geography 3 credits  
HIS 399 History of U.S. Foreign Relations  

or  
PSC 245 Foreign Policy  
PSC 442 Seminar in International Relations 3 credits  
Business: one 300 or 400-level international business course 3 credits  
Modern language training through the Intermediate-High level (ML 215-216) 6 credits  
300-level course in a Modern Foreign Language 3 credits

B. Major electives (7 courses)  
Electives chosen from approved list in Economics, Finance, History, International Business, Modern Languages, Political Science and Religious Studies 21 credits

3. Free electives:  
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

**Recommended Semester Schedule for Major Courses**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
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<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
<td></td>
</tr>
<tr>
<td>PSC 140</td>
<td>3 credits</td>
</tr>
<tr>
<td>HIS 107 or HIS 109</td>
<td>3 credits</td>
</tr>
<tr>
<td>or HIS 131</td>
<td>3 credits</td>
</tr>
<tr>
<td>Modern Language 215</td>
<td>3 credits</td>
</tr>
<tr>
<td>ECO 101</td>
<td>3 credits</td>
</tr>
</tbody>
</table>

| **Sophomore Year** | | |
| Modern Language 300 | 3 credits | IR Major Elective | 3 credits |
| IR Major Elective | 3 credits | IR Major Elective | 3 credits |
| HIS 399 or PSC 245 | 3 credits | | |

| **Junior Year** | | |
| IR Major Elective | 3 credits | IR Major Elective | 3 credits |
| IR Major Elective or 300-400 level Business | 3 credits | IR Major Elective or 300-400 level Business | |
| HIS 300 | 3 credits | | |
Senior Year
IR Major Elective 3 credits
PSC 442 3 credits

Students pursuing a dual major in another discipline will use their free electives to satisfy requirements in those majors. In this case, the recommended schedule for the sophomore, junior and senior years may differ from that described above.

Tracks within the International Relations Major

Within the International Relations major a student may pursue one of four distinct tracks in International Business, International History, International Politics, and Language and World Culture. Or a student may opt to pursue none of these tracks but fulfill the program major requirements listed above without concentrating in any particular area of the program. If a student chooses to pursue one of these four tracks, this will affect his or her choice of major electives. A student pursuing one of these tracks would still be required to take a modern foreign language through the advanced level and one course in that language beyond the advanced level and to satisfy the international experience requirement. For further information, contact the director of the International Relations Program.

International Politics: A student pursuing the track in International Politics would take in addition to the eight IR core courses listed above 1) four political science courses in the fields of international relations or comparative politics approved as IR major electives by the International Relations Program Advisory Council, 2) one course in international business, 3) one IR major elective in either international business or history, and (4) one course in any field except foreign language as either an IR major elective or a designated world culture course.

International History: A student pursuing the track in International History would take in addition to the eight IR core courses listed above 1) five history courses in the field of international history approved as IR major electives by the International Relations Program Advisory Council, one course in international business, one IR major elective in either international business or political science, and one course in any field except foreign language as either an IR major elective or a designated world culture course.

International Business: A student pursuing the track in International Business would take in addition to the eight IR core courses listed above 1) five courses in international business approved as IR major electives by the International Relations Program Advisory Council, including IBUS 301 (Fundamentals of International Business), MGT 472 (Comparative Management), MKT 475 (International Marketing) and FIN 460 (International Finance); 2) two courses in history and/or political science approved by the International Relations Program Advisory Council as IR major electives; and 3) one course approved by the International Relations Program Advisory Council as an IR major elective in a field other than international business or a course in history, political science, religious studies, or another area designated as a world culture course.
World Culture and Language: A student pursuing the track in World Culture and Language would take in addition to the eight IR core courses listed above and a 300-level course in a modern foreign language 1) three courses in a modern foreign language; 2) one course in international business; 3) two courses in history, political science, or international business approved as IR major electives by the International Relations Program Advisory Council; and 4) two courses designated by the International Relations Advisory Council as world culture courses in any field except foreign language.

International Relations Major Electives
ECO 360 International Economics
ENT 312 International Entrepreneurship
FIN 460 International Finance
HIS 213 Twentieth-Century Europe
HIS 240 Wars of Latin America
HIS 260 Canada and the World
HIS 327 History of Ireland
HIS 335 Britain in the Twentieth Century
HIS 336 Modern Mexico
HIS 338 The British Empire
HIS 339 Nazi Germany, World War II, and the Holocaust
HIS 341 Europe: The World War II Era, 1936-48
HIS 345 The Soviet Union and After
HIS 346 The Age of European Fascism, 1919-45
HIS 347 History of Marxism
HIS 350 20th-Century Eastern Europe
HIS 352 The Cuban Revolution
HIS 354 Post-War Europe 1945 to the Present
HIS 356 Twentieth-Century China
HIS 359 History of Modern Japan, 1858 to the Present
HIS 365 U.S.-Latin American Relations since 1898
HIS 366 Modern Brazil
HIS 380 America and the Cold War
HON 220 War and Society in Modern Europe
HON 223 Revolutions in Latin America
HON 225 Empires and Their Aftermath
HON 247 Islam: Religion, History, and Culture
HON 298 US Foreign Policy in a New Age
HON 335 Britain in the Twentieth Century
HON 336 Modern Mexico
HON 338 The British Empire
HON 339 Nazi Germany, World War II, and the Holocaust
HON 341 Europe: The World War II Era, 1936-48
HON 345 The Soviet Union and After
HON 346 The Age of European Fascism, 1919-45
HON 347 History of Marxism
HON 350 20th-Century Eastern Europe
HON 352 The Cuban Revolution
HON 354 Post-War Europe 1945 to the Present
HON 356 Twentieth-Century China
HON 359 History of Modern Japan, 1858 to the Present
HON 365 U.S.-Latin American Relations since 1898
HON 366 Modern Brazil
HON 380 America and the Cold War

International Relations World Culture Courses
FRC 333 Survey of French and Francophone Literature I (In French)
FRC 334 Survey of French and Francophone Literature II (In French)
FRC 337 French History and Culture Through Film I (In French)
FRC 339 French History and Culture Through Film II (In French)

HON 220 War and Society in Modern Europe
HON 223 Revolutions in Latin America
HON 225 Empires and Their Aftermath
HON 247 Islam: Religion, History, and Culture
HON 298 US Foreign Policy in a New Age
HON 335 Britain in the Twentieth Century
HON 336 Modern Mexico
HON 338 The British Empire
HON 339 Nazi Germany, World War II, and the Holocaust
HON 341 Europe: The World War II Era, 1936-48
HON 345 The Soviet Union and After
HON 346 The Age of European Fascism, 1919-45
HON 347 History of Marxism
HON 350 20th-Century Eastern Europe
HON 352 The Cuban Revolution
HON 354 Post-War Europe 1945 to the Present
HON 356 Twentieth-Century China
HON 359 History of Modern Japan, 1858 to the Present
HON 365 U.S.-Latin American Relations since 1898
HON 366 Modern Brazil
HON 380 America and the Cold War

IBUS 301 Fundamentals of International Business
MGT 440 Global Supply-Chain Management
MGT 472 Comparative Management Systems
MGT 473 Culture, Language and Management
MGT 478 Global Logistics and Transportation
MKT 475 Doing Business in Latin America
PSC 242 International Organizations
PSC 244 War: Causes and Consequences
PSC 245 American Foreign Policy
PSC 253 Politics in North America
PSC 343 International Law
PSC 345 International Crime after 9/11
PSC 346 National Security Council
PSC 355 European Union
PSC 359 International Political Economy
PSC 445 Seminar in European Politics
RST 332 Islam: Tradition and Modernity
GER 353 German Literature since 1945 (In German)
GER 361 Germany Before Unification (In German)
GER 362 Germany Today (In German)
GER 363 1989: The Fall of the Wall (In German)
GER 472 Contemporary German Film (In German)
GER 473 Literature and Film (In German)
HIS 355 Chinese Culture and Civilization before 1900
HIS 358 Traditional Japan
HON 130 Religious Experience of the East
HON 313 Representations of the Holocaust in Literature, Film, Music and Art
HON 399 Building a British Identity
RST 220 Introduction to Eastern Religions
RST 222 African Religions
RST 228 Introduction to Mayahana Buddhism
RST 327 Modern Global Christianity
RST 362 Fundamentalism
SPA 333 Survey of Peninsular and Latin American Literature I (In Spanish)
SPA 334 Survey of Peninsular and Latin American Literature II (In Spanish)
SPA 350 Hispanic Short Stories (In Spanish)
SPA 451 Selected Contemporary Works by Women Writers in Spanish (In Spanish)
SPA 473 Mexican Crafts and Culture (In Spanish)

Internships
The International Relations Program offers a wide variety of internship programs in the Buffalo area, as well as the foreign policy Washington Semester Program at American University and a Summer Internship Program in Washington, D.C. Each program is designed to permit students to broaden their international relations education through contact with a diverse array of political participants.

Dual Majors
Dual majors have been developed between the International Relations Program and the Departments of History, Modern Languages and Political Science as well as with the programs in European Studies and International Business. It is also possible to pursue a dual major with other academic programs such as Communication Studies, Criminal Justice, Sociology/Anthropology and Women’s Studies. For further information on dual majors, contact the director of the International Relations Program.

Students pursuing a dual major in International Relations and another major may double count as many courses as possible toward the satisfaction of International Relations major requirements.

Dual Major in International Relations and International Business
The director of the International Relations Program has worked closely with the director of the International Business Program to develop a double major in the two disciplines. A student pursuing a double major in International Relations and International Business must complete the core curriculum in the School of Business and take IBUS
301 (Fundamentals of International Business), FIN 460 (International Finance), MGT 472 (Comparative Management) and MKT 475 (International Marketing), as well as three international business electives. Of those courses offered under the auspices of the International Relations Program, the following — HIS 300 (Historical Geography), PSC 355 (European Union) and PSC 442 (Seminar in International Relations) — are among those that have been approved for International Business major credit. For further information, consult the statement on the Double Major in International Business and International Relations in the catalog description of the International Business Program.

**International Relations Minor**

Total (9 courses plus language competence)

Choose one of the three course groupings

**Group 1**

HIS 107 History of Modern Europe to 1815
HIS 108 History of Modern Europe since 1815

**or**

**Group 2**

HIS 109 History of Asia to 1800
HIS 110 History of Asia since 1800

**or**

**Group 3**

HIS 131 Latin American History to 1830
HIS 132 Latin American History since 1830

PSC 140 Introduction to International Relations
PSC 150 Introduction to Comparative Politics and Gov’t

HIS 300 Historical Geography

Minor electives: three courses chosen from approved list in economics, finance, history, business, modern languages, political science and religious studies

Course in International Business

Language Competence: A student pursuing a minor in International Relations must also demonstrate competence in a modern foreign language through the Intermediate Mid level (ML 115-116) according to guidelines established by the American Council of Teachers of Foreign Languages

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1 A student may substitute HIS 213 (Twentieth-Century Europe) or HIS 230 (The Holocaust in Historical Perspective) for HIS 108. A student in the All-College Honors Program may substitute HON 220 (Problems in Modern European History) for HIS 108.

2 A student in the All-College Honors Program may substitute HON 223 (Revolutions in Latin America) for HIS 132.

3 A student may substitute HIS 213 (Twentieth-Century Europe) or HIS 230 (The Holocaust in Historical Perspective) for HIS 108. A student in the All-College Honors Program may substitute HON 220 (Problems in Modern European History) for HIS 108.

4 A student in the All-College Honors Program may substitute HON 223 (Revolutions in Latin America) for HIS 132.
management

Full-Time Faculty: Gregory R. Wood, Chair; Michael Braunscheidel, Lynn A. Fish, Michael J. Gent, Rev. Frank LaRocca, S.J., Gordon Meyer, Stephen C. Molloy, Ronald Rivas, Girish Shambu, Howard Stanger, Raymond W. Vegso, Alan G. Weinstein.

Every organization has individuals whose job it is to coordinate and integrate the activities of the employees, manage operations and lead the organization successfully into its future. These individuals are managers.

Management is the art and science of getting things done through people. Good management is necessary for the success of any company or organization. It is a process aimed at accomplishing organizational objectives through the coordination of people and other resources, and involves such functions as planning, organizing, leading, controlling, motivating and general problem solving and decision making.

Managers today face the task of leading their companies as they compete in the global marketplace by designing and managing processes that create goods and/or services and add value for customers. They do this in multiple ways. For instance, effective managers empower the work force to face the challenges of the changing environment. They also manage an organization’s operational and technological systems to satisfy customers. Such processes are critical in all firms from the smallest entrepreneurial company to the largest multinational corporation.

The management major at Canisius prepares students to perform a variety of roles in business and not-for-profit organizations. The management major and management courses are designed to give students insight into human behavior; to help them develop an understanding of organizational issues; and to teach them how to analyze information, make decisions and implement solutions in a range of settings and circumstances.

Students wishing to become Management majors should inform the registrar of their intention and meet with their management advisor to make course selections and get career advice.

The Management and Marketing Department

The Management program is one of four majors offered by the Department of Management and Marketing at Canisius College. The department also offers majors in Entrepreneurship, International Business and Marketing along with a variety of academic minors in such areas as Management of Technology, Global Supply Chain Management and Human Resource Management. With 16 full-time faculty, the department is the largest in the Richard J. Wehle School of Business. The department also offers a wide variety of extra-curricular programs including student clubs, internships and research opportunities.

Management Major

The task of the manager is to coordinate the activities of people and resources in order to accomplish organizational objectives. The Management major provides students with a balanced education to prepare them for this important organizational role. The curriculum contains basic coursework in quantitative methods, operations management, behavioral principles and strategic management. Students are encouraged to take additional specialized courses and electives to add depth in one of four management minors: Global Supply Chain Management, Human Resource Management, International Management, or Management of Technology. Alternatively, they can work with an advisor in the department to choose their electives to fit their individual interests or needs.

Management is both a process and a set of skills necessary for the success of any organization, large or small, public or private, for profit or non-profit.
As a result, the Management program seeks to prepare students who can identify and analyze problems, evaluate information and implement solutions in a variety of occupations and settings. Some examples are: office management, financial management, human resources management, employee or labor relations, systems and procedures, production management, materials management, quality control, marketing management, and supervision or general management in manufacturing, finance, retail sales, transportation, hospitality and entertainment, education, government and other service and non-profit organizations.

Management Major Student Learning Goals.

Management majors will:
* be able to solve problems in operations management
* will be knowledgeable about leadership in organizations
* will recognize and be able to address ethical issues in the treatment of employees and job candidates

Management Minors

Management students may choose a minor in the junior year and notify their department advisor of this decision. Alternatively, they can consult with an advisor in the department to select management electives that meet their individual interests or needs. Students who are not business majors may pursue one of the minors in business management to complement their major in another field.

Global Supply Chain Management Minor

Global Supply Chain Management is concerned with the integrated management of the set of value-added activities from product development, through material procurement from vendors, to manufacturing and distribution of the good to the final customer. In today’s environment, competition is no longer primarily a matter of one company versus another, but rather, one supply chain versus another. In the Global Supply Chain Management concentration, students learn theory and skills for competing successfully.

Requirements

Complete all the specified courses in the Management major including the following three required courses:

- MGT335 Management Science
- MGT336 Production/Operations Management (Management Majors) -or-
- MGT325 Operations Analysis for Business (Non-Management Majors)
- MGT440 Global Supply Chain Management -or-
- MKT478 Global Logistics/Transportation

And two electives from the following list:
- MGT334 Procurement
- MKT390 New Product Development
- MGT440 Global Supply Chain Management -or-
- MKT478 Global Logistics/Transportation
- MGT474 Doing Business in Canada
- MKT476 Doing Business in Mexico
- MGT479 Current Topics in Global Supply Chain Management
- MGT492 Internship in Global Supply Chain Management
- MGT 499 Independent Study

MGT335 and MGT336 are prerequisites for most of the elective courses and should be completed by the end of the junior year. These two courses can be taken simultaneously. MGT325 may be substituted for MGT336.

Non-business majors must take MGT101 (Introduction to Management) and ECO255 (Business
Statistics) prior to beginning the program.

**The Human Resource Management Minor**

Organizations can gain a sustained competitive advantage in the business world by promoting “high performance work practices” through strategic human resource management (HRM). There is a need for individuals who know how to acquire and maintain effective employees, develop their potential, and manage their performance. This minor is designed to provide students with basic knowledge and experience in contemporary human resource practices.

**Requirements**

Complete all the specified courses in the Management major and use the following courses as management electives:

- MGT 367 Employee and Labor Relations
- MGT 464 Current Topics in Human Resource Management
- MGT 493 Internship in Human Resource Management

Students in the HRM minor are expected to become members of the Canisius Chapter of the Society for Human Resource Management (SHRM).

**International Management Minor**

To meet the international dimension of today’s business environment, this minor enables students to acquire knowledge and competence in the practice of management on the global stage.

**Requirements**

1. Complete all specified courses in the Management major and use the following courses as management electives:
   - MGT 472 Comparative Management Systems
   - MGT 475 International Management
   - IBUS 301 Fundamentals of International Business
2. Complete one International elective: MKT 475, ISB 303, ECO 360, FIN 460, MGT 495, PSY 320.

Students in this minor are encouraged to seriously consider taking advantage of one of the college’s study-abroad opportunities.

**Management of Technology Minor**

In a time of constant technological change, managers will be increasingly called upon to manage new products, processes and systems. In addition to providing a fundamental understanding of the field, this track helps students prepare for the six professional certification examinations of the American Production and Inventory Control Society (APICS). APICS certification should significantly improve a student’s employment prospects.

**Requirements**

Complete all the specified courses in the Management major and use any three of the following as management electives:

- MGT 434 Technology Management
- MGT 436 Quality Management
- MGT 437 Project Management
- MGT 439 Operations Planning and Control
- MGT 440 Global Supply Chain Management
MGT 494 Internship in Technology/Operations Management

The MGT 335-336 sequence is a prerequisite for most of these courses and should be completed by the end of the junior year. These two courses can be taken simultaneously. Students in the Management of Technology minor are expected to become student members of the Canisius Chapter of APICS - The Association for Operations Management.

Non-business majors must take MGT 101 (Introduction to Management) and ECO 225 (Business Statistics) prior to beginning the program.

Management Curriculum

a. Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements.

b. Major course requirements: (21 or 20 courses)

b. Common body of business knowledge:
MAT 105 Finite Mathematics
AND
MAT 106 Calculus for the Non-Sciences OR MAT 111 Calculus I
AND Free Elective
MAT 115 Calculus for Business I
ACC 201 Financial Accounting
ACC 202 Managerial Accounting
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
ECO 255 Business Statistics I
ECO 256 Business Statistics II
FIN 201 Introduction to Finance
ISB 101 Management Technology
MGT 101 Introduction to Management
MGT 370 Managerial Environment
MGT 446 Managerial Policy Strategy
MKT 201 Principles of Marketing

c. Management major:
MGT 335 Management Science
MGT 336 Production/Operations Management
MGT 360 Organizational Behavior
MGT 364 Human Resources Management
Management electives: three courses. Marketing courses may not be used here

d. Restricted Electives (must be liberal arts) 4 courses

e. Free Electives 3 or 4 courses.
Recommended Schedule (Management):

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
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<tbody>
<tr>
<td><strong>Freshmen Year</strong></td>
<td><strong>Sophomore Year</strong></td>
</tr>
<tr>
<td><strong>FYS 101</strong></td>
<td><strong>ENG 101</strong></td>
</tr>
<tr>
<td><strong>MAT 105 OR MAT 115 OR MAT111</strong></td>
<td><strong>MAT 106 OR FREE ELEC IF MAT 115/111</strong></td>
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<tr>
<td><strong>RST 101</strong></td>
<td><strong>PHI 101</strong></td>
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<tr>
<td><strong>ECO 101 (Field of Knowledge Social Science)</strong></td>
<td><strong>ECO 102 MICRO</strong></td>
</tr>
<tr>
<td><strong>ISB 101</strong></td>
<td><strong>MGT 101</strong></td>
</tr>
</tbody>
</table>

| **Sophomore Year** | **Junior Year** | **Senior** |
| **MKT 201** | **MGT 335** | **MGT 370** |
| **ACC 201** | **MGT 360** | **MGT Elective** |
| **Field of Knowledge** | **MGT 336** | **MGT 446** |
| **ECO 255 (Field of Knowledge Math)** | **MGT Elective** | **MGT Elective** |
| **Business International Requirement** | **A&S Elective** | **Free Elective** |
| (Two semesters of language or approved regional studies His 107-108, 109-110, 131-132—when taken is flexible) | **Field of Knowledge** | **Field of Knowledge** |
| **Field of Knowledge** | **Field of Knowledge** | **Core Capstone** |
| **Business International Requirement (2 semester sequence required)** |

Note: To ensure that all prerequisites are met, it is especially important that majors follow the indicated sequence for the following “quantitative” courses: MAT 105-MAT 106 (OR MAT 111 OR 115), ECO 255, ECO 256 and MGT 335, MGT 336.

**Business Management Minor (for majors outside the Wehle School of Business)**

The Business Management minor provides a basic understanding of what it takes to organize and manage complex organizations in the for-profit and not-for-profit sectors. The coursework focuses on achieving results through proper management and leadership. Students have an opportunity to work with instructors who have professional background in business and to experience a project-team environment. To complete the business management minor, students must complete:
MGT 101 Introduction to Management (3 credits)
MKT 201 Principles of Marketing (3 credits)
MGT 325 Operations Analysis for Business (3 credits)
MGT 370 Managerial Environment (3 credits)
Business Management electives: two courses (MGT 360, MGT 364, MGT 475, MKT 320, MKT 351, MKT 352, MKT 475, or other Business courses approved by department chair) (6 credits)

TOTAL (6 courses) (18 credits)

Other Programs of Interest

Entrepreneurship major
The Management and Marketing department also offers a major in Entrepreneurship. Complete details are listed elsewhere in the catalog under “Entrepreneurship.”

International Business Major
The Management and Marketing department also offers a major in International Business. Complete details are listed elsewhere in the catalog under “International Business.”

Marketing major
The Management and Marketing department also offers a major in Marketing. Complete details are listed elsewhere in the catalog under “Marketing.”

The department also offers dual majors in Marketing and Management, Management and a modern language, and Marketing and a modern language. For more information about these programs, students should consult their department advisor.

Minor in Industrial/Organizational Psychology
This interdisciplinary program, which is open to management majors, combines management and psychology courses. See your advisor for details.

Additional Information

Internships
Internships qualifying for three hours of academic credits are available to upper-division students majoring in management. These opportunities involve a work-and-study situation with faculty supervision. Many are paid. Students wanting internships for credits must meet certain departmental requirements. For further information, contact the department chair or your departmental advisor.

Career Preparation
All management majors are expected to register with the Career Center during their senior year (if not before). Registration includes preparation of a formal resume and an interview with the Career Center staff. In addition, majors are encouraged to actively utilize the office’s other career-oriented services. Students should contact the Career Center in Old Main 016.

COURSES: 2009 - 2011

REQUIRED COURSES FOR MANAGEMENT OR BUSINESS MAJORS

MGT 101 Introduction to Management
3 credits
Organization design and administration, including traditional and modern theories. The production function, managerial functions and processes, decision-making, behavioral factors/issues and case analysis. Fall and Spring

MGT 325 Operations Analysis for Business
3 credits
Production/operations management and management science. Decision areas include: Operations strategy, process management, quality management, facilities layout, inventory management, aggregate planning and just-in-time systems. Problem-solving techniques include forecasting, linear programming and decision analysis.
Prerequisites: QNT 101 and MAT 106 or MAT 115, or other acceptable mathematics courses. This is not a MGT elective. Fall and Spring

MGT 335 Management Science 3 credits
Introduction to a variety of management science tools and applications including linear programming, forecasting, decision analysis and project management. Quantitative modeling of decision-making problems, with an emphasis on interpretation of results. Prerequisites: ECO 255. Fall and Spring

MGT 336 Production/Operations Management 3 credits
How firms manage processes that create goods and/or services and add value for the customer. Decision areas include: operations strategy, types of processes, product/service design, facilities layout, inventory management, aggregate planning, just-in-time systems and supply chain management. Prerequisites: MGT 335 or concurrent registration. Fall and Spring

MGT 360 Organizational Behavior 3 credits
Organizational functioning at the individual, group, and system levels. Topics include communications, leadership and motivation, organization design and change. Course includes experiential practice of related managerial skills. Prerequisites: MGT 101, sophomore standing. Fall only

MGT 364 Human Resources Management 3 credits
Focuses on a firm’s human-resources management activities. Topics include contemporary approaches to staffing, performance evaluation, compensation and union-management relations. Formerly MGT 340. Prerequisites: MGT 101; junior standing. Spring only

MGT 370 Managerial Environment 3 credits
Managing interplay between business and society, including political, economic, social, legal, international, ethical environments. Role of market, law, self in control of business. Cases; issues. Prerequisite: MGT 101. Fall and Spring

MGT 446 Managerial Policy/Strategy 3 credits
Business students’ capstone course. Integration of all business disciplines into discussion of goals, strategies, policies, planning, evaluation. Cases provide decision-making experience. Prerequisite: To be taken in the last semester of the senior year. Fall and Spring

ELECTIVE COURSES IN MANAGEMENT
Note: Additional or different management electives may be offered. Students should consult the semester-specific Registration and Advisement Guide and/or their academic advisor.

MGT 307 U.S. Business History 3 credits
This course provides students with an overview of business organizations in American history since the nation’s founding. Some of the major themes covered are: small business and entrepreneurs in American life; the rise of big business; labor and employee relations; business-government relations; marketing, advertising history and the consumer culture; and other notable changes in the business system over the period covered. Prerequisite: MGT 101. Elective. Fall

MGT 334 Procurement 3 credits
The objective of this course is to expose students to the demands placed on purchasing and supply chain managers, the competitive impact purchasing has on the success and profitability of the organization, the strategic nature of purchasing, and its cross-functional interactions. Topics include the purchasing process, policies organization and procedures, supplier evaluation and selection, supplier quality management, worldwide sourcing, negotiations and contract management. In addition, purchasing law ethics, the purchasing of services and future trends are addressed. Fall or Spring.

MGT 367 Employee and Labor Relations 3 credits
Understanding power relationships in the world of work. Formal relationships between management and unions representing employees. Topics include labor history, negotiating, labor/management relations including adversarial as well as labor/management collaboration and managing grievances. Some emphasis on skill development. Prerequisites: MGT 360, junior standing. Elective. Spring only

MGT 380 International Business Seminar 3 credits
Three weeks of travel in Europe, either between fall/spring semesters or in summer. Gives exposure to international business environment and to business practices outside U.S.A. Readings; discussions; paper required after return to U.S. Prerequisite: Open to all Business majors and to others by approval. Application to Dr. Vegso. Elective. Spring and Summer

MGT 434 Technology Management 3 credits
Management of new product development in organizations with focus on the technology and innovation process. Both theoretical and practical aspects of managing this process are considered. Prerequisites:
MKT 201, MGT 360. Elective. Fall or Spring

MGT 436 Quality Management 3 credits
Tools, techniques, and strategies used in quality management. Application of current ideas in the field to problem-solving and case analysis. Emphasis on quality issues relating to technological innovation and implementation. Prerequisite: MGT 336. Elective. Fall or Spring

MGT 437 Project Management 3 credits
Introduction to the principles and techniques employed by project managers. Focus on entire project life cycle. Critical issues such as time, cost and performance parameters analyzed from organizational and resource management perspectives. Prerequisite: MGT 335 or MGT 325 Elective. Fall or Spring.

MGT 439 Operations Planning and Control 3 credits
Series of topics designed to target the professional certification examinations in supply chain management conducted by APICS. Prerequisite: MGT 336. Elective. Fall or Spring

MGT 440 Global Supply Chain Management 3 credits
This course examines procurement and outsourcing strategies, network configuration, inventory management, supply chain integration, strategic alliances, international issues, coordinated product and supply chain design, demand forecasting, ERP systems, quality and JIT issues and performance measurement in a global supply chain. Prerequisite: MGT 336 or MGT 325. Elective. Fall or Spring

MGT 464 Current Topics in Human Resource Management 3 credits
Seminar on selected topics with focus on emerging practices and contemporary examples. Topics may include work teams, HR and TQM, strategic HRM, labor-management collaboration, managing workplace diversity, emotional intelligence and leadership, etc. Prerequisites: MGT 101, MGT 364. Elective. Fall only

MGT 472 Comparative Management Systems (International) 3 credits
International business emphasizing differences in systems. Context and traditions in different countries and regions: social, political, governmental, business, labor, ethical, cultural analysis. Different management and business practices. Managing and doing business within and across many countries. Prerequisite: MGT 101 or permission of instructor.

Elective. Spring only

MGT 473 Culture, Language and Management 3 credits
This course explores the relationship between culture and language and how they impact the practice of management in the international marketplace. Students will explore how to find a business edge by knowing the language and culture of a market they are working in. Students will participate in a project designed to demonstrate how this is done. Elective. Fall only

MGT 475 International Management 3 credits
Decision-making models to help the manager deal effectively with the global marketplace. Emphasis on situation analysis and problem solving. Prerequisite: MGT 101 or permission of instructor. Spring only

MGT 476 Doing Business in Mexico 3 credits
This course is designed to stimulate curiosity about management practices of companies seeking market opportunities in Mexico and to raise students’ consciousness about the importance of viewing international marketing/management strategies from a global perspective. Prerequisite: MGT 101 or permission of instructor. Elective. Fall only

MGT 479 Current Topics in Global Supply Chain Management 3 credits
Seminar on selected topics with focus on emerging practices and contemporary examples in Global Supply Chain Management. Selected course in Information Systems & Supply Chain Management, International Accounting and Law, E-Commerce and Finance may also, on occasion be accepted as the equivalent of MGT 479. Consult your departmental advisor. Prerequisite: MGT 336 or MGT 325. Elective. Fall or Spring

MGT 492 Internship in Global Supply Chain Management 3 credits
Fall and Spring

MGT 493 Internship in Human Resource Management 3 credits
Fall and Spring

MGT 494 Internship in Technology/Operations Management 3 credits
Fall and Spring

MGT 495 Internship in International Management 3 credits
Fall and Spring

MGT 496 Internship in Management 3 credits
Non-routine job experiences that link specific management topics with practical experience. Topic-specific course numbers should be taken for internships meeting requirements for a minor. Require supervision by faculty and student demonstration of academic value through papers and reports. Enrollment subject to meeting
marketing

Full-Time Faculty: Gregory R. Wood, Chair; Guy H. Gessner, Paul L. Sauer, David J. Snyder, Kevin J. Trainor.

What is Marketing?
Marketing is a thrilling and dynamic discipline that helps organizations and individuals become successful by building relationships with customers and other stakeholders and creating products and services that are valued by customers. Every year excitement comes from new product launches, popular advertising campaigns and innovative approaches to doing business in traditional industries. Marketing is global, fast-paced and rewarding. Marketing offers the student an opportunity for an exciting career that can be of value around the world. Marketing positions are available in all types of industries ranging from pharmaceuticals and healthcare to high technology and telecommunications. The Marketing major is designed for students who want a balanced career that rewards creativity, while requiring business results.

Marketing positions are available in a variety of consumer, industrial and institutional market areas, including such “non-business” fields as health care, government administration and cultural development. The marketing program is designed for those who wish to pursue careers in international marketing, brand and product management, global supply chain management, marketing research, fashion merchandising, electronic and internet marketing, sales and sales management.

During their course of studies, students will have the opportunity to demonstrate their knowledge of marketing by solving applied marketing problems, developing and carrying out marketing research projects, making pricing decisions under a variety of marketing conditions and developing international marketing plans. They will have the opportunity to engage in exciting and rewarding internships, independent studies, national competitions and marketing organizations.

Marketing Department Student Learning Goals.

Marketing Majors will:

• be well versed in the principles of marketing
• apply quantitative marketing techniques
• be knowledgeable about domestic buyer behavior

minimum GPA requirement.

MGT 496 Management Internship  3 credits
Non-routine job experience that links academic concepts with practical experience. Requires supervision by faculty, and student demonstration of academic value through papers and reports. Enrollment subject to meeting minimum GPA requirement. Fall and Spring

COURSES IN OTHER MAJORS GRANTED MANAGEMENT ELECTIVE CREDIT
Students should consult the semester-specific Registration and Advisement Guide, their academic advisor, or the department chair to see if there are other courses which are acceptable for management elective credits

ENT 311 Entrepreneurship and Family Business  3 credits
ENT 411 Entrepreneurial Leadership  3 credits
MKT 351 Sales Management  3 credits
MGT 474 Doing Business in Canada  3 credits
MKT 478 Global Logistics  3 credits
The faculty of the marketing program regularly assesses student success with regard to these goals and objectives in order to maintain a marketing program worthy of national recognition and accreditation by the most well respected professional and academic accrediting organizations in the world.

The Management/Marketing Department
The Marketing program is one of four majors offered by the Department of Management and Marketing at Canisius College. The department also offers majors in Management, International Business and Entrepreneurship along with a variety of minor degree programs in such areas as Management of Technology, Global Logistics and Supply Chain Management and Human Resources Management. With 16 full-time faculty, the department is the largest in the Richard J. Wehle School of Business. The department also offers a wide variety of extra-curricular programs including student clubs, internships and research opportunities.

Marketing Curriculum

a. Core Curriculum: See Pages 38-40 for the Core Curriculum requirements. Students in all majors are expected to fulfill Core requirements

Major courses requirements: (20 or 21 courses)
b. Common body of business knowledge:
MAT 105 Finite Mathematics
AND
MAT 106 Calculus for the Non-Sciences
OR
MAT 111 Calculus I OR MAT 115 Calculus for Business I
AND Free Elective
ACC 201 Financial Accounting
ACC 202 Managerial Accounting
ECO 101 Principles of Macroeconomics
ECO 102 Principles of Microeconomics
ECO 255 Business Statistics I
ECO 256 Business Statistics II
FIN 201 Introduction to Finance
ISB 101 Management Technology
MGT 101 Introduction to Management
MGT 325 Operations Analysis
MGT 370 Managerial Environment
MGT 446 Managerial Policy Strategy
MKT 201 Principles of Marketing

c. Marketing major:
MKT 320 Consumer Behavior
MKT 331 Fundamentals of Marketing Research
MKT 401 Cases in Marketing Management
MKT 475 International Marketing
Marketing electives: two courses. Some courses offered by other programs may be used as marketing electives. Please consult your academic advisor for details.

d. Restricted Electives (must be liberal arts) 4 courses

e. Free Electives 3 or 4 courses.

Recommended Schedule (Marketing):

FALL
Freshmen Year
FYS 101
MAT 105 OR MAT 115 OR MAT 111
RST 101
ECO 101 (Field of Knowledge Social Sciences)
ISB 101

SPRING
ENG 101
MAT 106 OR Free Elective IF MAT 115/111
PHI 101
ECO 102
MGT 101

Sophomore Year
MKT 201
ACC 201
Field of Knowledge
ECO 255 (Field of Knowledge Math)
Business International Requirement
(Two semesters of language or approved regional studies His 107-108, 109-110, 131-132–when taken is flexible)

Junior Year
MKT 320
MGT 325
Field of Knowledge
Field of Knowledge
Field of Knowledge
Field of Knowledge

Senior Year
MKT 401
MKT Elective
Free Elective
A&S Elective
A&S Elective

Note: To ensure that all prerequisites are met, it is especially important that majors follow the indicated sequence for the following “quantitative” courses: MAT105-MAT 106 (OR MAT 111 OR 115), ECO 255, ECO 256 and MGT 325.

Dual Major
Highly motivated students may choose to enhance their career potential and enrich their business background by completing a dual major. Students are encouraged to major in both marketing and a
related field of interest to the student including majors such as Management, International Business, Finance, Modern Languages, Economics, Psychology, etc. These dual majors require some additional courses to complete beyond the normal curriculum.

Other Programs

Global Supply Chain Management Minor
Global Supply Chain Management is concerned with the integrated management of the set of value-added activities from product development, through material procurement from vendors, to manufacturing and distribution of the good to the final customer. In today’s environment, competition is no longer primarily a matter of one company versus another, but rather, one supply chain versus another. In the Global Supply Chain Management concentration, students learn theory and skills for managing this competition.

Requirements
Complete all the specified courses in the Management major including the following three required courses:

MGT335 Management Science
MGT336 Production/ Operations Management (Management Majors) -or-
MGT325 Operations Analysis for Business (Non-Management Majors)
MGT440 Global Supply Chain Management -or-
MKT478 Global Logistics/Transportation
And two electives from the following list:
MGT334 Procurement
MKT390 New Product Development
MGT440 Global Supply Chain Management -or-
MKT478 Global Logistics/Transportation
MGT474 Doing Business in Canada
MKT476 Doing Business in Mexico
MGT479 Current Topics in Global Supply Chain Management
MGT492 Internship in Global Supply Chain Management
MGT 499 Independent Study

MGT335 and MGT336 are prerequisites for most of the elective courses and should be completed by the end of the junior year. These two courses can be taken simultaneously. MGT325 may be substituted for MGT336. In the alternative, students who take both MGT335 and MGT336 are not required to take MGT325.

Non-business majors must take MGT101 (Introduction to Management) and ECO255 (Business Statistics) prior to beginning the program.

Fashion Institute of Technology
This program combines professional fashion-related education with marketing courses to provide a concentration for students interested in a career in the fashion industry. Students accepted into the program spend either their junior or their senior year in New York City at the Fashion Institute of Technology, completing practical coursework in fashion design, manufacturing and retailing. Students interested in this program must apply to the program coordinator during their sophomore year. For further information, contact the department chair or Dean Valone.
Additional Information

Internships
Internships qualifying for three hours of academic credit are available to upper-division students majoring in management and marketing. These involve a work-and-study situation with faculty supervision. Many are paid. Students wanting internships for credit must meet certain departmental requirements. For further information, contact the department chair.

Career Preparation
All Marketing majors are expected to register with the Career Center during their junior year (if not before). Registration includes preparation of a formal resume and an interview with the Career Center staff. In addition, majors are encouraged to actively utilize the office’s other career-oriented services. Students should contact the Career Center in Old Main 016.

COURSES: 2009 - 2011

REQUIRED COURSES FOR MARKETING MAJORS

MKT 201 Principles of Marketing 3 credits
Introduction to the concepts, issues and opportunities associated with marketing management. Marketing strategy, buyer behavior, new product development, product management, price, promotion and channel decisions within context of overall environment and the cornerstones of this course. Fall and Spring

MKT 320 Consumer Behavior 3 credits
Application of concepts drawn from the behavioral sciences (i.e., anthropology, sociology and psychology) to provide insight into consumer decision-making and buyer behavior. Prerequisite: MKT 201 or permission of instructor. Fall

MKT 331 Fundamentals of Marketing Research 3 credits
Analyzes various techniques for obtaining marketing intelligence for top-level decision-making. Emphasizes marketing-research methodologies and evaluation of data from primary and secondary sources. Prerequisites: MKT 201, ISB 201, ECO 255 and ECO 256. Spring

MKT 475 International Marketing 3 credits
Issues involved in marketing products in global markets. The focus is on identifying opportunities in world markets and adapting strategies to fit specific national market needs. Prerequisite: MKT 201 or permission of instructor. Spring

MKT 401 Cases in Marketing Management 3 credits
Case analysis is used to apply advanced practices and policies concerning product, price, promotion and supply chain marketing to marketing decision making. Prerequisites: FIN201, ACC201 and ACC202, MGT325 (or MGT335, MGT336), MKT201, MKT320. Fall

ELECTIVE COURSES IN MARKETING

Note: Additional or different marketing electives may be offered. Students should consult the department.

MKT 351 Sales Management 3 credits
Sales policies and planning; sales organization; selection, training and compensation of salespersons; control of sales performance, sales budgets and cost control. Case materials used. Prerequisite: MKT 201. Elective.

MKT 352 Professional Sales 3 credits
The more significant aspects and techniques of sales and practical issues pertaining to a career in sales. Prerequisite: MKT 201. Elective.

MKT 390 New Product Development 3 credits
Examines marketing’s role in bringing the ‘voice of the customer’ into the new product (and new service) development process. Application of a variety of analytical, conceptual and statistical techniques are combined in marketing’s role in the development process. Prerequisites: MKT 201, ECO 255 and ECO 256, MKT320 and MKT 331. Elective
MKT 396 Promotion / Advertising  3 credits
Applies the theoretical bases from the consumer behavior course to promotional planning and implementation. Student project involves using the mix of promotional components to design an integrated marketing communication campaign. Prerequisites: MKT 201, ECO 255 and ECO 256, MKT320 and MKT 331. Elective.

MKT 445 Marketing Strategy Game  3 credits
Student-run firms compete in a simulated business environment and use marketing concepts to make pricing, distribution, promotion and channels of distribution. Prerequisites: MKT 201, MKT 331. Elective.

MKT 471 Doing Business in Emerging Markets  3 credits
An introduction to international marketing in two emerging markets: China and India. The commercial aspects of the Indian and Chinese marketplaces are explored. In-depth analyses of individual companies in these markets are central to this course. Prerequisites: MKT 201 or permission of the instructor. Elective

MKT 472 Doing Business in Asia  3 credits
This course in an introduction to international marketing in Asia. The commercial aspects of the Asian marketplace are explored. In-depth analyses of individual Asian countries and individual Asian businesses are central to this course. Prerequisites: MKT201 or permission of the instructor. Elective.

MKT 474 Doing Business in Canada  3 credits
This course is an introduction to managing a business in Canada. The commercial aspects of the Canadian marketplace are explored as well as in-depth analyses of individual Canadian businesses are central to this course. Prerequisites: MKT201, MKT475. Elective

MKT 478 Global Logistics  3 credits
This course is an introduction to logistics and transportation aspects of the distribution of goods in North America. The advantages and disadvantages of the different modes of transportation and their impact on business decisions are explored in detail. Prerequisites: MKT201, MKT331. Elective

MKT 496 (MGT 496) Marketing Internship  3 credits
See MGT 496 for description.

MKT 497 FIT Internship  15 credits
For students in the Fashion Institute of Technology program. Prerequisite: Approval of chair or FIT coordinator.

mathematics and statistics


The Department of Mathematics and Statistics strives to transmit an understanding and appreciation of mathematics: its substance, its applicability, its literature, its current directions and problems, its historical development, its human worth and values; and to promote the development of skill in the practice of mathematics.

Student Learning Goals
The graduating mathematics majors will be able to:
Goal 1: Perform tasks requiring logical reasoning;
Goal 2: Discern patterns, coherence and significance of central mathematical topics and concepts;
Goal 3: Persist through complex reasoning with enthusiasm and curiosity as they explore new mathematical areas;
Goal 4: Learn mathematical content and analyze relevant information;
Goal 5: Communicate mathematical ideas with precision and clarity in both written and oral form.

To meet these learning goals in a manner consistent with the interests and needs of its diverse clientele — mathematics, science and education majors, as well as students in other disciplines — the department offers a variety of courses and programs. Graduates who major in mathematics can enter careers in research, education, industry, business and government, among other fields. Increasingly, they go on to earn advanced degrees in the areas of business, economics, computer science, operations research, statistics and actuarial science, as well as mathematics. The mathematics major is available under three options, each of which furnishes a sound foundation for the future.

Option A, the major option, is designed to prepare the student for positions in which mathematical competence is sought, as well as for advanced study in graduate school.

Option B, mathematics with a concentration in another area, allows the student to develop expertise in another area besides mathematics. The option may enable a student to earn a dual major or a minor from another department.

Option C, the statistics option, prepares the student for advanced work and the many careers which utilize statistical thinking. The course work also offers students good preparation for graduate study.

Option B or C, together with appropriate courses in business, can constitute a good preparation for a career in actuarial science.

The department also offers a mathematics minor, which is described under Other Programs.

For the non-specialist in mathematics, the department offers service courses which provide mathematical techniques necessary in the development of the student’s own field, studies imparting insights into the nature and applications of mathematics generally and courses treating the historical development or logical foundations of the subject.

Qualifications for the major
Math majors must have a minimum grade of “C -” in all courses in the major.

Mathematics Curriculum:

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements:
   A. Major courses
      Option A (Mathematics major credits)      (16 courses)
      Option B (Mathematics with concentration in another area credits)   (18 courses)
MAT 111-112 Calculus I and II 8 credits
MAT 211 Calculus III 4 credits
MAT 230 Logic, Set Theory and Proofs 4 credits
MAT 219 Linear Algebra 4 credits
MAT 222 Differential Equations OR MAT 351 Probability and Statistics 4 or 3 credits
MAT 311 Abstract Algebra I 4 credits
MAT 321 Real Analysis I 4 credits
One course to be chosen from the following:
   MAT 312, 313, 322, 411, 416, 421 3 credits
   Mathematics Seminar (MAT 380-381-480) 3 credits
   PHY 223-224 General Physics for Physical Science Majors
      OR Two Economics courses 8 or 6 credits

B. Restricted Major Electives in Options:

Option A: four additional 300 or 400-level Mathematics courses 12 credits

Option B: two additional 300 or 400-level Mathematics courses, and
   four courses in another area approved by the Mathematics Department 18 credits

Option C (Statistics) (16 courses)
   MAT 111-112 Calculus I and II 8 credits
   MAT 211 Calculus III 4 credits
   MAT 230 Logic, Set Theory and Proofs 4 credits
   MAT 219 Linear Algebra 4 credits
   MAT 222 Differential Equations 4 or 3 credits
      OR Mathematics elective: one 300- or 400-level Mathematics course
   MAT 351-352 Probability and Statistics 6 credits
   MAT 321 Real Analysis I 4 credits
   MAT 322 Real Analysis II OR 3 or 4 credits
   MAT 311 Abstract Algebra I Mathematics seminar 3 credits
   PHY 223-224 General Physics for Physical Science Majors OR Two Economics courses 10 or 6 credits

C. Restricted major electives: three additional upper-level
   Mathematics/Statistics courses from (MAT 353, 354, 365, 370) 9 credits

3. Free electives:
   Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a
   minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120
   credit hours. Note: the Department recommends at least one computer science course, such as CSC 111.
   Students planning on graduate work in mathematics should take as many as possible from the following:
   MAT 312, 313, 322, 411, 416, 421
Recommended Semester Schedule for Major Courses (Options A and B)

**FALL**

**Freshman Year**
- MAT 111 4 credits
- PHY 223 or Economics 3 or 4 credits

**Sophomore Year**
- PHY 224 or Economics 4 or 3 credits
- MAT 211 4 credits
- MAT 230 4 credits
- Attribute/Elective 3 credits

**Junior Year**
- MAT 311 4 credits
- MAT 321 4 credits
- Mathematics Seminar 1 credits
- One of these: MAT 312, 313, 322, 421 3 credits

**Senior Year**
- Mathematics elective 3 credits
- Mathematics elective 3 credits
- Mathematics Seminar 1 credits

**Recommended Schedule (Option C)**

**FALL**

**Freshman Year**
- MAT 111 4 credits
- RST 101 or PHI 101 3 credits
- PHY 223 or Economics 4 or 3 credits

**Sophomore Year**
- PHY 224 or Economics 4 or 3 credits
- MAT 211 4 credits
- MAT 230 4 credits
- MAT 222 or 351 4 or 3 credits

**Junior Year**
- MAT 321 4 credits
- MAT 322 OR MAT 222/ Math Elective 3 or 4 credits
- MAT 352 4 credits
- Mathematics Seminar 1 credits
- Mathematics Seminar 1 credits
- Statistics elective 3 credits

**SPRING**
- MAT 112 4 credits
- PHY 223 or Economics 3 or 4 credits
- MAT 219 4 credits
- MAT 222 or 351 4 or 3 credits
- Mathematics elective 3 credits
- Mathematics Seminar 1 credits
- One of these: MAT 312, 313, 322, 421 3 credits
- Mathematics elective 3 credits
- Mathematics Seminar 1 credits
Senior Year

Statistics elective  3 credits  MAT 222/Math elective  4 or 3 credits
MAT 311 or Math Elective  3 credits  Statistics Elective  3 credits
Mathematics Seminar  1 credits

Other Programs

Mathematics Minor  (7 courses)  26-28 credits
MAT 111 Calculus I OR
MAT 115 Calculus for Business I  4 credits
MAT 112 Calculus II  4 credits
MAT 211 Calculus III  4 credits
MAT 219 Linear Algebra  4 credits
MAT 230 Logic, Set Theory and Proofs  4 credits
Restricted electives: two courses from any one of the following tracks:
Probability and Statistics: MAT 351, 352, 353, 354, 365, 390
Applied Mathematics: MAT 222, 335, 336, 341
Theoretical Mathematics: MAT 311, 312, 313, 321, 322, 411, 416, 421
Mathematics and Culture: MAT 301, 331  6-8 credits

Dual Major or Minor in Another Department

By suitable choice of electives, a student following Option B can also complete the requirements for a minor or a major in another department, most commonly physics, chemistry, computer science or economics.

Additional Information

Students of computer science, physics, chemistry and engineering, in consultation with their advisors, should consider taking MAT 219 (Linear Algebra), even if this course is not listed as a required course in their major. Increasingly, linear algebra is playing an important role in applications of mathematics. This recommendation is in addition to the required calculus courses so central to the understanding of many physical, biological, chemical and economic phenomena. Those interested in probability and statistics are encouraged to take MAT 351-352.

COURSES: 2009-2011

MAT 002 Pre-College Mathematics II  0 credits
Intermediate Algebra II: Simplifying and solving rational equations, conic sections, relations and functions, exponential and logarithmic functions. Word problems.  Fall

MAT 105 Finite Mathematics  3 credits
Introduction to finite (non-calculus) mathematics and its applications: linear, quadratic, exponential and logarithmic functions and equations; systems of linear equations and linear programming; compound interest problems and annuities. (Field 7)  Fall & Spring

MAT 106 Calculus for the Non-Sciences I  3 credits
Fundamentals of calculus for students in business, or social or behavioral sciences. Credit not allowed if
student already has credit for MAT 111 or 115. (Field 7)  

**MAT 107 Calculus for the Non-Sciences II**  
3 credits  
Continuation of MAT 106. Integral calculus and calculus of several variables with applications. (Field 7).  
*On demand*

**MAT 109-110 Calculus with Review I and II**  
4-4 credits  
For science and mathematics majors. Calculus, with topics from pre-calculus. Logarithms, exponentials, trigonometric functions, limits, differentiation, related rates, max-min problems, anti-differentiation, definite integral. No credit allowed if student has credit for MAT 111, 115 or 117. (Field 7)  
*MAT 109 Fall; MAT 110 Spring*

**MAT 111 Calculus I**  
4 credits  
For science and mathematics majors. Functions of single variable. Functions, limits, differentiation, continuity, graphing, logarithm, exponential and inverse trigonometric functions, related rates, max-min problems, mean value theorem, l’Hospital’s rule, anti-differentiation, definite integral. (Field 7)  
*Fall & Spring*

**MAT 112 Calculus II**  
4 credits  
Applications of integration. Integration techniques, improper integrals, sequences, series, convergence tests, Taylor’s theorem, applications; parametric and polar curves. (Field 7)  
*Prerequisite: MAT 111 or 115 with minimum grade C-. Fall & Spring*

**MAT 115 Calculus for Business I**  
4 credits  
First of two semesters of mathematics for business students. Differentiation/integration of functions of one variable. Applications: concepts, examples and problems in economics and business. (Field 7)  
*Prerequisite: 3 1/2 years of high school mathematics. Fall*

**MAT 121 The Nature of Mathematics**  
3 credits  
Liberal arts mathematics course. Problem solving techniques, deductive reasoning in mathematics, some modern topics and quantitative thinking. (Field 7)  
*Prerequisite: 3 years of high school math or equivalent; sophomore standing or higher. Spring*

**MAT 131 Statistics and Computers**  
3 credits  
A first course for majors in social or health sciences. Descriptive statistics, calculators, computer programs and introduction to inferential statistics. (Field 7)  
*Prerequisite: High school intermediate algebra. Fall & Spring*

**MAT 141 Inferential Statistics and Computers for Science**  
4 credits  
Elementary probability theory, descriptive statistics, hypothesis testing, estimation, correlation and regression. The computer will be used with one of the standard statistical packages. (Field 7)  
*Prerequisite: 3-1/2 years of high school mathematics. Spring*

**MAT 150 Mathematics and Politics**  
3 credits  
Liberal arts course emphasizing applications of math in the social sciences. Covers topics such as voting theory, decisions made by groups, measurement of political power. (Field 7)  
*Prerequisite: 3 years of high school mathematics or equivalent. Spring*

**MAT 181 Symmetry**  
3 credits  
Liberal arts course exploring the mathematical world of geometry and symmetry. Measurement, billiards, polygons and polyhedra, tilings and wallpaper patterns, spirals and natural growth. (Field 7)  
*Prerequisite: 3 years of high school mathematics or equivalent. Fall*

**MAT 191 Introduction to Discrete Mathematics**  
4 credits  
Fundamental topics with computer science applications. Sets and logic, propositional and predicate calculus, elements of combinatorics and counting, elementary discrete probability, functions and relations, graphs.  
*Prerequisite: Sophomore standing or instructor's permission. Spring*

**MAT 211 Calculus III**  
4 credits  
Continuation of MAT 111-112. Analytic geometry of 3-space and calculus of functions of several variables.  
*Prerequisite: MAT 112 with minimum grade of C-. Fall & Spring*
MAT 219 Linear Algebra  4 credits
Vector spaces and inner product spaces. Linear transformations and matrices. Eigenvectors, eigenvalues, and applications. Orthogonal transformations. Quadratic forms and quadric surfaces. Prerequisite: MAT 112 or consent of the instructor. Fall & Spring

MAT 222 Differential Equations  4 credits
Introduction to the theory and applications of ordinary differential equations. Prerequisite: MAT 211 with minimum grade of C -. Spring

MAT 230 Logic, Set Theory and Proofs  4 credits
Transition from calculus to upper division courses: logic and methods of proof; set theory; relations, orders and functions; number systems; cardinality. Prerequisite: MAT 112 with minimum grade of C - or consent of the instructor. Fall & Spring

MAT 301 History of Mathematics  3 credits
Development and interrelations of major areas of mathematics, from ancient to modern times. Emphasis on both historical context and mathematical content. Mathematics as cultural heritage. Prerequisite: MAT 111-112. Fall 2010

MAT 311 Abstract Algebra I  4 credits
Introduction to the basic structures of abstract algebra; groups, rings, fields. Prerequisites: MAT 230 and MAT 219 with minimum grades of C -. Fall

MAT 312 Abstract Algebra II  3 credits
Continuation of MAT 311. Selected topics from rings, Integral domains, field extensions and Galois theory. Prerequisite: MAT 311. Spring 2011

MAT 313 Number Theory  3 credits
Divisibility, prime numbers, numerical functions, congruencies, quadratic reciprocity, Diophantine equations. Prerequisite: MAT 311 or permission of instructor. Spring 2010

MAT 321 Real Analysis I  4 credits
Advanced study of differentiation and integration of functions. Prerequisites: MAT 211, 230, 219 with minimum grades of C -; or MAT 211, 230 and consent of instructor. Fall

MAT 322 Real Analysis II  3 credits
Continuation of MAT 321. Selected topics from functions of one or several variables. Prerequisite: MAT 321 with minimum grade of C -. Spring 2010

MAT 331 Introduction to Modern Geometry  3 credits
Axioms for geometry and their consequences: independence of the parallel postulate. Rudiments of hyperbolic geometry. Geometric transformations. Prerequisite: MAT 230. Fall

MAT 335-336 Mathematical Analysis for Physicists  4-4 credits
Theory and applications of infinite series. Fourier series, Green’s functions. Fourier integrals, vector calculus, linear algebra, partial differential equations and complex variables. Prerequisite: MAT 222 or consent of instructor.

MAT 341 Numerical Analysis  3 credits
The methods used to obtain numerical solutions of functional, integral and differential equations. Prerequisites: An elementary knowledge of computer programming and MAT 219. On demand

MAT 342 (CSC 342) Introduction to Graph Theory  3 credits
This course covers basic constructions on graphs. Complete graphs, bipartite graphs, trees, cycles, and more general graphs are studied along with their combinatorial properties. Euler circuits, Hamilton circuits, spanning trees. Applications of graphs to optimization problems such as the Traveling Salesperson Problem and Construction of the Minimal Spanning Trees. Prerequisite: one semester of Calculus. On demand

MAT 351-352 Probability and Statistics  3-3 credits
Introduction to the mathematical aspects of modern probability theory and the theory of statistics. Prerequisite: MAT 211. MAT 351 Spring; MAT 352 Fall

MAT 353 Regression Analysis  3 credits
Linear regression and correlation. Covariance, residual sum of squares, residual variance, correlation coefficient,
tests of significance for correlation coefficient and for regression coefficients. Non-linear regression.

Prerequisites: MAT 351-352 or consent of instructor.

Spring 2010

MAT 354 Experimental Design and Statistical Computing 3 credits
Analyzing data; one-way/two-way blocking; chi-square, goodness of fit. Statistical computing package; Monte-Carlo simulation-subset selection, central limit theorem; residual plots. Prerequisites: MAT 351-352 or permission of instructor. Fall 2009

MAT 365 Logistic Regression 3 credits
Statistical analysis of dichotomous data. Univariate and multivariate cases are covered. Applied problems solved on the computer. Prerequisite: MAT 352 or ECO 256. Fall 2010

MAT 370 Topics in Statistics 3 credits
Prerequisite: MAT 352 or permission of instructor. Spring 2011

MAT 380-381-480 Mathematics Seminar 1 credit each
Mathematics seminar for majors To be taken for three semesters. Prerequisite: Junior standing

MAT 400 (PHY 400) Math/Physics Reading Group 1 credit
Study of a book on recent developments in math and science. Book subject varies. May be taken more than once. Prerequisite: By permission. On demand

MAT 411 Topology 3 credits
An introduction to topology, stressing concrete examples including surfaces. Point-set, geometric and algebraic topology with interconnections and applications. Prerequisite: MAT 230 or permission of instructor. Fall 2011

MAT 416 Differential Geometry 3 credits
Curves in the plane and 3 space: Frenet formulas, isoperimetric inequalities. Basic elements of surface theory. Curvature and mean curvature. Gauss’s Theorema Egregium. Rigidity questions. Prerequisite: MAT 321. On demand

MAT 421 Complex Analysis 3 credits
Complex numbers, analytic functions and mappings. Cauchy-Riemann equations, harmonic functions, Cauchy’s theorem, integral formula and inequalities. Power series, residues, singularities and zeros, Rouch’s Theorem. Prerequisite: MAT 321 or permission of the instructor. Spring 2011

MAT 498 Internship in Mathematics 1-3 credits
Internship involving non-routine tasks linking academic concepts to practical experience. May be used for free elective credit only. Prerequisite: Consent of chair. On demand

MAT 499 Independent Study 3 credits
Prerequisite: Consent of instructor and chair. On demand
The Military Science Program is designed to augment the college learning experience. The cornerstone of the program is to identify and develop future leaders. The primary goals are to identify, assess and develop the potential of young men and women for commissioning as officers in the United States Army, Army Reserve or Army National Guard.

Intermediate goals include providing students with leadership and managerial skills that will prepare them to lead in public service, business, military and community organizations. This program is open to students of all majors.

The traditional Military science program is four years: a two-year Basic Course (six credit hours/year), for which no military obligation is incurred and a two-year Advanced Course (six credit hours/year) for which there is a military obligation.

The Basic Course refers to the first and second year of the Military Science curriculum. It is designed as a classroom and lab course that stresses the fundamentals of leadership. A freshman student would enroll in MLS 101 and MLS 111L in the fall and MLS 102 and MLS 112L in the spring. A sophomore would enroll in MLS 201 and 211L in the fall and MLS 202, 212L in the spring. These courses are designed for students who are interested in exploring opportunities within the military and learning basic leadership fundamentals. A number of popular and challenging extra-curricular activities are available to students who take these courses. Students may take up to twelve Basic Course credits without obligation.

The basic course sequence is required for all students that want to qualify for entry into the Advanced Course. A student may also qualify for acceptance into the Advanced Course by completing the Leaders Training Course (MLS 210) at Ft. Knox, KY. Students, with prior military service may also receive placement credit.

For more information students should contact the Military Science Department located on the first floor in the Health Science Building.

The following sequence of Military Science 100 and 200 level courses can each be counted as a 3.0 credit free elective:

- MLS 101 (1 credit) and MLS 111L (2 credits)
- MLS 102 (1 credit) and MLS 112L (2 credits)
- MLS 201 (1 credit) and MLS 211L (2 credits)
- MLS 202 (1 credit) and MLS 212L (2 credits)

The Course must be taken in these sequences during the same semester. Students may count up to two such sequences of 3 each for a total of two free electives (6 credits) in their college career.

The Advance Course is comprised of MLS 301/311L, MLS 302/312L, MLS 401/411L and MLS 403/412L. Upon completion of this sequence and successful completion of The Leadership
Development Assessment Course (LDAC) students are commissioned as Second Lieutenants in the Army, Army National Guard or Army Reserve. Based on the students’ area of study, Military Science 300 and 400 level courses continue to bear free elective credit.

The following sequence of Military Science 300 and 400 level courses may be counted as a 3.0 credit elective:

- MSL 301 3 and MSL 311L (0 credits)
- MSL 302 3 and MSL 312L (0 credits)
- MSL 401 3 and MSL 411L (0 credits)
- MSL 402 3 and MSL 412L (0 credits)

Students are required to sign up and participate in Lab during the Advance Course even though they do not receive credit for the lab.

**Note: Successful completion of the ROTC program also requires a one-semester course in military history that is offered through the History Department. Students should contact the Military Science Department for the approved Military History Courses.**

### COURSES: 2009-2011

**MSL 101 Introduction to Leadership I**

1 credit

Course focuses on individual leadership skills and functioning as an effective member of a team. Optional: Leadership Lab; three one-hour physical fitness sessions; weekend military exercises. 50 minutes once a week.

**MSL 102 Introduction to Leadership II**

1 credit

Course continues leadership development through an introduction to problem solving and effective decision-making techniques. Optional: Leadership Lab; three one-hour physical fitness sessions; weekend military exercises. 50 minutes once a week.

**Military Science Summer Credit**

During the summer, students may receive 3.0 credits for completing MLS 210 (Leader Training Course (LTC) at Ft. Knox, KY. LTC is a 5-week program that allows a student to meet the prerequisite (100-200 level courses, basic course) in order to begin the junior year in the program. For example, a second semester sophomore who has not taken MLS 100-200 level courses can go to Ft. Knox over the summer and then take 300-400 level courses during his/her junior and senior years and be commissioned upon graduation.

For more information on this program, contact the Military Science Department.

All juniors receive credit for MLS 310 - Leader Development and Assessment Course (LDAC) at Ft. Lewis, WA during the summer between their junior and senior year. This is a demanding 32-day course designed to develop and evaluate leadership ability and is required for all Advanced Course ROTC cadets.

Further details are available through the Canisius College Department of Military Science.

**MSL 201 Leadership and teamwork I**

1 credit

Course focuses principally on leadership, providing an extensive examination of the unique purpose, roles and obligations of leaders. This course involves exercises in communication; goal setting and public speaking. Optional: leadership labs, three one-hour physical fitness sessions, weekend military exercises. 50 minutes once a week.

**MSL 202 Leadership and Teamwork II**

1 credit

Course focuses on motivational techniques, organizational ethics, values and counseling as part of a team. The course involves basic military tactics, small unit operations planning and map reading. Optional: leadership labs, three one-hour physical fitness sessions,
weekend military exercises. 50 minutes once a week.

**MSL 111L/112L/211L/212L Basic Course**
**Leadership Laboratory** 2 credits
Students are given opportunities to lead their peers in hands-on training in basic military skills such as land navigation, rifle marksmanship, tactics, drill and ceremony, first aid training and survival swimming. *Prerequisite:* Concurrent Enrollment in MLS 101, 102, 201 or 202.

**MSL 210 – Summer Course - Leader’s Training Course** 3 credits
A summer leadership internship held at Fort Knox, Kentucky. Students are paid and expenses are covered. Completion allows a student to compete for a Two Year Army ROTC scholarship and entrance into the Advance Course. Five weeks

**MSL 301 – Unit Organization and Tactical Operations I** 3 credits
Small unit operations and advanced tactics. Extensive use of situational leadership exercises and group problem solving. Formulation of oral and written operational plans and orders. Military geography and orienteering. Three hours per week. *Prerequisite:* Approval of department chair; concurrent registration in MLS 311L.

**MSL 302 Unit Organization and Tactical Operations II** 3 credits
Course focus is on application of military leadership theory. Instruction includes delivering briefings and issuing operation orders; advanced military skill training and small unit operations are emphasized. *Prerequisite:* Approval of department chair; concurrent registration in MLS 312L.

**MSL 310 Leader Development and Assessment Course** 3 credits
A five week training experience at Fort Lewis, WA designed to develop and evaluate leadership ability. The challenges are demanding, both mentally and physically. In addition to proving their leadership ability, cadets must meet established standards in physical fitness and demonstrate proficiency in military skills.

**MSL 311L/312L Advanced leadership Lab 0 credits**
Cadets apply basic military skills in small peer learning exercises and small unit training operations. Leadership positions are rotated to solve problems in tactics, land navigation, logistics and crisis reaction. Required for MSL 301/302 students.

**MSL 401 Advanced Leadership Studies** 3 credits
This course studies leadership skills required of Army Officers and prepares cadets to lead the cadet battalion during the school year. Emphasis on staff organization and function, the Army’s training management system, counseling methods and leadership. *Prerequisites:* MSL 301, MLS 302 and MSL 310; concurrent registration in MLS 411L.

**MSL 402 Military Law, Ethics and the Military Profession** 3 credits
Final preparation for commissioning as a US Army Officer. Course emphasis is on establishing command climates, the military legal system, laws of war, administrative and logistical management and transition from cadet to lieutenant. *Prerequisite:* MSL 401; concurrent registration in MLS 412L.

**MSL 411L/412L Senior Leadership Laboratory 0 credits**
Under cadre supervision, seniors plan, conduct and evaluate training for the underclass leadership labs. Seniors provide instruction, coaching and mentoring to underclass cadets, and conduct command and staff activities needed to run the cadet battalion. Required for MSL 401/402.

**MLS 199/299/399/499 Independent Study** 1-3 credits
Students study selected military topics under the supervision of a cadre member. *Prerequisite:* Permission of the Professor of Military Science.
The Department of Modern Languages offers full and varied programs leading to majors in French, German and Spanish. Instruction is also provided in American Sign Language, Arabic, Italian and Polish. Dual majors with virtually every other academic discipline are encouraged and easily implemented. Courses in Latin and Greek are provided by the Department of Classics.

The primary goal of the department is to develop the student’s ability to read, write, speak and understand the language(s) of his or her choice. At the same time, it strives to instill an understanding and appreciation of the culture, history, literature and diversity of other peoples. A further aim is to give the student a comprehensive grasp of the structure of language as an end in itself. In short, the department seeks to provide its students with the skills and intellectual breadth needed to communicate effectively and to play an active role in today’s world. As such, the courses offered in the Department of Modern Languages are aligned with the National Standards for Foreign Language Learning: Communication (Communicate in Languages Other Than English); Cultures (Gain Knowledge and Understanding of Other Cultures); Connections (Reinforce and Further Knowledge of Other Disciplines); Comparisons (Develop Insight into the Nature of Language and Culture); and Communities (Participate in Multilingual Communities at Home and Around the World).

Proficiency in foreign languages enables students to broaden their intellectual and aesthetic horizons. Specifically, such mastery can lead to rewarding careers in social work, international business (sales, management, banking, import-export), government service (customs and immigration, foreign service, AID, USIA, CIA, NSA), teaching, interpreting and scientific research, to mention but a few. Language skill can often be the deciding factor in finding a job in competition with equally qualified but monolingual peers. Finally, proficiency in one or more foreign languages is useful and often required for students who go on to pursue masters’ or doctoral degrees.

**Student Learning Goals**

**Goal 1:** Majors in French, German, or Spanish will demonstrate linguistic skills in oral and written expression as well as listening and reading comprehension at the ACTFL Advanced-Mid Level.

Students will:

A. Demonstrate the ability to understand speech in the target language in most social and professional situations;

B. Demonstrate the ability to communicate orally in the target language in most social and professional situations;

C. Demonstrate the ability to understand written texts (journalism, non-fiction, literature, etc.);

D. Demonstrate the ability to write grammatically and analytically at the ACTFL Advanced-Mid levels.

**Goal 2:** Majors in French, German, or Spanish will demonstrate a sense and understanding of the cultural aspects of the peoples who speak the
target language. Students will be aware of:
A. Political, social, economic, geographic, and linguistic factors that influence components of the language and the culture;
B. Peoples of other cultures in general and in the particular local and non-academic setting(s).

Goal 3: Majors in French, German, or Spanish will demonstrate an ability to read and analyze literature written in the target language. Students will be:
A. Sensitive to literary language;
B. Familiar with various literary terms and concepts and be able to use them in interpreting literary texts;
C. Acquainted with a diverse range of literary genres, trends, schools, and groups;
D. analyze and interpret literary texts;
E. Understand the historical, social, and political context of literary works and apply that knowledge to a literary analysis of those works.

Qualifications for the major
Students planning to major in French, German or Spanish must complete FRC 215-216, GER 215-216 or SPA 215-216 with a C average or better. Students must maintain a 2.00 G.P.A. in their Major courses to be eligible to graduate with a degree in French, German or Spanish. Students in language-education and dual-major programs are governed by the same requirements.

Modern Language Curriculum (Spanish, German or French)

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major Requirements (12 courses)
   SPA, GER, FRC 115 Adv. Introductory (I) with lab 3 credits
   SPA, GER, FRC 116 Adv. Introductory (II) with lab 3 credits
   SPA, GER, FRC 215 Advanced (I) 3 credits
   SPA, GER, FRC 216 Advanced (II) 3 credits
   SPA, GER, FRC 323 Conversation (I) with lab 3 credits
   SPA, GER, FRC 324 Conversation II) with lab 3 credits
   SPA, GER, FRC 331 Substance and Style I 3 credits
   SPA, GER, FRC 332 Substance and Style II 3 credits
   SPA, GER, FRC Capstone or Major elective 3 credits
   Major Electives (3 Courses 300-400 level in the target language 9 credits

3. Additional Requirements:
   Study Abroad Requirement and Cultural Requirement (see descriptions below)
4. Free electives
   Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.
Study Abroad Requirement

Modern Language majors are required to study abroad for a minimum of four consecutive weeks in a formal pre-approved program in the target language. Canisius College maintains its own unique programs at the University of Lille (France); the University of Dortmund (Germany); Hochschule für Wirtschaft und Recht (Berlin, Germany); Katholische Universität Eichstätt (Eichstätt, Germany); the University of Oviedo (Spain); the Universidad del Sagrado Corazón (Puerto Rico); and the Universidad Michoacana de San Nicolás de Hidalgo (Mexico). Education majors with a concentration in a Modern Language are highly encouraged to study abroad as well.

Other study abroad possibilities include, but are not limited to and are not necessarily pre-approved for study abroad credit for the Modern Language major, the Beijing Center (China), Lorenzo de Medici (Florence, Italy); Mediterranean Center for the Arts and Sciences in Sicily and John Cabot University in Rome; Sophia University (Tokyo, Japan); the University of Uppsala (Uppsala, Sweden); and the Academy of Fine Arts (Warsaw, Poland).

Students who choose to spend a semester abroad at a foreign university may count up to three courses as a Modern Language Core or Elective as long as these courses have been pre-approved by the chair of the Department of Modern Languages. Students who spend more than one semester studying at a foreign university of universities may count an additional two courses as a Modern Language Core or Elective. Exceptions to these rules will require special permission from the chair of the Department of Modern Languages. Credits for short programs abroad are determined by the number of contact hours.

As a general rule, students must complete the 215-216 sequence or the equivalent and one 300-level course at Canisius College prior to studying at a foreign university. Consultation with a Department of Modern Languages academic major advisor is required prior to study abroad. It is expected that students will complete at least one course in the major upon return to Canisius College.

Eligible students, whether majors or not, are also encouraged to participate in one or more of the non-academic summer internships that are maintained by the college in France, Germany, Mexico and Spain.

Atlantis Program is a special opportunity for business majors to earn a Canisius degree and a European degree at IECS School of Management/Robert Schuman University in Strasbourg, France or at the University of Antwerp in Belgium. This is a thirteen-month program divided between Antwerp and Strasbourg and includes a monthly living allowance of $1,200.00 to qualified program participants.

Cultural Requirement

Over the course of the semester, each student in the Department of Modern Languages in courses 103 and above will participate in or attend two cultural events or activities outside of regular class time. One of them must be related to the culture of the language under study. The second should at least have a multicultural character.

A current list of events acceptable in fulfillment of the cultural requirement will be posted electronically and updated weekly by the Modern Languages Department. Suggestions by students are welcome.

Dual Major

Language study lends itself uniquely to the concept of the dual major. Students may combine language programs with virtually any major, but of particular
interest and practicality are dual majors with international business, international relations, communication, economics, marketing-management, philosophy, history, English, political science, art history, biology and chemistry.

Dual majors in French, German or Spanish and another department must complete FRC/GER/SPA 215-216, 323-324, 331-332 plus four French, German or Spanish electives. Dual majors in two languages must complete FRC/GER/SPA 215-216, 323-324 and 331-332 in both languages plus four electives in their primary language and two electives in their secondary language.

**Education Majors with Language Concentration**

Education majors fall into three separate tracks: those with a concentration in a Modern Language at the K-6 levels (Early Childhood and Childhood) are required to take a total of ten language courses beginning at a minimum of the 215-216 level; those with a concentration in a Modern Language at the secondary levels (Adolescence Education) are required to take a total of twelve language courses beginning at a minimum of the 215-216 level; and, those with a dual major in any Education track and a Modern Language are required to take a total of twelve language courses beginning at a minimum of the 115-116 level.

**Placement into Courses**

Foreign language placement is determined by how many years of a language were studied between the ninth and twelfth grades. Initial language placements may be changed during the first week of classes.

- 0-1 year studied = 103 (Introductory level).
- 2-3 years studied = 115 (Advanced-

introductory level). However, if the last year you studied that language was your sophomore year in high school and you received a C+ or lower, you will be placed into 103.

- 4-5 years studied = 215 (Intermediate review level or higher). However, if the last year you studied that language was your junior year in high school and you received a C+ or lower, you will be placed into 115.

- AP scores of 3 = Fulfills a two-semester language sequence at the 115-116 level
- AP scores of 4 or 5 = Fulfills a two-semester language sequence at the 215-216 level.

- College Credit Programs refer to admission guidelines.
- CLEP credits = refer to admission guidelines.
- Transfer students = see appropriate associate dean.

If advisors and students have concerns about the placement guidelines, they are encouraged to consult with DML faculty.

**Native Speaker**

Native speakers of languages other than English receive a language requirement waiver if they are able to provide documentation of their native speaker status. Examples of documents include, but are not limited to, a school diploma received from a country where the language of instruction is not English or an internationally recognized examination certifying language abilities.

Native speakers of French, German or Spanish may be allowed to replace one or more of the required 300-level courses with a 300- or 400-level major elective, upon consultation with their departmental advisor. Second language proficiency is required ONLY for graduate-track majors, although it is strongly advised for language-education majors.
COURSES: 2009-2011

FRC 103-104 Introductory French  6 credits
Reading, writing, listening and speaking. Introduction to French culture. Almost exclusive use of French in class. Supplemented by required aural-oral practice in Language Laboratory (FRC 299). Prerequisite for 104: Grade of C of better in FRC 103 or permission of chair.  FRC 103 Fall; FRC 104 Spring

FRC 115-116 Advanced-Introductory French 6 credits
Continued development in writing, listening, speaking and especially reading French literary and cultural material. Comprehensive grammar review. Almost exclusive use of French in class. Lab required. Prerequisites for FRC 115: C or better in FRC 104 or two years of high school French  Prerequisite for FRC 116: C or better in FRC 115 or permission of chair.  FRC 115 Fall; FRC 116 Spring

FRC 215-216 Intermediate French  6 credits
This course is designed as a thorough review of grammatical structures. Also emphasized is the building of vocabulary, increasing competence in the four skills (reading, writing, listening and speaking) and gaining an overview of Francophone cultures. Exclusive use of French in class. Prerequisites for FRC 215: C or better in FRC 116 or four years of high school French  Prerequisite for FRC 216: C or better in FRC 215 or permission of chair.  FRC 215 Fall; FRC 216 Spring

FRC 299 French Language Lab  0 credits
Students enrolled in FRC 103-104, 115-116, 323-324 must register for one hour per week practice in Language Lab. Prerequisite: Registration for one or more of courses listed above.

FRC 300 Intermediate Internship, in France 3 credits
Comparative study of a designated aspect of popular culture in France. For students who have not yet completed FRC 331. Prerequisite: Permission of chair.

FRC 323 Topics in Conversation I  3 credits
Contemporary communication skills emphasized in general exploration of contemporary culture of the Francophone world. Exclusive use of French in class. Phonetics may be included. Language lab required. Prerequisite: C or better in FRC 216.  Fall

FRC 324 Topics in Conversation II  3 credits
A continuation of FRC 323. Exclusive use of French in class. Language lab required. Prerequisite: C or better in FRC 323 or permission of chair.  Spring

FRC 331 Substance and Style: Effective Writing in French I  3 credits
Distinguishing and producing effective writing of different types: essay, correspondence, description, report. Exclusive use of French in class. Prerequisite: C or better in FRC 216.  Fall

FRC 332 Substance and Style: Effective Writing in French II  3 credits
A continuation of FRC 331. Exclusive use of French in class. Prerequisite: C or better in FRC 331 or permission of chair.  Spring

FRC 333-334 Survey of French and Francophone Literature I/II  6 credits
Selected readings of literary works from France and other French-speaking countries. Exclusive use of French in class. Prerequisite for FRC 333: C or better in FRC 324 and 332 or permission of chair. Prerequisite for FRC 334: C or better in FRC 333 or permission of chair.  FRC 333 Fall; FRC 334 Spring

FRC 337 French History and Culture Through Film I  3 credits
Via feature-length films and documentaries, the history and culture of France are explored. An emphasis is placed on how France’s history and culture impact its current policies on international relations. Exclusive use of French in class. Prerequisite for FRC 337: C or better in FRC 324 and 332 or permission of chair.  Fall
FRC 339 French History and Culture Through Film II 3 credits
A continuation of FRC 337. Via feature-length films and documentaries, selected topics in contemporary issues of French and Francophone societies are explored. Exclusive use of French in class. 
Prerequisite for FRC 339: C or better in FRC 337 or permission of chair.  Spring

FRC 341-342 Advanced French for Business I & II 6 credits
Advanced aural/oral and writing skills needed for working in a French-speaking environment. Via the case-study method, practical situations, technical vocabulary and correspondence are highlighted. Exclusive use of French in class. Preparation for the Chambre de Commerce et d’Industrie de Paris Examination.  
Prerequisite for FRC 341: C or better in FRC 324 and 332 or permission of chair. 
Prerequisite for FRC 342: C or better in FRC 341 or permission of chair.  FRC 341 Fall; FRC 342 Spring

FRC 350 Tour de l’Amérique du Nord: Following the French in North America 3 credits
Exploration of the rich history of the French in North America from the time of Nouvelle France (the era of Samuel de Champlain, the Huron-Wendat, les coureurs des bois, Marguerite Bourgeoys, Jeanne Mance, and les Filles du Roi), La Guerre de Conquête (England defeats France and gains control of Quebec), and Le Grand Dérangement (the uprooting of the Acadian People) to the present day reemergence of language reacquisition among the multiple Franco-American communities in the United States.  
Prerequisite for FRC 350: C or better in FRC 324 and 332 or permission of chair.

FRC 351 Junior French Seminar & Special Topics 3 credits
Intensive analysis of selected literary works. Research paper required. Exclusive use of French in class.  
Prerequisite: C or better in FRC 324 and FRC 332 or permission of chair.

FRC 400 Advanced Internship, in France 3 credits
Comparative study of a designated aspect of culture in France. For students who have already completed FRC 331/332. Prerequisite: Permission of chair.

FRC 451 French Seminar & Special Topics 3 credits
Intensive analysis of culture and/or selected literary themes. Research paper required. Exclusive use of French in class. Discipline specific topics according to course instructor.  
Prerequisite: C or better in FRC 324 and FRC 332 or permission of chair.

FRC 499 Independent Study 3 credits
Prerequisite: Permission of chair.

GER 103-104 Introductory German 6 credits
Reading, writing, listening, and speaking. Introduction to German culture. Almost exclusive use of German in class. Supplemented by required aural-oral practice in Language Laboratory (GER 299). Prerequisite for GER 104: C or better in GER 103 or permission of chair.  GER 103 Fall; GER 104 Spring

GER 115-116 Advanced-Introductory German 6 credits
Continued development in writing, listening, speaking and especially reading German literary and cultural material. Comprehensive grammar review. Almost exclusive use of German in class. Lab required.  
Prerequisites for GER 115: C or better in GER 104 or two years of high school German. Prerequisite for GER 116: C or better in GER 115 or permission of chair.  GER 115 Fall; GER 116 Spring

GER 215-216 Intermediate German 6 credits
This course is designed as a thorough review of grammatical structures. Also emphasized is the building of vocabulary, increasing competence in the four skills (reading, writing, listening and speaking) and gaining an overview of German culture. Exclusive use of German in class.  
Prerequisites for GER 215: C or better in GER 116 or four years of high school German. Prerequisite for GER 216: C or better in GER 215 or permission of chair.  GER 215 Fall; GER 216 Spring.

GER 299 German Language Lab 0 credits
Students enrolled in GER 103-104, 115-116, 123-124, 133-134, 323-324, 353-354 must register for one hour per
GER 323 Topics in Conversation I  3 credits
Contemporary communication skills emphasized in general exploration of contemporary culture of the German-speaking world. Exclusive use of German in class. Phonetics may be included. Language lab required. Prerequisite: C or better in GER 216. Fall

GER 324 Topics in Conversation II  3 credits
A continuation of GER 323. Exclusive use of German in class. Language lab required. Prerequisite: C or better in GER 323 or permission of chair. Spring

GER 331 Substance and Style: Effective Writing in German I  3 credits
Distinguishing and producing effective writing of different types: essay, correspondence, description, report. Exclusive use of German in class. Prerequisite: C or better in GER 216. Fall

GER 332 Substance and Style: Effective Writing in German II  3 credits
A continuation of GER 331. Exclusive use of German in class. Prerequisite: C or better in GER 331 or permission of chair. Spring

GER 341-342 Advanced German for Business I & II  6 credits
Advanced aural/oral and writing skills needed for working in a German-speaking environment. Practical situations, technical vocabulary, and correspondence highlighted. Preparation for Wirtschaftsdeutsch International Exam. Exclusive use of German in class. Prerequisite for GER 341: C or better in GER 324 and 332 or permission of chair. Prerequisite for GER 342: C or better in GER 341 or permission of chair. GER 341 Fall; GER 342 Spring

GER 353 German Literature since 1945  3 credits
A thorough inquiry into aspects of literary life in both parts of Germany before and after 1990. Reflection on the attempts by East and West German authors to distance themselves from and cope with the experience of the literature of the NAZI era.

Prerequisite: C or better in GER 324 and GER 332 or permission of chair.

GER 361 Germany before Re-Unification  3 credits
An examination of dissimilar political, economic, and social issues in East- and West-Germany before 1989. Assessment of values and attitudes in the two German societies. Culture and cultural politics in the East and the West. Prerequisite: C or better in GER 324 and GER 332 or permission of chair.

GER 362 Germany Today  3 credits
The ‘new’ political system in post-1989 unified Germany, the country’s cultural development, her economic structure, as well as her particular styles (!) of life. Voices from West-German and East-German authors are heard as well as assessments of foreign critics and supporters of Germany’s re-unification. Prerequisite: C or better in GER 324 and GER 332 or permission of chair.

GER 400 German Internship  3 credits
Qualified students are placed in jobs or service programs where they will use and perfect language skills. Prerequisite: Permission of chair.

GER 472 Contemporary German Film  3 credits
Concentration on the period of Autorenfilm and highlighting some of its most prominent directors: Rainer Werner Fassbinder, Werner Herzog, Alexander Kluge, Edgar Reitz, Volker Schlöndorff, Jean-Marie Straub, Hans-Jürgen Syberberg, Rolf Thiele, Margarethe von Trotta, and Wim Wenders. Prerequisite: C or better in GER 324 and GER 332 or permission of chair.

GER 473 Literature and Film  3 credits
Study of six literary epochs through literature and film, stretching from the 18th to the 20th centuries. Comparison and critical analysis of prose and its adaptation in (German and foreign) film. Prerequisite: C or better in GER 324 and GER 332 or permission of chair.

SPA 103-104 Introductory Spanish  6 credits
Reading, writing, listening and speaking. Introduction to Hispanic culture. Almost exclusive use of Spanish in class. Supplemented by required aural-oral practice in Language Laboratory (SPA 299). Prerequisite for SPA 104: C or better in SPA 103 or permission of chair. SPA
SPA 115-116 Advanced-Introductory Spanish  
6 credits
Continued development in writing, listening, speaking and especially reading Hispanic literary and cultural material. Comprehensive grammar review. Almost exclusive use of Spanish in class. Lab required. **Prerequisite** for SPA 115: C or better in SPA 104 or two years of high school Spanish. **Prerequisite** for SPA 116: C or better in SPA 115 or permission of chair. SPA 115 *Fall*; SPA 116 *Spring*

SPA 215-216 Intermediate Spanish   
6 credits
This course is designed as a thorough review of grammatical structures. Also emphasized is the building of vocabulary, increasing competence in the four skills (reading, writing, listening and speaking) and gaining an overview of Hispanic cultures. Exclusive use of Spanish in class. **Prerequisite** for SPA 215: C or better in SPA 116 or four years of high school Spanish. **Prerequisite** for SPA 216: C or better in SPA 215 or permission of chair. SPA 215 *Fall*; SPA 216 *Spring*

SPA 299 Spanish Language Lab   
0 credits
Students enrolled in SPA 103-104, 115-116, 323-324 must register for one hour per week practice in Language Lab. **Prerequisite:** Registration for one or more of the courses listed above.

SPA 323 Topics in Conversation I   
3 credits
Contemporary communication skills emphasized in general exploration of contemporary culture of the Hispanic world. Exclusive use of Spanish in class. Phonetics may be included.Language lab required. **Prerequisite:** C or better in SPA 216. *Fall*

SPA 324 Topics in Conversation II   
3 credits
A continuation of SPA 323. Exclusive use of Spanish in class. Language lab required. **Prerequisite:** C or better in SPA 323 or permission of chair. *Spring*

SPA 331 Substance and Style: Effective Writing in Spanish I   
3 credits
Distinguishing and producing effective writing of different types: essay, correspondence, description, report. Exclusive use of Spanish in class. **Prerequisite:** C or better in SPA 216. *Fall*

SPA 332 Substance and Style: Effective Writing in Spanish II   
3 credits
A continuation of SPA 331. Exclusive use of Spanish in class. **Prerequisite:** C or better in SPA 331 or permission of chair. *Spring*

SPA 333-334 Survey of Peninsular and Latin American Literature I/II   
6 credits
Selected readings of literary works from Spain and Latin American countries. Exclusive use of Spanish in class. **Prerequisite** for SPA 333: C or better in SPA 324 and 332 or permission of chair. **Prerequisite** for SPA 334: C or better in SPA 333 or permission of chair. SPA 333 *Fall*; SPA 334 *Spring.*

SPA 350 Hispanic Short Stories   
3 credits
Critical survey of outstanding short stories ranging from Unamuno in Spain and Echeverría to Cortázar in Latin America. Exclusive use of Spanish in class. **Prerequisite:** C or better in SPA 324 and 332 or permission of chair.

SPA 351 Junior Spanish Seminar & Special Topics   
3 credits
Intensive analysis of selected literary works. Research paper required. Exclusive use of Spanish in class. **Prerequisite:** C or better in SPA 324 and SPA 332 or permission of chair.

SPA 400 Spanish Internship   
3 credits
Qualified students are placed in jobs or service programs where they will use and perfect language skills. **Prerequisite:** Permission of chair.

SPA 451 Senior Spanish Seminar   
3 credits
Intensive analysis of culture and/or selected literary themes. Research paper required. Exclusive use of Spanish in class. Discipline specific topics according to course instructor. **Prerequisite:** C or better in SPA 324 and SPA 332 or permission of chair.

SPA 452 Senior Latin American Special Topics   
3 credits
Exclusive use of Spanish in class. **Prerequisite:** C or better in SPA 324 and SPA 332 or permission of chair.
SPA 473 Mexican Crafts and Culture 3 credits
Meets once a week with MGT 473, in English, for discussion of crafts of Michoacan/importation and sale. Meets once a week independently, in Spanish, for study of general Mexican culture. 
Prerequisite: C or better in SPA 324 and SPA 332 or permission of chair.

SPA 474 Spanish for Business 3 credits
Advanced aural/oral and writing skills needed for working in a Spanish-speaking environment. Practical situations, technical vocabulary and correspondence highlighted. Exclusive use of Spanish in class. Prerequisite for SPA 474: C or better in SPA 324 and SPA 332 or permission of chair.

SPA 499 Independent Study 3 credits
Prerequisite: Permission of chair.

ARBC 103-104 Introductory Arabic 6 credits
Reading, writing, listening and speaking. Introduction to Arabic culture. Course aim is for almost exclusive use of Arabic in class. Supplemented by required aural-oral practice in Language Laboratory (ARBC 299). Prerequisite for ARBC 104: C or better in ARBC 103 or permission of chair. ARBC 103 Fall; ARBC 104 Spring

ARBC 115-116 Advanced-Introductory Arabic 6 credits
Continued development in writing, listening, speaking and especially reading Arabic literary and cultural material. Comprehensive grammar review. Continued aim of almost exclusive use of Arabic in class. Lab required. Prerequisites for ARBC 115: C or better in ARBC 104 or two years of high school Arabic. Prerequisite for ARBC 116: C or better in ARBC 115 or permission of chair. ARBC 115 Fall; ARBC 116 Spring.

ASL 103 American Sign Language I 3 credits
Introduction to American Sign Language (ASL), its structure, major grammatical features and language functions. Vocabulary acquisition. Captioning and telecommunication devices. Deaf cultural information. Deaf co-teacher and deaf consultants. Language lab required. Fall

ASL 104 American Sign Language II 3 credits
Builds on basic American Sign Language (ASL) grammar and conversational skills. Increases expressive/receptive fluency. Linguistic and cultural ASL concepts are expanded and deaf traditions studied. Deaf co-teacher and deaf consultants. Language lab required. Prerequisite: ASL 103. Spring

ASL 299 American Sign Language Lab

GREEK - See Classics Department.

ITA 103-104 Introductory Italian 6 credits
Reading, writing, listening and speaking. Introduction to Italian culture. Almost exclusive use of Italian in class. Supplemented by required aural-oral practice in Language Laboratory (ITA 299). Prerequisite for ITA 104: C or better in ITA 103 or permission of chair. ITA 103 Fall; ITA 104 Spring

ITA 115-116 Advanced-Introductory Italian 6 credits
Continued development in writing, listening, speaking and especially reading Italian literary and cultural material. Comprehensive grammar review. Almost exclusive use of Italian in class. Lab required. Prerequisites for ITA 115: C or better in ITA 104 or two years of high school Italian. Prerequisite for ITA 116: C or better in ITA 115 or permission of chair. ITA 115 Fall; ITA 116 Spring.

ITA 299 Italian Language Lab 0 credits
Students enrolled in ITA 103-104, must register for one hour per week practice in Language Lab. Prerequisite: Registration for one or more of courses listed above.

LATIN - See Classics Department.

POL 103-104 Introductory Polish 6 credits
Reading, writing, listening and speaking. Introduction to Polish culture. Course aim is for almost exclusive use of Polish in class. Supplemented by required aural-oral practice in Language Laboratory (POL 299). Prerequisite for POL 104: C or better in POL 103 or permission of
POL 115-116 Advanced-Introductory Polish
6 credits
Continued development in writing, listening, speaking and especially reading Polish literary and cultural material. Comprehensive grammar review. Continued aim of almost exclusive use of Polish in class. Lab required. *Prerequisites* for POL 115: C or better in POL 104 or two years of high school Polish. *Prerequisite* for POL 116: C or better in POL 115 or permission of chair. POL 115 *Fall*; POL 116 *Spring*.

POL 299 Polish Language Lab 0 credits
Students enrolled in POL 103-104 must register for one hour per week practice in Language Lab. *Prerequisite*: Registration for one or more of courses listed above.

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**philosophy**

**Full-time Faculty:** George Boger, Chair; Marianne Djuth, Michael Forest, Devonya Havis, John Kelly, Tanya Loughead, Philip Reed, Janice Schultz-Aldrich, John Zeis.

Philosophy is concerned with fundamental questions about the nature of reality, the foundations of the natural and social sciences, normative principles of ethics and art, with the scope of human knowledge, distinguishing truth from falsity, and what constitutes happiness. Because of its power to objectify principles, philosophy has been considered the *science of the sciences*.

**A Cornerstone of Jesuit education**

Philosophy has been a cornerstone of Jesuit education since the founding of the first Jesuit universities in 17th century Europe. Educators at Jesuit colleges and universities in the United States continue to recognize the special province of philosophy. Philosophy:

- embraces our human powers to think abstractly and thus to cultivate models of mental discipline and to broaden our capacities to understand and to enjoy living.
- raises critical questions and uses reasoned argumentation to develop normative standards for guiding a person’s relationship to his or her community.
- promotes reasoning about human nature and about human values to help provide bridges between religious belief and contemporary intellectual directions.
- values integrity, commitment to truth, excellence and understanding with an aim to enhance our expressive powers, our knowledge, foresight and sense of direction.
- is an especially ennobling activity since it elevates what is common in being human while also nurturing individuality and self-esteem.

Philosophy helps to cultivate responsible citizenship by promoting thoughtful reflection on contemporary cultural and intellectual currents, by critically assessing the discourse of public officials, and by identifying unfounded assertions and biased opinions with an aim to replace them with responsibly reasoned argumentation.

**Department Mission**

To fulfill its Ignatian mission, the philosophy faculty provides programs of instruction to cultivate an abiding sense of responsibility as men and women for and with others by focusing on the service of
faith and the promotion of justice. The faculty considers it crucially important that a good education addressing such concerns has a firm foundation in the history of philosophy and its principal branches, the issues of moral philosophy, together with special attention to examining argumentation.

**Student Learning Goals**

Upon successfully completing a program of philosophy instruction, each graduate will have:

- **Goal 1:** acquired a broad knowledge of canonical and non-canonical traditions in philosophy — figures, branches, traditions.
- **Goal 2:** acquired an enhanced capacity for communicating ideas specific to philosophy by both oral and written means.
- **Goal 3:** developed a sharpened capacity for thinking critically and for effectively assessing argumentational discourse.
- **Goal 4:** become information literate as this applies to philosophical study and research.
- **Goal 5:** developed an ability to apply philosophy to contemporary life in an increasingly globalized world.
- **Goal 6:** value for good citizenship by considering the service of faith and the promotion of justice in a meaningful life.

**Three Philosophy Curricula**

Students desiring to major in philosophy might have scholarly interests to pursue graduate study in philosophy or desire to acquire competence in philosophy for a diversity of reasons including advanced study in other disciplines. To help students satisfy these interests, the Department of Philosophy offers two major programs and one minor that maintain intellectual and academic rigor while promoting the mission to educate for others with attention to the principle of *cura personalis*. Each major curriculum consists of 12 courses (36 credit hours) beyond PHI 101 Introduction to Philosophy. Each curriculum combines a historical, a topics, and a fields approach to construct a unified program of instruction. Since our mission emphasizes concern with critical examination of values and principles of justice, each major curriculum requires one course in study and analysis of argumentation and two courses in study of ethics, one of which is theoretical.

**Ignatian Scholars Philosophy Curriculum**

This curriculum prepares scholars specifically for advanced study in philosophy.

1. **Core Curriculum Requirements:**

See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major Course Requirements** (12 courses)

- **Logic** (1 course) 3 credits
- **Ethics** (2 courses) 6 credits
  - Theoretical/Historical
  - Applied Ethics
- **History of Philosophy** (3 courses) 9 credits
  - Ancient
Medieval
Early Modern

**Thesis (1 course)**  3 credits
Senior Project & Defense

### 3. Philosophy Electives (5 courses)  15 credits

Possible Concentrations:
- Opt 1 — Catholic Social Thought
- Opt 2 — Modern Moral Challenges
- Opt 3 — Metaphysics/Epistemology
- Opt 4 — History of Philosophy
- Opt 5 — Identity, Race & Gender
- Opt 6 — A combination to student interest

### 4. Free electives:

Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

**Hypatian Scholars Philosophy Curriculum**

This curriculum prepares scholars for advanced study in disciplines other than philosophy.

### 1. Core Curriculum Requirements

See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

### 2. Major Course Requirements (12 courses)

- **Logic**  (1 course)  3 credits
- **Ethics**  (2 courses)  6 credits
- Theoretical/Historical
  - Applied Ethics
- **History of Philosophy**  (2 courses)  6 credits
  - One course from Series I
  - One course from Series II
- **Philosophy Electives**  (7 courses)  21 credits

### 3. Free electives:

Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.
Minor

Philosophic Associates Minor in Philosophy

A minor in philosophy consists of six (6) courses at middle and upper levels of study that might complement another major or provide personal intellectual satisfaction.

<table>
<thead>
<tr>
<th>History of Philosophy</th>
<th>(2 courses)</th>
<th>6 credits</th>
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<tbody>
<tr>
<td>One course from Series I</td>
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<td></td>
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<tr>
<td>One course from Series II</td>
<td></td>
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</tbody>
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| Philosophy Electives | (4 courses) | 12 credits |

TOTAL required courses (6 courses) 18 credits

COURSES: 2009-2011

Cultivating Ignatian discernment in a changing world

If philosophy is to serve human excellence and happiness, it must address the pressing concerns of its times. Philosophers and teachers of philosophy must reach into the collective store of philosophic wisdom and engage discourse that clarifies, defines and opens possibilities for resolving problems facing the human community. This requires restoring and universalizing the worth of the human person and the importance of promoting concern for the common good. The Ignatian call for the service of faith and the promotion of justice — as guiding programmatic enrichment for educating not only the whole person but also educating men and women for and with others — places on us a responsibility to address the modern predicament in its varying complexities.

An Ignatian education at a Jesuit university maintains this unity of philosophy and recognizes the priority of concern for the moral and spiritual. Our program of philosophy reaffirms this model of instruction by developing an undergraduate curriculum that combines concern for incisive analysis with special concern to treat moral matters of value and virtue. An Ignatian education broadens discourse on the important concerns facing the world’s peoples in modern times.

Principal to philosophic analysis is assessing and constructing argumentations. Our philosophy courses devote special attention to cultivating facility with identifying the principles, suppositions and presuppositions that underlie moral and political philosophies and systems of metaphysics and epistemology. This approach also cultivates skill at assessing the consequences of philosophical positions.

| PHI 101: Introduction to Philosophy | 3 credits |

Core Curriculum Foundation Course. This course aims to develop a capacity to interpret common experience in a philosophic way by becoming familiar with principal branches of philosophy — metaphysics, epistemology, ethics — being able to identify the elements of good argumentation, and recognizing the value of reason in a meaningful personal life. PHI 101 is a prerequisite for PHI 200 courses.
PHI 200 Courses — conversing with philosophers
PHI 200 level courses are Field 2 courses that cover a wide range of topics to enrich a sense of the importance and relevance of philosophy. Each course broadens exposure to issues and deepens appreciation of philosophic analysis. Many PHI 200 courses have an attribute attached — Ethics, Justice, Diversity, or Global Awareness. At least one PHI 200 level course is prerequisite for upper level PHI courses.

PHI 201 — Philosophy of the Person 3 credits
A study of various notions of person, human nature, and the relationship between persons and their natural and social environments.

PHI 205 — Philosophy of Nature & Reality 3 credits
A study of philosophical notions of nature, treating such topics as substance and universals, change and causality, space, time and infinity, and freedom of the will and determinism.

PHI 211 — Philosophy of Religion 3 credits
A study of principal contemporary and classical discussions about the existence and nature of God, God’s relationship to the world, the individual and society.

PHI 221 — Critical Thinking 3 credits
A study and exercise of forming good judgments for making decisions and for solving problems, considering evidence, context, relevant criteria and argument theories.

PHI 225 — Logic 3 credits
An introductory study of logic treating such topics as: deduction; techniques for evaluating reasoning; language and meaning; and various fallacies.

PHI 231 — Thinking, Knowing, and Believing 3 credits
A study of epistemology, treating concepts and problems of such topics as sense perception, distinguishing knowledge and belief, the roles of necessity, universality, and truth in knowing.

PHI 241 — Ethics: Traditions in Moral Reasoning 3 credits
A survey of principal traditions in moral reasoning with attention to moral principles and their applications to contemporary social realities.

PHI 242 — Ethical Issues in Business 3 credits
A study of important concerns in business and market realities with special concern to applying moral principles in decision making.

PHI 243 — Bio-Medical Ethics 3 credits
A study of important moral issues in relation to current concerns in medicine, medical technology and the life sciences.

PHI 244 — Environmental Ethics 3 credits
A study of classical and contemporary moral theories concerning the relationship of human beings to the manifold of their natural surroundings.

PHI 245 — Animal Ethics 3 credits
An examination of the notion that animals are things, machines, commodities, or resources, and whether sentient beings have intrinsic value and should be respected.

PHI 251 — Love, Friendship & Moral Life 3 credits
A philosophical study of the relationships among love, friendship and a moral life that treats individuals in families and society.

PHI 252 — Happiness, Virtue & the Good Life 3 credits
A study of the role of virtue and vice in the moral life, how they emerge from developments of personal character and relate to meaningful happiness and the good life.

PHI 261 — Philosophy of Law 3 credits
A study of the nature, sources and sanctions of law and
legal theory, treating concerns of legal positivism, natural law theory, rights and justice, and the relationship between law and morality.

PHI 266 — Philosophy of the Family 3 credits
A study of traditional and modern notions of the family with attention to challenges to the family in contemporary society.

PHI 267 — Catholic Social Thought 3 credits
A study of the legacy of Catholic social teaching from official papal encyclicals of Leo XIII to the present, from unofficial vehicles of independent social thinkers and from social forces such as labor unions, journals, political parties, spiritual social justice movements.

PHI 268 — Catholic & Jewish Bioethics 3 credits
A study of Catholic and Jewish thinkers working with shared values in addressing challenges in clinical medicine such as reproductive technology, beginning and end of life decisions, access to health and rationing.

PHI 271 — Philosophy of Human Rights 3 credits
A study of various issues of human rights in global perspective to ask if human rights transcend political orders, whether they are universally applicable to all human beings or determined to be culturally relative.

PHI 272 — Gender & Philosophy 3 credits
A study of feminist theories that analyzes the role that gender plays in society and in the formation of the masculine and feminine subjects; an examination of notions of power, structure and work; and gender as performance and representation.

PHI 273 — Race & Philosophy 3 credits
A study of philosophical assumptions underlying concepts of race that treats designations of racial identities, the political effects of racial classification, the ethics of race and the metaphysical legitimacy and social reality of racial designations.

PHI 274 — Social & Political Philosophy 3 credits
A study of foundational philosophical theories on how to organize the collective and social life of individual human beings, examining justifications for state authority, establishing citizen’s rights and allocating resources for human well-being.

PHI 277 — African American Philosophy 3 credits
A study of philosophical trends within the American experience with attention to the contributions of prominent African American philosophers and social activists.

PHI 281 — World Wisdom: Global Traditions 3 credits
A comparative study of philosophical traditions ranging from locations such as ancient Greece, Africa, Asia and the Americas.

PHI 285 — African American Philosophy 3 credits
A study of philosophical trends within the American experience with attention to the contributions of prominent African American philosophers and social activists.

PHI 291 — Philosophy of Art & Beauty 3 credits
A study of responses to defining art and beauty, treating topics such as the artistic process, art for life, beauty as objective and the impact of social trends on aesthetic theories.

PHI 300 Courses — philosophical challenges
PHI 300 level courses treat issues with greater attention to philosophic analysis and argumentation and expect students especially to demonstrate deeper capacity to compare and contrast the reasoning of different philosophers on a topic or theme. These courses are consistently more specialized and focus examination on primary texts with special attention to identify and extract the principles and premises underlying a philosopher’s argumentation and then to reconstruct its chain of reasoning. At least two PHI 300 level courses are prerequisite for PHI 400 courses and senior thesis experiences.
SERIES in HISTORY of PHILOSOPHY

Series I

PHI 301 — Ancient Philosophy 3 credits
An examination of principal trends in ancient philosophy in the West from the Preplatonic Greeks through Plato and Aristotle, to the beginning of the Medieval period.

PHI 302 — Medieval Philosophy 3 credits
An examination of principal trends in Medieval philosophy from St. Augustine in the fifth century up to Renaissance philosophical explorations.

PHI 303 — Early Modern Philosophy 3 credits
An in depth examination of major thinkers in the modern western philosophical tradition from Descartes to Kant. Renaissance & Enlightenment

Series II

PHI 304 — Nineteenth Century Philosophy 3 credits
A study of principal trends of 19th century European philosophy beginning with Kant and leading up to developments in early 20th century thinking.

PHI 305 — Contemporary Continental Philosophy 3 credits
An examination of principle philosophic trends emerging in Europe after the 19th century, treating such traditions as phenomenology, critical theory, structuralism, post-structuralism, deconstruction and postmodernism.

PHI 306 — Contemporary Analytic Philosophy 3 credits
An examination of principal philosophic trends in the Anglo-American world including logical positivism, linguistic analysis and ordinary language philosophy.

Other PHI 300 Courses

PHI 311 — God & the World 3 credits
Philosophical exploration of the ways in which belief in divine or spiritual entities influences relations between humans, animals and the environment.

PHI 312 — Time & Human Experience 3 credits
What is time? How is it experienced? How does an appreciation of time affect self understanding? This course will explore the nature of time consciousness.

PHI 316 — Philosophy of Mind 3 credits
A study of the nature of mental phenomena and their connection to behavior, artificial intelligence, personal identity, the mind-body problem, the unity of consciousness, the problem of other minds, action, intention and the will.

PHI 318 — Indian Philosophy 3 credits
An examination of different schools of Indian philosophy, including Indian views about dualistic and non-dualistic views of absolute reality relating to materialism and idealism, different moral systems, systems of logic and knowledge.

PHI 319 — Buddhism & Philosophy 3 credits
A study of the core values and beliefs of Buddhism, making theoretical and practical comparisons between Buddhist ideas and Western ideas.

PHI 321 — Knowledge & Reality 3 credits
An examination of principal philosophies of nature and being and various philosophic approaches to knowledge and understanding.

PHI 322 — Philosophy of Science 3 credits
A study of the nature of scientific explanation, scientific method and scientific knowledge, confirmation of hypotheses, distinction between science and metaphysics, the structure and status observation statements and the 'unity of science' thesis.
PHI 325 — Mathematical Logic  3 credits
Advanced study of formal systems of logic, constructing artificial languages with a syntax, semantics and deduction system.

PHI 361 — The Individual & the State  3 credits
Examines different conceptions of the relationship between the individual and the state. Topics addressed will include the nature of power, freedom, justice and citizenship.

PHI 363 — Catholic Philosophical Traditions 3 credits
An introduction to Catholic philosophical traditions in metaphysics, epistemology and/or ethics through readings and discussion of figures and movements that span multiple historical periods – the Patristic era, the medieval era, the modern era and the 20th Century.

PHI 367 — Advanced Topics in Catholic Philosophy 3 credits
An examination of the philosophical principles underlying modern Catholic philosophy in dialog with contemporary political philosophies such as communitarianism, neo-liberalism, Marxism.

PHI 371 — Concepts of Race & Post Colonial Theory 3 credits
Explores the ways in which concepts of race influence the construction of identity, foster rationales for the distribution of resources, and contribute to American and international social movements.

PHI 372 — Philosophy of Identity & Difference 3 credits
Explores metaphysical, ethical, political and social issues concerning sex/gender identity.

PHI 376 — Marx & Marxism  3 credits
A study of classic texts of Marx, Engels, and Lenin and their influences on later 19th century and contemporary philosophy.

PHI 378 — Jewish Philosophers of German Ancestry 3 credits
A study of some prominent Jewish philosophers who played an important role in the intellectual life of Germany from the 18th century until the beginning of the Nazi era.

PHI 387 — Phenomenology and Existentialism 3 credits
A study of existential and phenomenological thought including views of the self, relationships to world, other people and God, responsibility, intentionality and phenomenological method.

PHI 388 — Diasporic Philosophy  3 credits
Investigates the philosophical heritage expressed in diasporic intellectual and social movements, treating thinkers in Latin America, Caribbean and Africana traditions.

PHI 389 — Philosophy & Psychoanalysis  3 credits
A study of the confrontation of the phenomenological and psychoanalytical notions of the development and structure of the subject and its desires, ethics, traumas, and confrontation with society.

PHI 392 — American Philosophy  3 credits
A study of principal trends in American thinking with special focus on the pragmatic philosophers.

PHI 395 — Problems in Aesthetics 3 credits
A critical examination of select problems in contemporary controversies in aesthetics treating the intersections of personal and social values and the production of art.

PHI 396 — Philosophy & Literature  3 credits
A study of philosophical themes as expressed in literary texts to examine the propriety of literature as a medium for expressing philosophical ideas, and textual interpretation.

PHI 397 — Philosophy & Film  3 credits
An examination of the basic issues in the philosophy of film, including its nature and social function as well as film’s relation to authors, aesthetics, narratives, emotions and theories.
**PHI 399 — Capstone Philosophy Thesis**

3 credits

A course recommended for students in the Hypatian or Associate programs and open to students in any major or minor program. This course caps a student’s intellectual and philosophical studies by developing a thesis over a semester that results in a written project using both primary and secondary sources. While a student works closely with a faculty advisor, most of the work is self-directed. Often a capstone project has an oral component by which a student presents his or her work to the faculty.

**PHI 400 Courses — philosophical synthesis**

PHI 400 level courses engage students in using their analytic skills to synthesize, evaluate and critique philosophic discourse; especially to grasp the logico-philosophic consequences of foundational principles of human nature, being, nature and society. Students demonstrate mature understanding of philosophic analysis in scholarly papers, theses or other appropriate projects.

**PHI 401 — Seminar on Ancient Philosophy** 3 credits
**PHI 402 — Seminar on Medieval Philosophy** 3 credits
**PHI 403 — Seminar on Modern Philosophy** 3 credits
**PHI 404 — Seminar on Contemporary Philosophy** 3 credits
**PHI 405 — Seminar on Topics in Metaphysics** 3 credits
**PHI 406 — Seminar on Topics in Epistemology** 3 credits
**PHI 407 — Seminar on Topics in Ethics** 3 credits
**PHI 408 — Seminar on Topics in Aesthetics** 3 credits
**PHI 409 — Seminar on Topics in Social & Political Philosophy** 3 credits
**PHI 451 — Senior Thesis — a capstone experience** 3 credits

An Ignatian Scholar successfully completes a senior thesis. This is a culminating experience by which a student expresses mature habits of self-directed study, critical analysis, with an ability to integrate knowledge beyond the expectations of a seminar paper. A senior thesis addresses a select philosophic topic and is especially concerned with philosophic argumentation. An Ignatian Scholar demonstrates ability to exercise appropriate research methods, to provide critical assessment of issues, to assess theoretical presuppositions underlying a discourse and to advance well-constructed argumentation. A senior thesis ought to exhibit the values of the department mission.

**PHI 499— Directed Readings in Philosophy** 3 credits

Tutorial. Personally designed with a member of the Philosophy Department. Topics and terms mutually determined by student and mentor. **Prerequisite:** Three courses in philosophy.
The Department of Physical Education, Health and Sport Studies offers several distinct undergraduate programs including a dual certification program in physical education and health (K-grade 12); certification in physical education only (K-grade 12); and a series of non-teaching degrees that prepare students to pursue career interests such as sport administration, sport psychology or coaching. These program options prepare candidates for a graduate degree in an area of interest. The department recommends that candidates interested in teaching obtain dual certification in physical education and health.

**Teacher Certification Options**

The teacher preparation program strives to develop a liberally educated individual who has special knowledge and skills in the areas of movement and sport and their interrelated disciplines. Major emphasis is placed on the development of educational and performance foundations which will prepare an individual to teach in kindergarten through grade 12 or to pursue professional growth through further study and/or graduate work.

Candidates enjoy a continuous and extensive program of clinical and laboratory experiences at the college and through our collaboration with our professional development schools which provide opportunities for in-school observations, micro-teaching, tutoring, video-taping and large-group instruction. These experiences help to insure that the program remains responsive to the needs of the candidates, students and the profession.

Candidates pursuing the Physical Education/Health Teacher Certification Option complete a total of 150 hours of practicum experiences in three different courses (PED 311, PED 441 and HED 325). Candidates pursuing the Physical Education Teacher Certification Option complete a total of 100 hours of practicum experiences in two different courses (PED 311 and PED 441).

This program of instruction incorporates the standards established for physical education and health at the local school district level, the New York State learning standards for health and physical education, the guidelines set forth by the National Association for Sport and Physical Education (NASPE) and the curriculum standards outlined for health education and health certification by the American Association for Health Education (AAHE). The teacher certification option culminates with a fourteen-week student teaching experience in the P-12 schools. Each student teacher is given the opportunity to experience the privileges and responsibilities of a full-time teacher on both the elementary and secondary levels. An individual choosing to graduate without completing student teaching must fulfill this credit requirement in
consultation with his/her advisor.

**Student Learning Goals**

**Knowledge**
- Candidates complete high quality academic programs in compliance with New York State and professional standards with the knowledge, skills and dispositions to be successful professionals.
- Candidates integrate theory, research and practice in coursework and practicum settings

**Service**
- Candidates interact effectively with students from diverse cultural backgrounds.
- Candidates, faculty, staff and administrators model *cura personalis* and foster an environment that educates and develops the mind, body and spirit of each individual.
- Candidates team and lead through service in order to better understand the complexities of our educational, political and social environment and thus be better prepared to advocate for social justice

**Leadership/Professionalism**
- Candidates become reflective practitioners able to critically question the ends, means and contexts of teaching and learning

**Certification Requirements**
To obtain initial teacher certification, candidates must pass the examinations required by the New York State Education Department. These include the Liberal Arts and Sciences Test (LAST), the Assessment of Teaching Skills-Written (ATS-W), and the appropriate Content Specialty Tests(s) (CST). The LAST should be taken in the sophomore year or early in the junior year and the ATS-W and the CTS(s) in the senior year.

Candidates must be cleared by the New York State Education Department through a fingerprint-supported criminal history background check.

Candidates in teacher certification programs are required to take three credits of foreign language to meet New York State certification regulations. Canisius College accepts high school foreign language study for the foreign language proficiency requirement for those candidates successfully completing the appropriate Regents Exam with a grade of 85% or higher. For students who graduated from high schools outside New York state, three or more full year courses in a foreign language with grades of ‘B’ or higher are acceptable for the foreign language proficiency. Your proficiency will be evaluated during freshman orientation by the Director of Advisement. Candidates may also demonstrate the foreign language proficiency requirement by passing the appropriate CLEP test. Candidates that do not meet the foreign language proficiency through high school study are required to take a three credit foreign language course at the college level. Candidates that have no prior high school foreign language experience, should register for a 103 level foreign language course. Candidates that have prior high school foreign language experience, should register for a 115 level foreign language course.

9. **Academic Criteria for Endorsement and Completion of Program**
- Cumulative GPA of 2.5 or higher
- Grade of ‘C’ or higher in pedagogical courses
- Satisfactory performance in field placements
- Successful portfolio review

Please see the School of Education page for information about transition points in the programs and portfolio requirements.
Curriculum

1. Core Requirements
Students in all majors are expected to fulfill Core requirements. See pages 38-40 of this catalog for the Core Curriculum requirements. Please go to [http://www.canisius.edu/core_curriculum/mission.asp](http://www.canisius.edu/core_curriculum/mission.asp) for complete information about the Core Curriculum.

2. Major Requirements
Major Sequence Coursework

Physical Education Teacher Certification Curriculum (K - grade 12)

<table>
<thead>
<tr>
<th>Dual Certification Curriculum:</th>
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<tbody>
<tr>
<td><strong>Physical Education courses:</strong></td>
<td><strong>36 credits</strong></td>
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<tr>
<td>PED 150 Intro to PE/Health</td>
<td>3 credits</td>
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<tr>
<td>PED 203 Net, Target, and Fitness Activities</td>
<td>3 credits</td>
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<td>PED 204 Invasion Games</td>
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<tr>
<td>PED 311 Movement Ed. &amp; Elementary Act</td>
<td>3 credits</td>
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<tr>
<td>PED 335 Technology in Physical Education &amp; Health</td>
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<td>PED 351 Coaching Theory &amp; Techniques</td>
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<td>PED 354 &amp; Lab Adapted Physical Education</td>
<td>3 credits</td>
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<tr>
<td>PED 371 Assessment in PE</td>
<td>3 credits</td>
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<tr>
<td>HHP 235 Kinesiology</td>
<td>3 credits</td>
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<thead>
<tr>
<th><strong>Health Education courses:</strong></th>
<th><strong>32 credits</strong></th>
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<tbody>
<tr>
<td>HED 115 Basic Nutrition</td>
<td>3 credits</td>
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<tr>
<td>HED 205 Wellness &amp; Fitness</td>
<td>3 credits</td>
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<tr>
<td>HED 220 Healthy Behaviors</td>
<td>3 credits</td>
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<tr>
<td>HED 321 Lifeguard, CPR, First Aid WSI</td>
<td>3 credits</td>
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<tr>
<td>HED 325 School Health</td>
<td>3 credits</td>
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<tr>
<td>HED 337 Exercise Principles &amp; Applications</td>
<td>3 credits</td>
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<tr>
<td>HED 425 Evolution of Disease and Illness</td>
<td>3 credits</td>
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<tr>
<td>HED 461 Psychology of Sport and Mental Health</td>
<td>3 credits</td>
</tr>
<tr>
<td>BIO 107 &amp; Lab Human Anatomy &amp; Physiology I</td>
<td>4 credits</td>
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<tr>
<td>BIO 108 &amp; Lab Human Anatomy &amp; Physiology II</td>
<td>4 credits</td>
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<tr>
<th><strong>Pedagogical Core:</strong></th>
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<tbody>
<tr>
<td>EDU 250 Foundations of Education</td>
<td>3 credits</td>
</tr>
<tr>
<td>PED 380 Human Learning: Growth &amp; Dev</td>
<td>3 credits</td>
</tr>
</tbody>
</table>
PED 441 Teaching Methods in PE 3 credits
PED 450 Student Teaching: PE/Health 12 credits
EDU 451 Child Abuse Seminar 0 credits
EDU 452 Prevention of School Violence Seminar 0 credits
PED 470 Student Teaching Seminar 1 credits
**TOTAL 126 credits**

**Physical Education Teacher Certification Curriculum**

**Physical Education courses**

<table>
<thead>
<tr>
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<tbody>
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<td>HED 337 Exercise Principles &amp; Applications</td>
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<td>PED 380 Human Learning: Growth &amp; Dev</td>
<td>3</td>
</tr>
<tr>
<td>PED 441 Teaching in PE</td>
<td>3</td>
</tr>
<tr>
<td>PED 450 Student Teaching PE/Health</td>
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<tr>
<td>PED 470 Student Teaching Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PED 451 Child Abuse Seminar</td>
<td>0</td>
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<tr>
<td>PED 452 Prevention of School Violence Workshop</td>
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</tbody>
</table>

**TOTAL 120 credits**

**3. Free Electives**

Courses/credits in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 hours for graduation. Students may graduate with more but not less than 120 credit hours.
Non-Teaching Minors
The physical education major may wish to pursue a career other than teaching. Several options are available to prepare candidates for professional careers or graduate training. Candidates may obtain a non-teaching, bachelor of science degree in physical education; a bachelor of science degree in physical education with a minor in sport psychology or a concentration in sport administration. In each program the candidate must combine the elected minor or concentration with the 12 courses in the Physical Education Core. Students in the non-teaching options follow the regular Canisius College Core Curriculum.

Physical Education Core
PED 150 Intro to PE/Health 3 credits
HED 205 Wellness & Fitness 3 credits
HHP 235 Kinesiology 3 credits
PED 281 Foundations of Sport Management 3 credits
HED 337 Exercise Principles & Applications 3 credits
PED 351 Coaching Theory and Techniques 3 credits
PED 380 Human Learning: Growth & Dev 3 credits
HED 461 Psych of Sport & Mental Health 3 credits
PED 482 Foundations of Sport Marketing 3 credits
BIO 107 & Lab Human Anatomy & Physiology I 4 credits
BIO 108 & Lab Human Anatomy & Physiology II 4 credits
PE or Health Elective 3 credits
PE or Health Elective 3 credits
PE or Health Elective 3 credits
TOTAL 44 credits

Minors
The sports psychology minor provides students interested in psychology and physical education with an interdisciplinary approach to the study of sport, physical activity, health psychology, exercise psychology or coaching. The minor ideally prepares the student for careers in coaching or sport psychology. Candidates may seek advisement from the Psychology Department or the Department of Physical Education, Health and Sport Studies. Candidates must complete the Physical Education Core listed above and the sport psychology minor courses listed below.

Concentrations
Candidates may obtain a bachelor of science degree in physical education (non-teaching) by completing the Physical Education Core courses, and will also obtain a sport administration concentration by completing the sport administration courses or sport psychology courses listed below. An internship is highly recommended in place of a free elective.
Physical Education/Sport Administration
Concentration:
MAT 105 Linear Algebra 3 credits
MAT 131 Statistics & Computers 3 credits
ECO 101 Principles of Microeconomics 3 credits
ECO 102 Principles of Macroeconomics 3 credits
MGT 101 Management of Organizations 3 credits
ACC 201 Financial Accounting 3 credits
ACC 202 Managerial Accounting 3 credits
ISB 101 Management Technology 3 credits
TOTAL 24 credits

Physical Education/Sport Psychology
Concentration
Free Electives (PED 498 Internship Recommended) 18
PSY 101 Introduction to Psychology I 3 credits
PSY 102 Introduction to Psychology II 3 credits
PSY 201 Basic Statistics for Behavioral Sciences 3 credits
PSY 202 Experimental Psychology 3 credits
PSY 318 Social Psychology 3 credits
PSY 329 Leadership and Motivation 3 credits
PSY 373 Behavior Modification 3 credits
TOTAL 39 credits

COURSES: 2009-2011
PED for Physical Education, HED for Health Education

HED 115 Basic Nutrition 3 credits
This course will address all aspects of proper nutrition. The class will address material such as macronutrients, micronutrients, daily caloric intake and portion sizes. Students will gain knowledge of nutrition through class lectures, interactive activities and peer presentations. Upon successful completion of the course, students will have a working knowledge of proper nutrition and appropriate dietary habits. Fall/Spring

PED 203 Net, Target and Fitness Activities 3 credits
Participation in selected net, target, and fitness activities. Students will develop a sub-skill analysis of the major skills within each sport, teaching progressions, lead-up games, informal/formal assessments of selected activities. Fall/Spring

PED 150 Intro to PE/Health 3 credits
Organization and administration of school programs, beginning teacher standards in physical education, INTASC standards, appropriate practices in health and physical education, and professional development activities. Development of electronic candidate portfolio. Taskstream course fee. 10 hours of Service-Learning required. Fall/Spring

PED 204 Invasion Games 3 credits
Participation in selected games which invade a territory. Students will develop a sub-skill analysis of the major skills within each sport, teaching progressions, lead-up games, informal/formal assessments of selected activities. Fall/Spring
HED 205 Wellness and Fitness 3 credits
Lecture and laboratory. Skills, teaching methods, resource units, evaluative instruments, teaching aids, leading to an overall understanding of the principles of health and wellness. Focus on physical fitness testing for childhood, childhood obesity and the development of a personal fitness program. Fall/Spring

PED 207 Dance 3 credits
This skill sequence includes activities such as games of low organization, table tennis, bowling, pool, and a unit in contemporary dance forms. Fall/Spring

PED 216 Gymnastics 3 credits
Participation in selected dance forms. Students will learn appropriate organization and teaching progressions for various forms of dance taught in the P-12 curricula. Fall/Spring

HED 220 Healthy Behaviors 3 credits
Examines health determinants and the effects on all seven dimensions of health. Assessment of personal lifestyle behaviors and factors influencing current and relevant health issues. Emphasis on personal behavior modification to practice health-enhancing behaviors and to reduce health risks. Guidelines for healthy practices related to nutrition, mental health, cancer prevention, HIV/STD’s, cardiovascular disease, stress management, sexuality, physical fitness, drugs and alcohol and relationships. Establishes foundation for living healthy and productive lives. Fall/Spring

HED 221 Lifeguard, C.P.R., First Aid, WSI 3 credits
Knowledge, skill techniques and appreciations necessary to meet certification requirements of the American Red Cross. Certification fee required for this course. Prerequisite: Department swimming test and completion of departmental recommendation. Fall/Spring

PED 281 / 481 Foundations of Sport Management/Sport Marketing 3 credits
Administrative leadership of health, physical education, recreation and athletic programs. Nature and philosophy of administration as related to problems and practices of public school administration. Service Learning required. Fall/Spring

PED 305 Cooperative Act. & Outdoor Curr. 3 credits
Philosophy, teaching methods, programming and safety management. Activities may include initiatives, new games, problem solving, trust activities, ropes course, cycling, mountain biking, rock climbing, repelling, cross-country skiing and others. Fall/Spring

PED 311 Movement Ed. & Elementary Act. 3 credits
Conceptual bases, perceptual-motor development and practical applications of movement education. Development, implementation and integration of a physical education program; teaching strategies geared to the elementary level classroom with emphasis on New York and national learning standards in Physical Education. 50 hour field experience required. Fall/Spring

HED 325 School Health 3 credits
Explores the most prevalent health and safety issues of school-aged children and youth. Risk factors and resiliency related are examined at individual, classroom, school, family and community levels. At-risk issues such as substance abuse, teen pregnancy, delinquency, violence, dropping out of school, child and teen suicide, child abuse are addressed. Prospective teachers learn strategies for a safe and healthy classroom and school environment. 50-hour field experience required. Fall/Spring

PED 335 Technology in Physical Education & Health 3 credits
Lecture and laboratory. Candidates will use information technology to enhance learning in physical education and health and personal and professional productivity. Content will include audio and visual technology, devices, hardware, software, and peripherals. Fall/Spring

HED 337 Exercise Principles and Applications 3 credits
This course will address the many aspects of fitness and exercise. Students will experience classroom lecture as well as practical experience in the weight room and other
alternative exercise facilities. Students will gain experience in the proper design of exercise programs and will understand the importance of periodization as it relates to exercise. Upon successful completion of this course, the student will have a vast knowledge of the principles surrounding strength and conditioning. Prerequisites: BIO 107/L and BIO 108/L with a minimum grade of C. Fall/Spring

PED 351 Coaching Theory and Techniques 3 credits
Principles of effective coaching, including the role of the coach, practice planning, leadership theory, sports psychology and teaching motor skills. Service-Learning hours may be earned in this course. Fall/Spring

PED 354 & Lab Adapted Physical Education 3 credits
Field-centered approach to development of physical-education pro-grams for students with disabilities. Concurrent observation and participation in program for the disabled. Includes 10 hour non-credit lab. For special populations. Service-Learning hours may be earned in this course. Prerequisites: BIO 107-108. Fall/Spring

PED 371 Assessment in PE 3 credits
Lectures, laboratory, and field experience in the Physical Best Fitness program, Fitnessgram, and integrating the NYS Profile. Focus on the evaluation of the State standards and authentic assessments and NASPE guidelines. Certification fee required for this course. 10 hour field experience required. Fall/Spring

PED 380 Human Learning: Growth & Dev 3 credits
Normal developmental patterns of motor skills. How the human organism acquires movement proficiency in those skills. Includes non-credit lab in teaching sport skills. Fall/Spring

HED 425 Evolution of Disease & Illness 3 credits
Overview of humanity’s triumphs and failures in the ongoing fight of illness and disease. Explores history of disease, current health issues and trends to determine outlook for emerging health concerns of the future. Examines various models of disease to explain disease agents and route of transmission throughout the body’s systems. Analysis of disease occurrence, predisposing factors, body’s immune response, symptoms, prevention, treatment and control. Fall/Spring

PED 441 Teaching Methods in PE 3 credits
Development, implementation and integration of a physical education program; teaching strategies for K-12 physical education with emphasis on New York and national learning standards in Physical Education. 50 hour field experience required. Prerequisites: PED 311 and HED 325. Fall/Spring

HED 461 Psych of Sport & Mental Health 3 credits
Psychological aspects of healthy living related to sports, exercise and lifestyle. Stress and relaxation techniques, controlled breathing and holistic benefits of health are discussed, leading to an improved quality of life for athletes. Meets Field Knowledge V. Fall/Spring

PED 450 Student Teaching PE/Health: Childhood and Adolescence 12 credits
Seven-week student teaching experience in an elementary school, Grades 1-6, and in a high school, Grades 7-12, culminating the preparation for teacher certification. Grade: Pass/Fail. Prerequisites: Completion of all other course requirements and department approval; 2.5 G.P.A. in all major courses. Fall/Spring

PED 470 Student Teaching Health/PE Seminar 1 credits
Six full days during the student teaching semester. Fall/Spring

EDU 451 Child Abuse Seminar 0 credits
Occurs during the Student Teaching Seminar. Required for NYS Teacher Certification. Fall/Spring

EDU 452 Prevention of School Violence Seminar 0
Occurs during the Student Teaching Seminar. Required for NYS Teacher Certification. Fall/Spring

NOTE: PED 450, PED 470, EDU 451, EDU 452 must be registered together during the student teaching semester.
This will count as a full semester of four courses, 13 credit hours.

**PED 498 Internship 3 credits**
Field-based experience in selected areas of physical education. Requires 120 clock hours. **Prerequisite:** Permission of instructor. **Fall/Spring**

**PED 499 Independent Study 3 credits**
Prerequisite: Permission of instructor. **Fall/Spring**

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**physics**

**Full-Time Faculty:** H. David Sheets, Chair (‘09 - ‘10); Kenneth Scherkoske, Chair (‘10 - ‘11); James C. Lauffenburger, Robert Selkowitz, Michael Woods.

The Physics major provides a strong background in the scientific skills of analysis and experimentation and gives students a broad choice of career opportunities. The Physics major is a preparation for further study in graduate physics and related areas such as oceanography, geophysics, patent law, medicine, engineering and astronomy and entry into research and development employment. The specific goal for majors is a thorough knowledge of basic physical science and the mathematical and experimental application of this basis to the study of natural phenomena. Other offerings are intended to give non-majors an appreciation of the relation between science and the world within which they live.

**Student Learning Goals:**

**Goal 1:** Physics majors will know how to learn physics. Students will:

A: Be able to comprehend and critically assess written expositions of physics, contrasting those ideas which are fundamental from those which are consequential;

B: Have an understanding of the circumstances under which a principle applies.

**Goal 2:** Physics majors will be able to produce analytical solutions to physical problems using sound critical-thinking skills. Students will:

A: Clearly identify what the problem is; i.e., what is being sought; generating equivalent statements of the problem;

B: Delineate the principles of physics and analytical techniques which will be used to obtain a Solution;

C: Correctly apply the principles and techniques delineated in Objective B to obtain a solution;

D: Test the correctness of the solution by showing that it yields expected results in limiting and special cases.

**Goal 3:** Physics majors will possess the technical skills needed to function effectively in a physics laboratory. Students will:

A: Be able to collect a broad range of data with an ability to adapt to new experimental methods;

B: Be able to apply fundamental statistical methods to analyze data;

C: Be able to display data with clarity;

D: Be able to draw sound conclusions from the results of the data analysis.

**Goal 4:** Physics majors will be able to communicate ideas in physics with precision and clarity.
Students will:

A: Be able to produce precise and clear expository written material about physics;
B: Be able to produce a well-organized and clear oral presentation of physics material.

Qualifications for the major
Physics majors must have a minimum grade of C for courses in General Physics (PHY 223, 224, 225) and Mathematics through Differential Equations (MAT 222).

Facilities
Physics majors use high resolution spectroscopy equipment, lasers, fiber optics, high vacuum apparatus, low temperature apparatus, a multi-channel nuclear spectrometer and an X-ray spectrometer. They have access to departmental computers and the college’s main computer system. In addition, a large supply of other equipment is available for students to use as early as their first semester.

Co curricular Opportunities
The Society of Physics Students offers opportunities for social activities, technical tours, lectures and other activities.

Physics Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements
PHY 223 (or PHY 223a/MAT 115-PHY 223b/MAT 118) - 224 General Physics for Physical Science Majors 8 credits
PHY 225 General Physics III 4 credits
PHY 226 Basic Electronics 4 credits
PHY 330 Electricity and Magnetism I* 3 credits
PHY 331 Electricity and Magnetism II* 3 credits
PHY 332 Statistical and Thermal Physics* 3 credits
PHY 350-351 Advanced Laboratory 2 credits
PHY 443 Classical Mechanics* 3 credits
PHY 447 Quantum Mechanics* 3 credits
PHY 449 Nuclear Physics Lab* 1 credit
PHY 498 Senior Project 1 credit
CHM 111-112 General Chemistry 8 credits
CSC 107 Computer Programming for Science* 4 credits
MAT 111-112 8 credits
MAT 211 Calculus III 4 credits
MAT 222 Differential Equations 4 credits
MAT 335-336 Mathematical Analysis for Physicists* 8 credits
*These courses offered in alternative years only

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours. Computer Science courses are highly recommended, as are PHY 301, PHY 360

Recommended Semester Schedule for Major Courses
Students should consult with their major advisor every semester to discuss course offerings and the courses needed to meet graduation requirements. Many courses, including CSC107, and all upper level (300-400) Physics courses are offered only in alternating years.

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
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<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
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<tr>
<td>CHM 111 4 credits</td>
<td>CHM 112 4 credits</td>
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<tr>
<td>MAT 111 4 credits</td>
<td>MAT 112 4 credits</td>
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<tr>
<td>CSC 107 4 or 3 credits</td>
<td>PHY 223 4 credits</td>
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<tr>
<td><strong>Sophomore Year</strong></td>
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<tr>
<td>MAT 211 4 credits</td>
<td>MAT 222 4 credits</td>
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<tr>
<td>PHY 224 4 credits</td>
<td>PHY 225 4 credits</td>
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<tr>
<td>CSC 107 3 or 4 credits</td>
<td>PHY 226 4 credits</td>
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<tr>
<td><strong>Junior or Senior Year</strong></td>
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<tr>
<td>PHY 330 3 credits</td>
<td>PHY 331 3 credits</td>
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<tr>
<td>PHY 350 1 credit</td>
<td>PHY 351 1 credit</td>
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<tr>
<td>MAT 335 4 credits</td>
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<tr>
<td><strong>Senior or Junior Year</strong></td>
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<tr>
<td>PHY 332 3 credits</td>
<td>PHY 447 3 credits</td>
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<tr>
<td>PHY 443 3 credits</td>
<td>PHY 499 1 credit</td>
</tr>
<tr>
<td>PHY 449 1 credit</td>
<td>Elective 3 credits</td>
</tr>
<tr>
<td>MAT 336 4 credits</td>
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</tbody>
</table>

Other Programs

**Physics Minor (7 courses)**
PHY 223 (or PHY 223a,b) and PHY 224, General Physics I, II 8 credits
PHY 225 General Physics III 4 credits
MAT 211 Calculus III 4 credits
Physics Minor Electives: Three courses selected from the following two groups.
At least one of these three must be selected from Group I.

**Group I**
- PHY 330 Electromagnetism I 3 credits
- PHY 331 Electromagnetism II 3 credits
PHY 332 Statistical and Thermal Physics  
PHY 443 Classical Mechanics  
PHY 447 Quantum Mechanics  

Note: (i) PHY 331 requires PHY 330 as a prerequisite.  
(ii) MAT 336 is strongly recommended for PHY 447.

Group II —
PHY 226 Basic Electronics  
PHY 360 Scientific Modeling  
Two of PHY 350, 351, 449 Advanced Lab  
MAT 222 Differential Equations  
MAT 335 Mathematical Analysis for Physicists I  
MAT 336 Mathematical Analysis for Physicists II  
CHM 301+ lab Classical Physical Chemistry  

Note: If CHM 301 is used for Group II, PHY 332 cannot be used for Group I.

Dual majors can be formed with almost any other course of studies.

COURSES: 2009-2011

PHY 129 Introduction to Astronomy  
Understanding modern astronomy by using ideas from basic physics. Mathematics minimized. Naming and viewing stars and constellations is included.  
(Field 6) Fall

PHY 131 Earthquakes: Seismology and Society  
The science behind earthquakes; their causes, locations, frequency and measurement; and their affects on geography, human structures and society.  
(Field 6) Spring

PHY 133 Dinosaurs  
An introduction to dinosaurs and their world through an examination of their anatomy, evolution, phylogeny, behavior, metabolism and the cause of their extinction. Exploration of geological concepts such as uniformitarianism, stratigraphy, sedimentation, fossilization and taphonomy will help to explain how this knowledge was extracted from the rocks.  
(Field 6) Fall

PHY 201-202 General Physics  
For biological-science students. Newtonian mechanics, electricity and magnetism, optics and atomic physics. Some calculus. Lecture, recitation and laboratory. Prerequisites: MAT 109 or equivalent. A grade of C- or higher in PHY 201 is required to continue in PHY 202. PHY 210 Fall; PHY 202 Spring

PHY 223-224 General Physics for Physical Science Majors  
Calculus-based physics course and related laboratory. PHY 223: Newtonian mechanics with applications. PHY 224: electricity and magnetism. Prerequisites: MAT 111. A grade of C- or higher in PHY 223 is necessary to continue in PHY 224. PHY 223 Fall; PHY 224 Spring

PHY 225 General Physics III  
Calculus-based physics course and related laboratory. Fluids, mechanical waves and sound, heat and thermodynamics, geometric and physical optics, relativity and introductory quantum physics. Prerequisite: A grade of C- or higher in PHY 224 is required to continue in PHY 225. Spring

PHY 226 Basic Electronics  
Circuit analysis, power supplies, semiconductor physics, operational amplifiers, digital electronics. Integrated circuit techniques. Includes laboratory work each week. Prerequisite: A grade of C- or higher in PHY 224 is required. Spring
PHY 301 Optics  3 credits
Geometric optics, interference, diffraction, fiber optics, laser system design, holographic metrology and non-linear optical phenomena. Prerequisites: MAT 222 and PHY 224. Offered irregularly, 2 year cycle

PHY 330 Electromagnetism I  3 credits
Static and time-varying classical electric and magnetic fields in free-space and matter. Prerequisite: PHY 224. Prior completion of or concurrent registration for MAT 335 is strongly encouraged. Fall 2009 only, 2 year cycle

PHY 331 Electromagnetism II  3 credits
Primary topic: electromagnetic waves in free-space and matter, beginning with the Maxwell equations. Additional topics: radiation and special relativity. Prerequisite: PHY 330. Spring 2010 only, 2 year cycle

PHY 332 Statistical and Thermal Physics  3 credits
Develops statistical concepts and methods used to relate macroscopic to microscopic descriptions of many particle systems. Prerequisite: PHY 225. Fall 2010 only, 2 year cycle

PHY 350-351 Advanced Laboratory  2 credits
Advanced experiments such as experimental instrumentation, holography, spatial filtering, atomic spectroscopy, x-ray diffraction, low-temperature measurements, magnetic resonance. Prerequisite: PHY 225. Fall and Spring

PHY 360 Scientific Modeling  3 credits
An introduction to the use of computer models to develop understanding in a scientific context. This course is intended for students in any scientific or mathematical discipline, and focuses on the principles involved in using and interpreting computer models. The course is divided into three main sections: dynamical modeling, structural modeling and computer-based statistical methods. Problems will be drawn from biology, biochemistry, chemistry, geology and physics. Prerequisites: MAT 111 and a one-year introductory science sequence (in computer science, chemistry, biology or physics). Offered irregularly, 2 year cycle

PHY 443 Classical Mechanics  3 credits
One, two, and three dimensional motion of a particle, non-inertial systems, classical scattering, rigid-body motion. Lagrange and Hamilton equations, calculus of variations, oscillations. Prerequisites: PHY 224, MAT 222. Fall 2010 only, 2 year cycle

PHY 447 Quantum Mechanics  3 credits
Experimental basis of quantum mechanics, state functions, operators. Schrodinger’s equation and applications, parity, perturbation theory, Dirac notation. Prerequisite: MAT 336 is strongly recommended. Spring 2010 only, 2 year cycle

PHY 449 Nuclear Physics Lab  1 credit
One-semester lab meeting once per week. Experiments study nuclear instrumentation, characteristics of radiation and nuclear spectra. Prerequisite: PHY 225 2 year cycle

PHY 498 Senior Project  1-3 credits
A one-semester research project done under the supervision of a faculty member. Prerequisite: Senior standing in physics and permission of department chair. Spring

PHY 499 Independent Study  3 credits
Prerequisite: Permission of department chair. Spring and Fall
**Political Science**

**Full-Time Faculty:** John D. Occhipinti, Chair; Jonathan M. DiCicco, Peter J. Galie, Kevin Hardwick, Michael V. Haselswerdt.

This major provides students with a comprehensive understanding of Political Science, including American Government, International Relations, Comparative Politics, and Political Philosophy. The major supplies students with an ideal academic background for careers in government, politics, the law, national security, business and education. The Political Science major also gives students a strong foundation for teaching social studies and can be combined with a major in secondary education. In addition, the Political Science major may be the basis for graduate study leading to careers in public policy, international governance, business or academia.

**Co-curricular Opportunities**
- Visits to Congress and the Supreme Court
- Travel to Europe for EuroSim, an international inter-collegiate simulation of the European Union
- Trips to Washington, D.C. for alumni connections and job prospects
- Internships in Buffalo, Albany and Washington, D.C.
- Experiential learning in the form of simulations of the National Security Council (PSC 346), Political campaigns (PSC 236) and the European Union (PSC 355).
- Opportunities for students to present their research papers at student conferences
- Several student clubs connected with American politics, world politics and the law
- Membership in Pi Sigma Alpha, the National Political Science Honor Society
- Awards for outstanding senior majors
- Departmental Honors Program

**Student Learning Goals**

Majors will develop and apply knowledge of the sub-fields of Political Science and will be able to think critically, conduct research and communicate effectively. Upon graduation, majors will be able to assume leadership roles and be able to articulate the importance of public service in sustaining an effective and just political community.

Students who complete the major will:
- **Goal 1:** Master the vocabulary, concepts, information and ideas necessary to understand politics and world affairs;
- **Goal 2:** Apply critical thinking skills, research skills and appropriate technology for problem solving, public policy development and analysis through both written and oral communication;
- **Goal 3:** Demonstrate the ability to work with and for others;
- **Goal 4:** Understand the qualities that contribute to leadership and teamwork; and
- **Goal 5:** Understand the role of public service at the local, national and global levels.

**Qualifications for the major**

The major in Political Science must have a minimum grade of C in each of the following courses: PSC 103, PSC 104, PSC 111, PSC 140,
PSC 150 and PSC 217. It is strongly recommended that these six courses be completed before the beginning of the junior year.

Political Science Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (12 courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSC 103 Constitutional Foundations of American Government</td>
<td>3</td>
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<tr>
<td>PSC 104 American Political Process</td>
<td>3</td>
</tr>
<tr>
<td>PSC 111 Western Political Tradition</td>
<td>3</td>
</tr>
<tr>
<td>PSC 140 International Relations</td>
<td>3</td>
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<tr>
<td>PSC 150 Comparative Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSC 217 Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>Political Science electives: five courses, including at least 2 at the 300/400 level</td>
<td>15</td>
</tr>
<tr>
<td>PSC 400/401 Capstone</td>
<td>3</td>
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</tbody>
</table>

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

The following courses from other departments will count as PSC Electives: ECO 401, ECO 411, HIS 345, HIS 347, HIS 350, HIS 394

Students are expected to complete the following four courses in their first year: PSC 103, PSC 104, PSC 140, and PSC 150. These courses can be taken in any sequence. By the end of their second year, students are also expected to complete PSC 111 and PSC 217. PSC 400/401 (capstone course) should be taken in the spring of the senior year.

Other Programs

Departmental Honors Program
The Political Science Honors Program provides an opportunity for outstanding students in the major to go beyond the usual course offerings. Majors who take part in the program will engage in original research under the close supervision of a faculty member. The research project provides the opportunity for students to do independent study on a topic of their own choosing. Participants in the All-College Honors Program may use their senior thesis to fulfill this requirement, provided that this project is prepared under the direction of a member of the Political Science Department.
Taking part in the Honors program can also make students more competitive after graduation, whether for further schooling or employment. For example, students applying for graduate school or law school in their senior year can refer to the research paper in their application. At the same time, participation on the Departmental Honors Program will enable students’ faculty advisors to write more detailed and enthusiastic letters of recommendation for these applications.

Requirements:
- Students may apply in the spring of their junior year or in their senior year
- Grade point average overall (to apply for the program and upon graduation): 3.30
- Grade point average for major courses (to apply for the program and upon graduation): 3.50
- Honors Research: a lengthy paper involving original research in the field of Political Science under the direction of a member of the Political Science Department

Minor Degree Possibilities
In addition to the major, two minors are offered. The Political Science minor, for non-majors only, provides an introduction to and overview of the discipline. The Law and Public Policy minor, for both majors and non-majors, focuses on the relationship between the legal system and public policy.

**Political Science Minor**
American Government and Politics (PSC 103) 3 credits
American Political Process (PSC 104) 3 credits
Political Theory (PSC 111) 3 credits
International Relations (PSC 140) 3 credits
Comparative Government (PSC 150) 3 credits
Public Policy: one course (PSC 215, 237, 334) 3 credits
American Political Institutions and Behavior: 1 course (PSC 224, 225, 325, 335) 3 credits
**TOTAL (7 courses)** 21 credits

**Law and Public Policy Minor**
PSC 103 Constitutional Foundations of American Government 3 credits
PSC 215 National Issues and Public Policy 3 credits
PSC 245 American Foreign Policy 3 credits
PSC 320 American Constitutional Law I (Structures and Powers) 3 credits
PSC 321 American Constitutional Law II (Civil Liberties and Civil Rights) 3 credits
PSC 345 International Crime after 9/11 3 credits
ECO 401 Public Finance 3 credits
**TOTAL (7 courses)** 21 credits


**Dual Degree Possibilities**

Most of the best majors in Political Science decide to build their resumes and enhance their post-graduate opportunities by earning dual or triple degrees with other programs. The most popular combinations are with Criminal Justice, European Studies, International Relations and Urban Studies. Other common dual degrees combine Political Science with Communication Studies, Economics, English, History, Modern Language and Sociology. Students planning dual or triple degrees should consult with their academic advisor in the Political Science department and the chair or director of each department or program involved.

**Political Science & Law**

The Political Science department is the home for the college’s pre-law center, and the Political Science major is the most common academic major for prospective law students. The college offers a recommended curriculum for pre-law studies, which can be easily combined with the Political Science major. For further information, students should consult with the chair of Political Science department and the director of the Pre-Law Center.

**Political Science & Business**

For Political Science majors considering a career in business and/or a master of business administration (MBA) degree, preparation can be obtained by taking a concentration in Business consisting of seven courses: ECO 101-102, ACC 201-202, MGT 101, MKT 201 and MAT 131 or MGT 340. There is also a minor in Business Management for non-business majors.

**Resume Building**

The Political Science department assists students in finding internships that allow them to gain valuable professional experience and contacts. Positions are available in Washington and Albany, as well as in Western New York with local government, the U.S. House of Representatives and Senate, and the New York State Assembly and Senate.

The college’s many study abroad programs offer exciting opportunities to examine politics in other countries or pursue internships, such as with a Member of Parliament in the British House of Commons. Students may also take a limited number of their major electives while studying abroad.

Students may also participate in EuroSim, an international intercollegiate simulation of the European Union, attended by American and European delegations. In even-numbered years students engage in subsidized travel to Europe related to the simulation, and in odd-numbered years the event is held in the United States.

Opportunity for independent study under the guidance of a faculty member is available for juniors and seniors who wish to explore topics that go beyond the department’s normal course offerings.

**COURSES: 2009-2011**

**PSC 103 Constitutional Foundations of American Government**

3 credits

Provides a thorough grounding in the U.S. Constitution, which is America’s founding document, and serves as the basis for its political system. (Field 5) \( \text{Spring \& Fall} \)

**PSC 104 American Political Process**

3 credits

An introduction to American politics including political socialization, public opinion and ideologies, political participation in electoral systems and mass movements, political parties and interest groups. (Field 5) \( \text{Spring \& Fall} \)
PSC 110 Western Political Tradition I  
3 credits  
Main outlines of history of Western political tradition from dawn of political consciousness to Machiavelli. (Field 4) Fall

PSC 111 Western Political Tradition II  
3 credits  
Development of Western political tradition from Machiavelli to present, emphasizing development of liberal, conservative and socialist traditions. (Field 4) Fall

PSC 140 International Relations  
3 credits  
Introduces paradigms of world politics. International security, political economy and globalization. Power politics and international organizations (Field 5) Spring & Fall

PSC 150 Comparative Government and Politics  
3 credits  
Comparative analysis of foreign countries. Governments, ideologies, parties, elections, political culture, civil society and democracy in industrialized and developing countries. (Field 5) Spring & Fall

PSC 210 American Political Humor  
3 credits  
History, significance and impact of humor on the political process. A wide ranging variety of humorous forms will be used including editorial cartoons, comic strips, radio broadcasts, television programs, movies and more. Fall

PSC 215 National Issues and Public Policy  
3 credits  
Selected policy issues and their relationship to the political process including health care, homeland security, welfare and housing. Fall

PSC 217 Research Methods  
3 credits  
Basic, non-statistical treatment of current techniques and methodologies which characterize political-science research.

PSC 224 Congress and the Legislative Process  
3 credits  
Survey of Congressional procedures and practices.

PSC 225 U.S. Presidency  
3 credits  
Survey of the U.S. executive branch of government, including President, Vice President, White House staff, Executive office and the bureaucracy. Fall

CRJ 227 Criminal Justice I  
3 credits  
See CRJ 227 for course description. Fall

CRJ 228 Criminal Justice II  
3 credits  
See CRJ 228 for course description. Spring

PSC 233 Interest Groups and Public Opinion in America  
3 credits  
Development of the notions of opinion and interest, their transmission and their influence on decision-making. Fall

PSC 236 Political Campaigning  
3 credits  
Campaigning resources, techniques, strategies and goals. Practical and theoretical treatment. Field research. Spring

PSC 237 State and Local Politics  
3 credits  
The institutions and policies of state and local governments, with focus on New York State. State and local elections, gubernatorial politics, state legislatures, community politics. Spring

PSC 242 International Organizations  
3 credits  
International and transnational. Intergovernmental and non-governmental. Regional and global. Content areas: political, economic and humanitarian. Fall

PSC 244 War: Causes and Consequences  
3 credits  
Investigates the conditions, processes, and events which lead to the outbreak of war, and explores the political, strategic, and human consequences of wars. In-depth analysis of selected wars in history and in contemporary global politics. Spring

PSC 245 American Foreign Policy  
3 credits  
US diplomatic history since 1945. Structure, process and issues in contemporary American foreign relations. Fall
PSC 320 American Constitutional Law I  
3 credits  
Development of constitutional law in the U.S. from the founding of the Republic to present. Case-study method in selected areas of constitutional jurisprudence. Fall

PSC 321 American Constitutional Law II: Civil Liberties  
3 credits  
Role of modern and contemporary Supreme Court in controversial areas of civil liberties and related questions. Current interpretations of the Bill of Rights and the Fourteenth Amendment. Spring

PSC 325 Elections and Voting Behavior  
3 credits  
The various types of elections and electoral procedures and their relationship to voter turnout and voter choice. Fall

PSC 334 Public Administration  
3 credits  
The Federal Bureaucracy: its relationship to the executive, and the public. Elements and issues of public-sector management. Prerequisite: PSC 103 or 104 or permission of instructor. Spring

PSC 335 Political Parties  
3 credits  
Development and present conditions of political parties. What they do and why they do it. Parties’ past and present roles, as well as their future prospects. Spring

PSC 336 Urban Government and Politics  
3 credits  
Structure, function, operation and politics of local government. Machine and reform models; power and participation. Significant policy issues to be addressed include schools, finances, land use, planning and crime. Fall

PSC 345 International Crime After 9/11  
3 credits  
Cross-border organized crime and responses, especially in North America and Europe. Emphasis on drug trafficking, terrorism and illegal immigration. Crime-fighting, counter-terrorism, border management and international police cooperation. Guest speakers and video. Prerequisites: PSC 140-150 or CRJ 227-228 or permission of instructor. Spring

PSC 346 National Security Council  
3 credits  
Role-play simulation of the National Security Council. Student “policymakers” conduct briefings, develop initiatives and debate policy positions and proposals concerning U.S. national security. Emphasizes strategic, ethical and moral dilemmas in foreign policy decision-making. Prerequisite: Permission of instructor. Fall

PSC 355 European Union  
3 credits  
History of European integration. Structure, process and politics of EU policies. Optional EuroSim: international, intercollegiate simulation of the EU and travel. Fall

PSC 359 International Political Economy  
3 credits  
Introduction to international politics in the global economy, focusing on the globalization of production, trade and finance; inequality and international development; and multinational corporations and international financial institutions. Spring

HIS 393 The Making of Modern Africa  
3 credits  
See HIS 393 for course description. Spring

HIS 394 Contemporary Middle East  
3 credits  
See HIS 394 for course description. Spring

ECO 401 Public Finance  
3 credits  
See ECO 401 for course description. Fall

PSC 400 Capstone  
3 credits  
Provide an integrative experience for senior majors. Students will complete a project/research paper in which they demonstrate a sense of public service and or leadership through the application of knowledge gained in the major. Additional topics and requirements vary by instructor. Applies only to class of 2013 and later graduating classes. Spring
PSC 401 Capstone  1 credit
Provides an integrative experience for senior majors (required for classes of 2011 and 2012 only). Allows students demonstrate their proficiency in the discipline and prepares them for post-graduate education or employment. Spring

PSC 436 Seminar in Presidential Campaigning and Advance Work  3 credits
Political advance work in the context of contemporary American presidential campaigns. Prerequisite: Permission of instructor. Fall

PSC 442 Seminar in International Relations  3 credits
Theoretically-informed perspectives on global affairs explored through selected topics and issues unified by a central theme, such as leaders and leadership in international politics. Prerequisite: International Relations majors or permission of instructor. Spring

PSC 455 Seminar in European Politics  3 credits
Contemporary issues in Eastern and Western Europe. Concepts and theories of comparative politics and European integration and governance. Prerequisites: PSC 140 and 150 or permission of instructor. Spring

PSC 498 Internship  3 credits
A variety of opportunities are available locally, as well as in Washington, D.C. and Albany. Internships arranged by faculty members in government, law offices and non-profit organizations. Prerequisite: Permission of chair of Political Science department. Spring & Fall

PSC 499 Independent Study  3 credits
Research and/or directed reading under direction of faculty members associated with the Political Science department. Prerequisite: Permission of chair of the Political Science department. Spring & Fall

pre-engineering

2+2 Program 3+2 Program

Full-Time Faculty: H. David Sheets, Director ('09-'10), Kenneth Scherkoske, Director ('10-'11); James C. Lauffenburger, Robert Selkowitz, Michael Wood

3 + 2 Dual Degree Physics-Engineering Articulation Programs
The 3+2 Dual Degree Engineering programs are ideal for students interested in scientific or industrial research and development careers. The dual degree programs, which provide extensive grounding in both science and engineering, consist of three years of study at Canisius and two subsequent years at one of our cooperating institutions. This leads to a B.S. in Physics from Canisius and a B.S. in Engineering from the partner institution. There are currently four articulation programs:

- B.S. in Physics, from Canisius and B.S. in Mechanical Engineering from Pennsylvania State University at Erie
- B.S. in Physics from Canisius and B.S. in Electrical Engineering from SUNY at Buffalo
- B.S. in Physics from Canisius and B.S. in Industrial Engineering from SUNY at Buffalo
- B.S. in Physics from Canisius and B.S. in Mechanical Engineering from SUNY at Buffalo.
2 + 2 Engineering Transfer Programs
These programs cover the first two years of a four-year engineering major. The 2+2 program covers the science, mathematics and engineering courses that form the basis of study for the first two years of most engineering school curricula.

The completion of the engineering degree normally takes an additional two years of study at an engineering school. Most students have chosen to transfer to SUNY at Buffalo, but students have also completed engineering degrees at a wide variety of schools such as Cornell, Clarkson, RIT and RPI. Canisius also maintains an articulation agreement in engineering with the University of Detroit Mercy.

Student Learning Goals and Objectives
Goal 1: Students in the Pre-Engineering program will be able to produce analytical solutions to engineering problems using sound critical-thinking skills. Students will:
   A: Clearly identify what the problem is; i.e., what is being sought; generating equivalent statements of the problem;
   B: Delineate the principles of science and analytical techniques which will be used to obtain a solution;
   C: Correctly apply the principles and techniques delineated in Objective B to obtain a solution;
   D: Test the correctness of the solution by showing that it yields expected results in limiting and special cases.

Goal 2: Students in the Pre-Engineering program will be able to produce non-analytical solutions to engineering problems. Students will:
   A: Be able to apply numerical methods, graphic approaches and other approximations for solving engineering problems too complex to allow for analytical solutions;

Goal 3: Students in the Pre-Engineering program will be able to communicate ideas in engineering with precision and clarity. Students will:
   A: Be able to produce precise and clear expository written material about engineering.
   B: Be able to produce a well-organized and clear oral presentation of engineering material.

Advisement:
Students should consult with their major advisor every semester to discuss course offerings and the courses needed to meet graduation requirements. Some courses, including CSC107 and most 300 and 400 level physics courses are offered only in alternating years.

Recommended Schedule: 2 + 2 Program

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<th>FALL</th>
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<tr>
<td><strong>Freshman Year</strong></td>
<td><strong>Freshman Year</strong></td>
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<tr>
<td>CHM 111 4 credits</td>
<td>CHM 112 4 credits</td>
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<tr>
<td>EGR 111 3 credits</td>
<td>Elective (optional) 3 credits</td>
</tr>
<tr>
<td>CSC 107 or Elective 3 credits</td>
<td>PHY 223 4 credits</td>
</tr>
<tr>
<td>MAT 111 4 credits</td>
<td>MAT 112 4 credits</td>
</tr>
<tr>
<td><strong>Sophomore Year</strong></td>
<td><strong>Sophomore Year</strong></td>
</tr>
<tr>
<td>MAT 211 4 credits</td>
<td>MAT 222 4 credits</td>
</tr>
<tr>
<td>PHY 224 4 credits</td>
<td>PHY 225 4 credits</td>
</tr>
<tr>
<td>EGR 211 3 credits</td>
<td>PHY 226 or Elective 4 credits</td>
</tr>
<tr>
<td>Elective or CSC 107 3 credits</td>
<td>EGR 208 or Elective 3 credits</td>
</tr>
</tbody>
</table>
**Recommended Schedule: 3 + 2 Program**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
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</thead>
<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
<td><strong>Sophomore Year</strong></td>
</tr>
<tr>
<td>CHM 111 4 credits</td>
<td>MAT 211 4 credits</td>
</tr>
<tr>
<td>MAT 111 4 credits</td>
<td>MAT 222 4 credits</td>
</tr>
<tr>
<td>CSC 107 4 or 3 credits</td>
<td>PHY 224 4 credits</td>
</tr>
<tr>
<td></td>
<td>PHY 225 4 credits</td>
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<tr>
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<td>PHY 226 4 credits</td>
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</table>

**Junior Year**

Students must complete the following list of courses during their third year at Canisius, and during their subsequent studies at an Engineering institution. Some course will satisfy electives in both the Physics Major and the Engineering Major, many are offered on a two-year alternating cycle. Careful advising is necessary to insure timely completion. The courses are: PHY 330, PHY 331, PHY 332, PHY 443, PHY 350, PHY 351, PHY 447, PHY 499, MAT 335, MAT 336.

**COURSES: 2009-2011**

**EGR 111 Introduction to Engineering Design** 3 credits
Introduction to the subject of robotics as well as some of the quantitative tools engineers use to solve problems; including model classification, optimization methods and deterministic, probabilistic and economic models. *Fall*

**EGR 211 Thermodynamics** 3 credits
Fundamental concepts and laws of thermodynamics, equilibrium. Applications to physical and chemical systems. *Prerequisite: PHY 223. Fall*

**EGR 207 Engineering Statics** 3 credits
Forces and torques on rigid bodies, couples, moments, centroids and moments of inertia. Equilibrium conditions, friction, free body diagrams.

**EGR 214 Strength of Materials** 3 credits
Behavior of materials under mechanical loading. Stress and strain relationships, shear, bending moments, torsion and deflection. Beams, columns, energy methods and failure criteria. *Prerequisite: EGR 207. Spring*

**EGR 211 Thermodynamics** 3 credits
Applications to beams, trusses, frames and other structures. *Prerequisite: PHY 223, MAT 112. Fall*

**EGR 208 Engineering Dynamics** 3 credits
Kinematics of particles and rigid objects. D’Alembert’s Principle, moving reference frames, work-energy methods, impulse and momentum, vibration. Applications to engineering problems. *Prerequisite: EGR 207. Spring*
Psychology is an exciting and constantly evolving discipline that plays an important role in a liberal arts education. As a science, it is the study of the mental processes, behavior and experience of humans and animals. As a profession, the goal of psychology is to apply psychological principles to help individuals, groups, and institutions to improve people’s lives.

Student Learning Goals

Goal 1. Classic and contemporary theoretical perspectives in psychology: students will demonstrate familiarity with classical and contemporary theoretical perspectives in psychology. Students will:
A. Identify the basis of psychology as a scientific endeavor.
B. Identify the primary objectives of psychology: describing, understanding, predicting, and controlling behavior and mental processes.
C. Demonstrate the use of classic/contemporary theories to explain and predict behavior and mental processes.
D. Identify classic and contemporary theoretical perspectives (e.g., behavioral, neuro-science, cognitive, evolutionary, humanistic, psycho-dynamic and sociocultural).
E. Demonstrate knowledge of overarching themes, persistent questions, or enduring conflicts in psychology such as: 1) the interaction of heredity and environment, 2) subjective versus objective perspectives on behavior, and 3) the interaction of mind and body.

Goal 2. Discipline-Specific Content in Psychology: students will demonstrate knowledge representing breadth and depth in selected discipline-specific content areas of psychology. Students will:
A. Demonstrate an understanding of the theory and research representing the domains of learning and cognition.
B. Demonstrate an understanding of the theory and research representing the domains of individual differences, psychometrics, personality and social processes.
C. Demonstrate an understanding of the theory and research representing the domains of the biological bases of behavior and mental processes, including physiology, sensation, perception, motivation and emotion.
D. Demonstrate an understanding of the theory and research representing the domain of developmental changes in behavior and mental processes across the life span.

Goal 3. Research methods in psychology: students will understand and apply basic research methods in psychology, including research design, data analysis and interpretation. Students will:
A. Identify the different research methods used by psychologists.
B. Distinguish the difference between research designs that permit causal inferences from those that do not.
C. Identify appropriate conclusions derived from psychological research and demonstrate their ability to interpret basic statistical conclusions and distinguish between statistical significance and
practical significance.

D. Identify relevant databases to design research studies.

E. Demonstrate an ability to identify testable research hypotheses based on operational definitions of variables.

F. Demonstrate knowledge of the APA code of Ethics in the treatment of human and nonhuman research participants.

Goal 4. Application of Psychology: students will demonstrate knowledge of psychological concepts, theories and research findings as these apply to everyday life. Students will:

A. Distinguish major applied areas of psychology (e.g., clinical, counseling, industrial/organizational, school, health).

B. Demonstrate knowledge of psychology-based interventions in clinical, counseling, educational, industrial/organizational, community and other settings.

C. Demonstrate knowledge to assess psychology-based interventions through empirical evaluation.

In order to complete the psychology major, seniors must take the Senior Assessment Exam used to assess how well these goals and learning objectives are being met by the Psychology Department. The score on the exam does not affect a student’s GPA.

The Canisius College Psychology major is designed to be flexible, permitting students to pursue dual majors or minors in other disciplines. Undergraduates can take advantage of Psychology minors in Child, Family and Community Studies, Clinical/Counseling Psychology, Forensic Psychology, Industrial/Organizational Psychology, Neuroscience, School Psychology and Sport Psychology. Each of these minors is a structured set of courses providing students with a specialized knowledge base that will better prepare them for post-graduate studies and/or careers.

Co-Curricular Opportunities
Extracurricular and social activities related to psychology are also available to those who are interested in extending their Canisius experience outside of the classroom. These activities include Psi Chi (national Honor Society in Psychology), the Psychology Club and participation in events sponsored by the college’s Counseling Center.

Qualifications for the major
Requirements for graduating as a Psychology major are a C average (2.00 G.P.A.) in psychology courses, and a C average (2.00 G.P.A.) in all college courses. Students wishing to major in psychology who did not list this major on entry to Canisius, should complete a Major Declaration form from the registrar’s office and fill out a Psychology Major Declaration Form in the Psychology Department (HSC 209).

Psychology Curriculum:

1. Core Curriculum Requirements:
   See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (10 courses)
   PSY 101 Introduction to Psychology I
   
   - 288 -
PSY 102 Introduction to Psychology II 3 credits
PSY 201 Basic Statistics for Behavioral Sciences 3 credits
PSY 202 Experimental Psychology 3 credits

Core I (Development-Social-Industrial):
one course to be chosen from the following: PSY 203, 229, 307, 318, 320, 329 3 credits

Core II (Personality-Abnormal-Counseling):
one course to be chosen from the following:
PSY 235, 302, 303, 334, 373, 384, 452 3 credits

Core III (Learning/Cognition-Neuroscience):
one course to be chosen from the following:
PSY 317, 324, 325, , 355, 391, 395, 397, 398, 410 3 credits
Psychology electives: three courses. 9 credits

Note: A total of only six credit hours from PSY 495, 497, 498, and 499 collectively may be counted toward the 30 credit hours for the Psychology major. Additional hours of these courses may be taken as free electives.

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Recommended Schedule:

FALL          SPRING
Freshman Year
PSY 101  3 credits  PSY 102    3 credits

Sophomore Year
PSY 201  3 credits  PSY 202    3 credits
Psychology core  3 credits  Psychology core    3 credits

Junior Year
Psychology core  3 credits  Psychology elective  3 credits

Senior Year
Psychology elective  3 credits  Psychology elective  3 credits

Minors
The General Psychology minor is for students not majoring in Psychology.

General Psychology Minor
PSY 101 Introduction to Psychology 3 credits
PSY 102 Introduction to Psychology 3 credits
Psychology electives: four Psychology courses approved by the student’s Psychology Department advisor 12 credits

TOTAL (6 courses) 18 credits

Clinical/Counseling Minor
The Clinical/Counseling Psychology minor is appropriate for individuals planning careers in the field of Mental Health Services (Clinical/Counseling), Social Work, or Counseling Education and is open to majors and non-majors with the needed prerequisites. Students learn about the therapeutic services provided in counseling centers, independent or group practices, hospitals or clinics.
(Note: Non-majors must complete the following prerequisites before beginning any of the three tracks in this minor: PSY 101, PSY 102, and PSY 201.

Adult Clinical/Counseling Track
PSY 303 Abnormal Psychology 3 credits
PSY 452 Theories and Techniques of Counseling 3 credits
Plus any FOUR of the following courses:
PSY 235 Health Psychology 3 credits
PSY 324 Cognitive Psychology 3 credits
PSY 382 Drugs and Behavior 3 credits
PSY 391 Biopsychology of Stress 3 credits
PSY 395 Assessment in the Behavioral Sciences 3 credits
PSY 397 Neurobiology of Mental Disorders 3 credits
PSY 498C Practicum: Clinical/Counseling Psychology 3 credits
TOTAL (6 courses) 18 credits

Child/Adolescent Clinical/Counseling Track
PSY 373 Behavior Modification 3 credits
PSY 384 Child Psychopathology 3 credits
PSY 452 Theories and Techniques of Counseling 3 credits
Plus any THREE of the following courses:
PSY 203 Developmental Psychology 3 credits
PSY 307 Adolescent Psychology 3 credits
PSY 334 Child, Family and Community Psychology 3 credits
PSY 498C Practicum: Clinical/Counseling Psychology 3 credits
COM 304 Family Communication 3 credits
CRJ 337 Violence in the Family 3 credits
CRJ 354 Juvenile Delinquency 3 credits
TOTAL (6 courses) 18 credits

Pastoral Counseling Track for the Clinical/Counseling Minor
A minor in pastoral/religious counseling will serve the needs of students interested in a future in human services through religious institutions. This minor is directed at students who are less focused on clinical
therapy and more oriented toward helping people through ministry. Courses will focus on coping, ethics, counseling, marriage and family and the unique blend of psychology and religion involved in these human service interventions. This minor will also help prepare students who are interested in continuing their education in pastoral counseling at the graduate school level. There are a variety of both master’s and Ph.D. programs in pastoral counseling offered through both Psychology Departments and Schools of Divinity throughout the country.

**Pastoral Counseling Track requires:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSY 452 Theories and Techniques of Counseling</td>
<td>3</td>
</tr>
<tr>
<td>RST 300 Theology of Suffering</td>
<td>3</td>
</tr>
<tr>
<td>RST 361 Psychology of Religion</td>
<td>3</td>
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</table>

**Plus any THREE of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 303 Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 334 Child, Family, Community</td>
<td>3</td>
</tr>
<tr>
<td>PSY 382 Drugs and Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSY 391 Biopsychology of Stress</td>
<td>3</td>
</tr>
<tr>
<td>RST 344 Theology of the Family Process</td>
<td>3</td>
</tr>
<tr>
<td>RST 453 Theology of Death</td>
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**Plus ONE of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOC 390 Marriage and Families</td>
<td>3</td>
</tr>
<tr>
<td>COM 304 Family Communication</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 337 Violence in the Family</td>
<td>3</td>
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</tbody>
</table>

**TOTAL (7 courses) 21 credits**

**Forensic Psychology Minor**

The Forensic Psychology minor, open to both majors and non-majors, focuses on the application of psychology to law and criminal justice, including the clinical, applied and research activities where these disciplines intersect. (Note: Non-majors must complete the following prerequisites before beginning the minor: PSY 101, PSY 102, PSY 201 or equivalent Field 7 statistics course, and PSY 202 or equivalent research methods course.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 303 Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 369 Forensic Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 307 Adolescent Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CRJ 227 Criminal Justice I</td>
<td>3</td>
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<tr>
<td>CRJ 228 Criminal Justice II</td>
<td>3</td>
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</table>

**Psychology elective: ONE of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 334, PSY 373, PSY 382, PSY 395, PSY 452, PSY 498F</td>
<td>3</td>
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</table>

**Criminal Justice elective: one of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CRJ 320, CRJ 337, CRJ 344, CRJ 351, CRJ 354, CRJ 356, CRJ 449, CRJ 450, CRJ 482</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL (7 courses) 21 credits**
Industrial/Organizational Psychology Minor

The Industrial/Organizational Psychology minor is open to majors in Psychology or Management/Marketing. This interdisciplinary collaboration is concerned with the workings of industrial and non-industrial organizations. Students interested in a career as a psychologist working in a business or similar organizational environment learn about selection and placement, organization development, training, personnel research, consumer psychology and engineering psychology.

(Note: Non-majors must complete the following prerequisites before beginning the minor: PSY 101, PSY 102, PSY 201 or equivalent Field 7 statistics course, and PSY 202 or equivalent research methods course.)

**Required Psychology Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 229 Industrial/Organizational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 318 Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 329 Leadership and Motivation</td>
<td>3</td>
</tr>
<tr>
<td>PSY 395 Assessment in the Behavioral Sciences</td>
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**Required Management Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MGT 360 Organizational Behavior OR</td>
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<tr>
<td>MGT 364 Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 367 Employee and Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>MGT 464 Current Topics in Human Resources</td>
<td>3</td>
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</tbody>
</table>

**TOTAL (7 courses) 21 credits**

Note: Students may not take PSY 229 and MGT 360 in the same semester.

School Psychology Minor:

The School Psychology minor focuses on the role of psychology in the field of education. Students gain knowledge of psychological development, applied behavior change and different types of psychological and educational assessment. This minor, which is of special value to students interested in education, testing, or working with children, is open to majors and to non-majors who take the prerequisite courses.

(Note: Non-majors must complete PSY 101, 102, and 201 before beginning the minor.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSY 203 Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 334 Child, Family and Community</td>
<td>3</td>
</tr>
<tr>
<td>PSY 373 Behavior Modification</td>
<td>3</td>
</tr>
<tr>
<td>PSY 395 Assessment in the Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>PSY 498D Practicum: School Psychology</td>
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**TOTAL (5 courses) 15 credits**

Social Sciences Minor in Child, Family and Community Studies

The social science interdisciplinary minor is co-sponsored by the Department of Psychology and the Department of Sociology, Anthropology and Criminal Justice. It is intended for students seeking a deeper
understanding of the dynamics of family relations and the interaction of the family with society. Its mission is to prepare undergraduate students for careers and future graduate studies in the fields of education, social work and social services. Embedded within the interdisciplinary focus of the minor is an emphasis on creating reflective and compassionate practitioners who are committed to the Jesuit ideal of men and women for others.

**Prerequisite courses** (2 of the following):
- PSY 101 Introduction to Psychology 3 credits
- PSY 102 Introduction to Psychology 3 credits
- SOC 110 Introduction to Sociology 3 credits
- COM 204 Interpersonal Communication 3 credits

**Required foundation courses** (2 of the following):
- PSY 334 Child, Family and Community 3 credits
- COM 304 Family Communication 3 credits
- CRJ 337 Violence in the Family 3 credits

**One course from EACH of the following three areas:**
Two (2) courses out of those three must be outside the student’s major.

**CHILDREN:**
- PSY 203 Developmental Psychology 3 credits
- PSY 307 Adolescent Psychology 3 credits
- PSY 384 Child Psychopathology 3 credits
- EDE 273 Human Growth and Development: Birth through Childhood 3 credits
- EDU 351 Human Growth and Development: Pre-Adolescence and Adolescence 3 credits
- EMC 352 Human Growth and Development: Middle Childhood 3 credits

**FAMILY:**
- CRJ 354 Juvenile Delinquency 3 credits
- PSY 382 Drugs and Behavior 3 credits
- SOC 390 Marriage and Family 3 credits
- EDY 313 Family and Community Involvement in Early Childhood 3 credits

**COMMUNITY:**
- COM 101 Communications in Contemporary Society 3 credits
- SOC 111 Social Problems 3 credits
- SOC 340 Sociology of the City 3 credits
- COM 350 Health Communication 3 credits
- CRJ 351 Police and the Community 3 credits

Service Learning: Students enrolled in the minor must complete 20 hours of volunteer work in addition to the course requirements.

**TOTAL: (7 courses)**

21 credits
Sports Psychology Minor
The Sports Psychology minor focuses on how psychological factors affect behavior in sports and athletics and on how participation in these activities affects the athlete. Students study social perception, motivation, group dynamics, development of motor skills, leadership, aggression and other topics essential to working with teams and individual athletes for careers in coaching, education, research/teaching or counseling.
(Note: Non-majors must complete PSY 101, 102, 201, and 202 before beginning the minor.)

Physical Education courses required for the minor:
PED 351 Coaching Theory and Technique 3 credits
HED 461 Health Psychology 3 credits
PED 381 Motor Behavior 3 credits

Psychology courses required for the minor:
PSY 329 Leadership and Motivation 3 credits
PSY 373 Behavior Modification 3 credits

Other courses required for the minor: (2 of the following)
BIO 107/107L Anatomy 4 credits
BIO 108/108L Physiology 4 credits
PSY 391 Biopsychology of Stress (OR advisor-approved substitution) 3 credits

Suggested internships for the minor:
PSY 498E Practicum in Sports Psychology or
PED 498 Internship (strongly recommended) 3 credits
TOTAL (7 courses) 21-23 credits

Other Programs:
Psychology/Biology Dual Major
A dual major in Psychology and Biology exists for students with an interest in both fields and seeking a combined educational program. (See description in Biology Department listing.)
Students in this dual major may count BIO 315, BIO 315L, and BIO 316 as PSY courses and as Core III courses in psychology.

Psychology/Criminal Justice Dual Major
Students interested in forensic psychology or the application of psychology to the legal and criminal justice systems may wish to combine Psychology and Criminal Justice courses into a dual major. Courses that count for credit in both psychology and criminal justice (e.g., Abnormal, Counseling, Drugs and Behavior and Forensic Psychology) facilitate this dual major and an accompanying minor in Forensic Psychology. Detailed information may be obtained from the Psychology Department.

Psychology/English Dual Majors
Psychology and English both have human experience as their subject matter and both strive to develop students’ abilities to think critically, logically and creatively. Studied together, these disciplines enrich students’ abilities to create and understand characterizations of personality and normal and abnormal behavior, increase their understanding of the impact of social forces on the individual and help them gain a greater appreciation of individual differences (e.g., children versus adults) in cognitive and emotional functioning.
Animal Behavior Minor: An Animal Behavior Minor administered in the Animal Behavior, Ecology & Conservation Major is pertinent to those psychology majors interested in animals. Students in this minor may count BIO 315, BIO 315L and BIO 316 as PSY courses and as Core III courses in psychology.

Neuroscience Minor: A Neuroscience minor administered in the Biology Department is pertinent to those Psychology majors interested in brain-behavior relationships.

COURSES: 2009-2011

PSY 101 Introduction to Psychology
3 credits
The study of behavior from a psychological perspective. Topics include: methods of psychological inquiry, motivation and emotion, thinking and language, learning, memory and physiological basis of behavior. Students taking PSY 101 are expected to be available for participation in research studies or equivalent activity. Fall

PSY 102 Introduction to Psychology
3 credits
The study of behavior from a psychological perspective. Topics include: methods of psychological inquiry, human development, social behavior, psychological testing - personality, psychopathology and psychotherapy. May be taken before PSY 101. Students taking PSY 102 are expected to be available for participation in research studies or equivalent activity. Spring

PSY 110 Animal Learning`  3 credits
Animal conditioning and memory research with emphasis on both theory and practice. The training of animals in zoos and other applied settings will be emphasized. Fall

PSY 201 Basic Statistics for Behavioral Sciences
3 credits
Descriptive statistics, probability, sampling distributions, hypothesis testing and inferential statistics. SPSS for Windows. Fall & Spring

PSY 202 Experimental Psychology
3 credits
Philosophical measurement and statistical concepts of common methods of experimental and non-experimental research. Design and execution of project required. Prerequisite: PSY 201. Fall & Spring

PSY 203 Developmental Psychology  3 credits
Important factors in the psychological development of the child. Social, biological and historical antecedents of behavior from birth through puberty. Fall

PSY 229 Industrial/Organizational Psychology
3 credits
Selection, evaluation and training of personnel, facilitation of group dynamics on the job, leadership, worker motivation and effects of workplace environment on performance and morale. Fall

PSY 235 Health Psychology  3 credits
Psychology of health-related behaviors, including coping with stress and ill health, physician-patient relationships, compliance with medication and psychological influences on specific disorders. Students conduct personal stress assessments and design interventions. Spring

PSY 303 Abnormal Psychology’ 3 credits
Overview of psychopathology: history, assessment, causes, DSM-IV, clinical symptoms and treatment. Review of major DSM-IV disorders with an emphasis on adults. (Also counts for CRJ credit.) Fall & Spring

PSY 307 Adolescent Psychology  3 credits
Physiological, psychological and emotional factors in achieving maturity. Extension of theoretical orientation to adolescent problems. Emphasis on real world problems and solutions. (Also counts for CRJ credit.) Spring
BIO 317 Sex, Evolution and Behavior  
3 credits  
Focus is on how evolutionary perspective accounts for male-female differences in lifestyle and behavior across diverse animal species, including humans. **Fall**

PSY 318 Social Psychology  
3 credits  
The self in social interaction: social perception and cognition, development and maintenance of relationships, attitudes, prejudice, social influence, group dynamics and related gender issues. (This course also counts for WST credit.) **Fall**

PSY 320 Motivation and Emotion  
3 credits  
Covers behavioral, cognitive and physiological theories of motivation and emotion with special focus on humanistic motivational theories. Through course activities and assignments, students will apply the theories learned in class to their own behaviors, examine the nature and progress made on their personal goals during the semester and understand the dynamic interplay between goal-directed behavior and emotion. **Fall**

PSY 324 Cognitive Psychology  
3 credits  
The psychological processes that enable us to acquire, store, retrieve and use knowledge. Topics include: perception, memory, language, thinking, decision making. Applications in education, psychopathology. **Spring**

BIO 325 Reproductive Biopsychology  
3 credits  
Neuro-endocrine mechanisms underlying sexual behavior, pregnancy and parental care. Equal focus on animal and human behavior. **Spring**

PSY 329 Leadership and Motivation  
3 credits  
Determinants of leadership effectiveness, factors influencing effectiveness in maintaining leadership position, influencing followers and accomplishing group objectives. Emphasis on communication competencies, group interaction, experiential learning. **Prerequisite:** Junior or senior status. **Spring**

PSY 334 Child, Family and Community Psychology  
3 credits  
Effects of social and non-social environments on emotions, thoughts and behaviors. Psychological reactions and adjustments to the nature of community life. Deals with social problems such as AIDS, alcoholism and child and elder abuse. (Also counts for CRJ credit.) **Fall**

BIO 355 Behavioral Neuroscience  
3 credits  
Functions of nervous/endocrine systems in mediating motivation, movement, sensation, ingestion, aggression, emotion, sleep, learning, memory, thought and behavior disorders. **Spring**

PSY 369 Forensic Psychology  
3 credits  
Psychology's role in the legal system; criminal behavior; trial process (competency evaluation, psychologists as expert witnesses, jury selection, jury deliberation, insanity defense); law enforcement and corrections; family law (divorce, domestic violence, child custody). (Also counts for CRJ credit.) **Spring**

PSY 373 Behavior Modification  
3 credits  
Application of conditioning principles to changing human behavior and cognitions; emphasis on practical problems. **Fall**

PSY 384 Child Psychopathology  
3 credits  
This course will introduce students to the signs and symptoms of various psychiatric disorders of childhood and adolescence (e.g., conduct disorder, ADHD). **Spring**

PSY 391 Biopsychology of Stress  
3 credits  
Examines the physiological and psychological components and effects of stress, including the involvement of the nervous, immune and endocrine systems. **Fall**

PSY 395 Assessment in the Behavioral Sciences  
3 credits  
Overview of measures of intelligence, personality, achievement and aptitude for clinical, industrial and research use. Students construct and validate psychological tests. **Prerequisite:** PSY 201. **Fall**

- 296 -
PSY 397 Neurobiology of Mental Disorders  
3 credits  
Examines the role of the central nervous system and other biological factors underlying the symptoms, etiology and treatment of various mental disorders.  
*Spring*

PSY 398 Neurobiology of Childhood Mental Disorders  
3 credits  
A sequel to the Neurobiology of Mental Disorders course that is currently being offered. This course will focus on the neurobiological underpinnings of several developmental and other mental disorders affecting children today. PSY 397 or Behavioral Neuroscience/Neuropsychology course is a prerequisite.  
*Spring*

PSY 401 Advanced Statistics Seminar  
3 credits  
Topics include: bivariate and multiple regression, least-squares estimation, model-building techniques, assumptions and diagnostics, mediation and moderation, the logistic model and exploratory factor analytic techniques. SPSS will be used throughout. Students will conduct a final research project through secondary analysis of a large national data set.  
*Spring*

PSY 406 Selected Topics in Psychology  
3 credits  
Current and advanced topics which may vary from semester to semester will be covered in this seminar.  
*Spring*

PSY 410 Fundamentals of Human Neuropsychology  
3 credits  
An advanced course that provides students with a perspective on the neural mechanisms underlying behavior. Material covered in the course will include (but not be limited to) structure and function of the brain from the cellular to the structural levels, brain imaging techniques, and brain development, plasticity and neurological disorders.  
*Spring*

PSY 452 Theories and Techniques of Counseling  
3 credits  
Theoretical foundations of counseling and psychotherapy with an emphasis on the mastery of technique and practical applications. Assessment and treatment planning to facilitate cognitive, emotional and behavioral change for a variety of patient populations.  
*Fall*

PSY 495 Research Seminar in Psychology  
3 credits  
Opportunity for students interested in designing and conducting empirical research to collaborate with faculty in research activities leading to undergraduate or professional conference presentations and possible publication.  
*Prerequisites:* PSY 101-102, PSY 201-202, PSY 497, junior or senior status and permission of instructor.  
*Summer, Spring & Fall*

PSY 497 Advanced Experimental Research  
3 credits  
Intended for advanced students with the interest, prerequisites and commitment to experimental research. Involves students in hands-on data collection and statistical analysis.  
*Prerequisites:* PSY 101-102, PSY 201-202, PSY 401, junior or senior status, OR permission of instructor.  
*Summer, Spring & Fall*

PSY 498 A-G Psychology Practicum  
3 credits  
Internships are available in animal behavior, clinical counseling psychology, forensic psychology, industrial/organizational psychology, counseling, school psychology, sports psychology, and leadership mentoring. Joint supervision by staff members and agency personnel. Registration requirements vary; six credit maximum.  
*Prerequisite:* Permission of chair or supervising faculty member.  
*Summer, Spring & Fall*

PSY 499 Independent Study  
3 credits  
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement.  
*Prerequisite:* Permission of the instructor, department chair and associate dean.  
*Summer, Spring & Fall*
Religion plays an important role in human life and history. A liberal education would be seriously incomplete if it did not provide some of the intellectual tools necessary for dealing with this important dimension of human life.

The department expresses the religious dimension of the college’s founding in the Jesuit and Catholic tradition. Its orientation is to serve the community that shares the values of that tradition.

A major in religious studies and theology provides a broad intellectual context for those who wish to study religion in greater depth. The major program offers courses in five different areas: World Religions, Jewish & Christian Origins, History of Christianity, Religion in the Modern World and Systematic Theology.

In its courses the department offers a scientific and theological study and appreciation of Roman Catholicism, other confessional Christian churches, Jewish religious thought, and other religions. This approach involves the ecumenical and comparative study of religions and a positive approach to the varieties of non-religion, such as atheism. The department provides the opportunity for a critical appraisal of religious faith through the study of primary source materials — scriptural, historical and theological — and the use of interdisciplinary methodologies, such as anthropology, sociology and psychology.

Student Learning Goals
Religious Studies and Theology majors will:

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**Goal 1.** Know the basic insights of Christianity and at least two other world religions.

**Goal 2.** Be critical thinkers about religion.

**Goal 3.** Do scholarly research and writing in religious studies.

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**Religious Studies and Theology Curriculum**

1. **Core Curriculum Requirements:**
   See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements:** (10 courses)
   - RST 200 Introduction to the Hebrew Bible 3 credits
   - RST 201 Introduction to the New Testament 3 credits
   - Course in a non-Christian contemporary religion 3 credits
   - RST 400 Religious Studies and Theology Seminar 3 credits
RST 489 Project for Majors 3 credits

Religious Studies electives: (5 courses)
   Electives should be concentrated in three of the five areas
   offered in the Religious Studies program. RST 101 may
   not be included. See listing below. 15 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a
minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120
credit hours.

History of Christianity
RST 219-History of Eastern Orthodox Christianity
RST 231-Intro to Catholic Studies
RST 314-New Testament in Literature & Art
RST 325-Early Christianity
RST 326-Medieval, Renaissance and Reformation Christianity
RST 327-Modern Global Christianity
RST 328-The Jesuits: History, Spirituality & Culture

Systematic Theology
RST 230- Catholic Belief Today
RST 350-The Christian Concept of God
RST 351-Freedom, Sin & Grace
RST 352-The Church in the Modern World
RST 353-Sacramental Theology
RST 354-Jesus Christ and Modern Culture
RST 355-The Problem of Suffering
RST 359-Revelation and Faith
RST 365-Christian Spirituality

Jewish and Christian Origins
RST 200-Intro to the Hebrew Bible
RST 201-Intro to the New Testament
RST 205-Reading the Bible: Literary & Theoretical Approaches
RST 301-The First Three Gospels
RST 303-Ethics and the New Testament
RST 311-Paul’s NT Epistles & His Church
RST 312-The Gospel, Letters & Rev of St. John
RST 321-New Testament Society
RST 322-Women Reading the Bible: Feminist Approaches to Scripture
RST 323-Biblical Archeology
World Religions
RST 218-Intro to Western Religious Traditions
RST 220-Intro to Eastern Religions
RST 221-Native American Religions
RST 222-African Religions
RST 223-Religions of China
RST 224-Islam: Tradition & Revival
RST 226-Hinduism
RST 228-Introduction to Mahayana Buddhism
RST 240-Dev of Jewish Religious Thought & Practice
RST 327- Modern Global Christianity
RST 329-Religions in N America to 1865
RST 330-Religions in N America 1865-present
RST 360-Magic, Science & Religion
RST 363-Women, Gender and Religion
RST 364-Zen and the Meditative Life

Religion in the Modern World
RST 225-Religion & Society
RST 230-Catholic Belief Today
RST 231-Intro to Catholic Studies
RST 235-Religion & Politics
RST 236-Theology & European Film
RST 237-Images of Jesus in Film and Art
RST 327-Modern Global Christianity
RST 340-Moral Issues Today
RST 341-Catholic Social Ethics: Theological Perspectives
RST 342-Theological Ethics and Environmental Justice
RST 343-Religion & the Challenge of Science
RST 344-Theology of Family Process
RST 345-Bio-Moral Problems
RST 352-The Church in the Modern World
RST 361-The Psychology of Religion
RST 362-Fundamentalism
RST 366-Theology of Death

LANGUAGES: The department has no required foreign language course(s) for its majors, but it strongly encourages all majors, if they are considering seminary or graduate study in theology or religion, to take a foreign language that is especially relevant to a student’s interest in the discipline, such as Biblical Hebrew, Greek, Latin, or a modern foreign language.
**Dual Majors**
Religious Studies and Theology majors have also majored in Communications, Education, History, Philosophy, and Psychology.

**Minors**
The Religious Studies and Theology Department offers a minor in the general area of religious studies for those seeking an overview of the field, as well as minor tracks in three specialty areas within the discipline.

**Track 1: Religious Studies and Theology**
- Biblical studies (RST 200 or 201) 3 credits
- Survey of world religions (RST 218 or 220) 3 credits
- Christian tradition(s): one course(e.g., RST 325, 340) 3 credits
- Religious Studies and Theology electives: 3 upper-level (200 or above) courses 9 credits

**Total (6 courses)** 18 credits

**Track 2: Biblical Studies**
- RST 200 Introduction to the Hebrew Bible 3 credits
- RST 201 Introduction to the New Testament 3 credits
- Biblical studies electives: four upper-level (200 or above) courses 12 credits

**Total (6 courses)** 18 credits

**Track 3: Christian History, Thought, and Ethics**
- Christian history: one course (e.g., RST 325, 326, 327, 329, 330) 3 credits
- RST 340 Moral Issues Today 3 credits
- Religious Studies electives: four upper-level (200 or above) courses 12 credits

**Total (6 courses)** 18 credits

**Track 4: Religions of the World**
- RST 218 Introduction to Western Religions 3 credits
- RST 220 Introduction to Eastern Religions 3 credits
- Religious Studies electives: four upper-level (200 or above) courses 12 credits

**Total (6 courses)** 18 credits

**Interdisciplinary Minor in Catholic Studies**
The Religious Studies and Theology department is the administrative center for an Interdisciplinary Minor in Catholic Studies. This minor has six required courses: RST 231, CTH 400 and four other courses. These are taken in each of four areas: Catholic Theology and Life; Catholic History and Politics; Catholic Social Thought and Philosophy; and Catholic Culture: Literature, Art, Music and Science. For further information, see Catholic Studies in the “Special Programs” section of this catalog.
COURSES: 2009-2011

INTRODUCTORY LEVEL

RST 101 Introduction to Religious Studies and Theology 3 credits
An academic introduction to the nature and role of religion in human life and society, including the Jesuit and Catholic traditions as well as other world religions. (Foundation) Fall, Spring

INTERMEDIATE LEVEL

200 level courses generally introduce a student to a religion or a particular method of study of religion; 300 level courses generally explore a particular topic or aspect of religion in greater depth.

All courses listed have RST 101 as a prerequisite.

RST 200 Introduction to the Hebrew Bible 3 credits
Introduction to the literature of the Old Testament within its ancient Near Eastern setting. Particular attention paid to historical, literary, cultural and theological questions. (Field 1)

RST 201 Introduction to the New Testament 3 credits
Introduction to the literature and background of the New Testament. (Field 1) Fall

RST 205 Reading the Bible: Literary & Theoretical Approaches 3 credits
Study of the Jewish and Christian Bibles from the standpoint of literary and critical theory. (Field 1)

RST 218 Introduction to Western Religious Traditions 3 credits
Introduction to and survey of the western religious tradition, including the ancient Near East, Greece and the great traditions of Judaism, Islam and Christianity. (Field 1)

RST 219 History of Eastern Orthodox Christianity 3 credits
Historical study of Eastern Christian Churches. (Field 1) Fall & Spring

RST 220 Introduction to Eastern Religions 3 credits
History, meaning and practice of living religions such as Hinduism, Buddhism and Islam. (Field 1)

RST 221 Native American Religions 3 credits
The nature of indigenous religions in Native American societies and the effect of cultural change through contact with other cultures. (Field 1) Fall

RST 222 African Religions 3 credits
Thematic study of religion in tribal societies. Primary emphasis on African, American Indian and Pacific Island traditions. (Field 1) Spring

RST 223 Religions in China 3 credits

RST 224 Islam: Tradition and Revival 3 credits
From pre-Islamic Arabia to Muslim reform in the modern world. Islamic cult, institutions and faith. Islam in Africa, Asia and the Middle East today. (Field 1)

RST 225 Religion and Society 3 credits
Relationship of religion and society. Sociological theories of religion. Concrete interaction of religion and society in U.S. and other cultures. (Field 1)

RST 226 Hinduism 3 credits
Development of classical and contemporary styles of Hindu religious thought and practice; from the Vedas to Hare Krishna; from Patanjali to TM. (Field 1)

RST 228 Introduction to Mahayana Buddhism 3 credits
An introduction to the Mahayana Buddhist tradition and
some of its permutations, e.g., Zen, through an exploration of its key doctrines, theologies, ethics and spiritual practices. (Field 1) *Fall

**RST 230 Catholic Belief Today**  
3 credits  
Scripture and tradition. The Trinity, incarnation, grace, sacramental life, worship. The Church as community and structure. (Field 1) *Fall & Spring

**RST 231 Introduction to Catholic Studies**  
3 credits  
Major movements and personalities in Catholic theology, history, culture and spirituality. The Catholic worldview and its relation to modern society. (Field 1) *Fall & Spring

**RST 235 Religion and Politics**  
3 credits  
Interaction of religion and politics in the United States and other cultures. (Field 1) *Fall

**RST 236 Theology and European Film**  
3 credits  
Analysis of a selection of foreign films to understand the artists’ positions regarding the nature of humanity, of God and of other theological themes. (Field 1) *Spring

**RST 237 Images of Jesus in Film and Art**  
3 credits  
Development of artistic representations of Jesus and other Biblical persons along with Christian concepts and themes. Selection of European and American films as well as pertinent art from Western Christianity. (Field 1) *Fall

**RST 240 Development of Jewish Religious Thought & Practice**  
3 credits  
Jewish religious thought from biblical times to the present: Hebraism and Judaism in pre-Christian times, Jesus and Jewish thought and modern trends in Judaism. (Field 1) *Fall & Spring

**RST 250 Biblical Greek**  
3 credits  
Introduction to Greek with a focus on grammar, vocabulary, and syntax of the koine Greek used in the New Testament. Taught as a private study. *Prerequisite:* Permission of chair.

**RST 251 Greek Exegesis**  
3 credits  

**RST 252 Biblical Hebrew**  
3 credits  
Introductory course for students with no prior Hebrew language experience. Study of the Torah text. Taught as a private study. *Prerequisite:* Permission of instructor.

**RST 301 The First Three Gospels**  
3 credits  
Portraits of Jesus in Matthew, Mark, Luke and “Q” leading to the question of the historical Jesus, against the backdrop of history and religions of New Testament times. (Field 1)

**RST 303 Ethics and the New Testament**  
3 credits  
New Testament approaches to ethical questions: the implications for human sexuality, marriage and divorce, racism, sexism, war and peace. (Field 1)

**HIS 306 History of Religion in America**  
3 credits  
See HIS 306 for course description. (Field 1)

**CLS 308 Pagans and Christians**  
3 credits  
See CLS 308 for course description. (Field 1) *Spring

**CLS 309 Greek and Roman Religion**  
3 credits  
See CLS 309 for course description. (Field 1)

**RST 311 Paul and His Churches**  
3 credits  
Survey of St. Paul’s theology and mission, the variety and controversies of the early church. (Field 1) *Spring

**RST 312 The Gospel, Letters and Revelation of St. John**  
3 credits  
The gospel message analyzed in Jesus’ words and deeds. The symbols of Revelation seen in their historical and contemporary meaning. (Field 1)

**RST 314 New Testament in Literature and Art**  
3 credits  
New Testament themes and personalities analyzed from a scriptural perspective and compared with expressions in the arts. Relationship of religion and art; scriptural roots of Christian art. [Also accepted for Art History major and
RST 321 New Testament Society 3 credits
Recent sociological and cultural-anthropological interpretation of the New Testament and its ancient environment. (Field 1) Spring

RST 322 Women Reading the Bible: Feminist Approaches to the Scripture 3 credits
Examination of the varieties of feminist, scholarly approaches to the Jewish and Christian Bibles. (Field 1) Spring

RST 323 Biblical Archaeology 3 credits
Contributions of Syro-Palestinian and other ancient Near Eastern archeological information to reconstructing the social world, history and religion of ancient Israel. (Field 1)

RST 325 Early Christianity 3 credits
Historical study of the development of Christianity from its first century roots to its rise as the dominant religion of the Roman Empire. (Field 1) Fall

RST 326 Medieval, Renaissance, and Reformation Christianity 3 credits
Historical study of life, thought and worship of the Christians during the medieval, renaissance, and reformation periods. (Field 1)

RST 327 Modern Global Christianity 3 credits
Historical study of the life, thought and worship of Christians, both Protestant and Catholic, from the Reformation to the present. (Field 1) Spring

RST 328 Jesuits: History, Spirituality, Culture 3 credits
Life of St. Ignatius of Loyola. History of Jesuits. (Field 1) Spring

RST 329 Religions in North America to 1865 3 credits
Historical study of the development of religions in North America from the Spanish, French, and English settlements in the 17th century to the Civil War era. (Field 1)

RST 330 Religions in North America 1865-present 3 credits
Historical study of religious developments in North America from the Civil War era to the present. (Field 1)

RST 340 Moral Issues Today 3 credits
An inquiry into religious and secular approaches to morality and the issues raised by specific moral problems. (Field 1) Spring

RST 341 Catholic Social Ethics: Theological Perspectives 3 credits
Study of the principles of Catholic Social Teachings articulated in papal and Episcopal documents with contemporary applications. (Field 1)

RST 342 Theological Ethics and Environmental Justice 3 credits
Investigation of the models of theological ethics and the ways in which ethics informs human interaction with the environment. (Field 1) Fall

RST 343 Religion and the Challenge of Science 3 credits
Traces the emergence of science as independent from and a challenge to the religious world view. (Field 1) Fall

RST 344 Theology of Family Process 3 credits
Biblical and religious ideals of Judaism, Catholicism, Protestantism. Current ethical issues: intimacy, relationship, power. Relevancy of love to sex, marriage, family. Communication styles. (Field 1)

RST 345 Bio-Moral Problems 3 credits
Considers a number of problem areas such as genetic intervention, medical experimentation, behavior control, organ transplants and resource allocation and death and dying. (Field 1) Fall

RST 350 Christian Concept of God 3 credits
Concept of God in light of Biblical faith. Historical development and modern approaches to the Christian doctrine of God. (Field 1) Spring

RST 351 Freedom, Sin and Grace 3 credits
What is humankind? What are our possibilities, radical
problems, resources? What Christian faith has to offer as answers to these and other universal human questions. (Field 1)

**RST 352 The Church in the Modern World**  
3 credits  
Study of the Church, its mission and structure. (Field 1)

**RST 353 Sacramental Theology**  
3 credits  
The presence of God in the midst of the human community, as symbolized by the sacraments. Their history, interpretation and anthropology. (Field 1)

**RST 354 Jesus Christ and Modern Culture**  
3 credits  
An historical-theological inquiry into the person of Jesus of Nazareth. (Field 1) *Spring*

**RST 355 The Problem of Suffering**  
3 credits  
Suffering confronts each individual in illness, broken relationships, failures, drug abuse and death. The course addresses how God is active even in suffering. (Field 1)

**RST 359 Revelation and Faith**  
3 credits  
Exploration into the meaning of revelation and its correlative faith in light of modern challenges to these foundational concepts. (Field 1) *Fall*

**RST 360 Magic, Science and Religion**  
3 credits  
Scholarly approaches used to understand how diverse peoples of the world conceive, make use of and tap into the realm of the extra human. Focus on “exotic” societies and peoples, exploration of the meanings of magic, science and religion in the more familiar contemporary Unites States and Europe. (Field 1)

**RST 361 Psychology of Religion**  
3 credits  
Interaction of Psychology and Religion: Freud, Jung, Erikson, Kohlberg, Kohut, Winnicott. Themes: character types, God image, religious psychobiography, narcissism, object relations, sin and love. (Field 1) *Fall & Spring*

**RST 362 Fundamentalism**  
3 credits  
Critical study of religious fundamentalism in a variety of religious traditions and cultural and geographical contexts. Historical, anthropological and sociological methodologies applied to the academic study of religion. (Field 1)

**RST 363 Women, Gender and Religion**  
3 credits  
Feminine symbolism and mythologies dealing with feminine archetypes in ancient religions and contemporary cultures: women in the Bible. The feminine in current psychology and theology. (Field 1) *Spring*

**RST 364 Zen and the Meditative Life**  
3 credits  
A study of the Zen tradition in China, Japan, Korea, Vietnam and the West from a Buddhist perspective: meditation, historical context, social milieu, primary texts and modern commodification. (Field 1)

**RST 365 Christian Spirituality**  
3 credits  
Historical, analytical and appreciative study of the fundamental principles and development of Christian ascetical theology. (Field 1) *Fall*

**RST 366 Theology of Death**  
3 credits  

**ADVANCED LEVEL**

400 level courses are reserved for majors, minors, or special permission of the instructor and require RST 101 as a prerequisite.

**RST 400 Religious Studies and Theology Seminar**  
3 credits  
A seminar for RST majors and minors, focusing on the history of theory and method in the academic study of religion.
RST 402 Christianity in the New World
3 credits
A study of Third World Christianity by immersion in different areas of Third World Countries. 
Prerequisite: RST 327.

RST 406 Special Topics in Religious Studies & Theology
3 credits
Critical examination of selected topics in Religious Studies & Theology with a focus on a particular period, religious tradition, author or topic. Subject matter determined by the instructor. Prerequisites: RST 101 and at least one 200-level RST course. For RST majors or minors, and others with permission of instructor. Fall & Spring

RST 489 Projects for Majors
3 credits
Concentrated investigation of a topic of particular interest to the student, under supervision of faculty advisor. Prerequisite: Departmental approval. Fall and Spring

RST 496 Internship
3 credits
Combination of teaching or religious work with special readings and theological reflection, under the guidance of department faculty. Prerequisite: Consent of chair. Fall and Spring

RST 499 Independent Study
3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. Prerequisites: Permission of the instructor, department chair and associate dean.

social sciences program

The social science major deals with mankind’s political, social, economic and psychological interrelatedness as studied in the fields of sociology, anthropology, history, political science, communication studies, economics and psychology. Students in this program develop and refine their insights into human behavior through a wide range of social observation, inquiry and study. By allowing a considerable degree of freedom in choosing electives, the program permits a meaningful flexibility not found in more restrictive curricula.

Social Sciences Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to http://www.canisius.edu/academics/core.asp for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major course requirements: (21 courses)
Basic social sciences: four courses each from four of the following departments, for a total of 16 courses:
   Anthropology: ANT121-122 plus two 300/400 level courses
   Communication Studies: two of the following:
   COM 201, 202, 203, 204, 205, 206, plus two 300/400 level courses
   Economics: ECO 101-102, plus two 300/400 level courses
   History: HIS 123-124, plus two 300/400 level courses
Political Science: PSC 103-104 plus two 300/400 level courses
Psychology: PSY 101-102, plus two Psychology courses above 100 level
Sociology: SOC 110 and SOC 111, Plus two 300/400 level courses
Three additional 300/400 level courses in one of the chosen departments: Interdisciplinary courses may be substituted for one or more department courses
MAT 131 Statistics and Computers
Social Sciences methods: PSC 217, SOC 342, or URS 350 or ANT 351

3. **Free electives:**
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours

**Associate of Arts Degree**
The associate of arts degree program in social sciences requires the completion of 60 credits of coursework. This program has two basic purposes: (1) It offers an immediate degree goal for students seeking a general introduction to the social sciences (psychology, sociology, political science, economics, and anthropology); and (2) It provides a basic foundation for those who wish to go on for a bachelor’s degree.

The program contains a second track designed for the prospective business major. Students who plan baccalaureate studies in the future are encouraged to choose the track which is more appropriate for them. If a student remains at Canisius College, all of the coursework in the associate degree program is transferable and applicable to the bachelor’s program.

**Social Sciences Curriculum (Associate Degree)**

1. **Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements: (8 courses)**
**Social Sciences Track-**
MAT 106 Calculus for the Non-Sciences I
MAT 131 Statistics and Computers
**Social Sciences electives:** two courses from each of three areas:
   Economics (ECO 101-102)
   Political Science (PSC 101-102)
   Psychology (PSY 101-102)
   Sociology (SOC 110-111 or ANT 121-122)
**Business Track**

QNT 101  Quantitative Methods for Business
MAT 106  Calculus for the Non-Sciences I
ECO 101  Principles of Macroeconomics
ECO 102  Principles of Microeconomics
ACC 201  Financial Accounting
ACC 202  Managerial Accounting
Business Electives (2 courses)

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 60 credit hours for graduation. Students may graduate with more but not less than 60 credit hours.

Other Associate’s Degree Regulations
The basic residency requirement for A.A. degrees is 30 credit hours, at least 15 of which must be completed in traditional classroom situations. No more than 30 hours may be transferred from another institution. Not all courses at other institutions are applicable to the associate degree, and transfer students are required to have a transfer evaluation completed by the college.

1 It is recommended that students in the Business Track take courses in the business core as their electives.
2 It is recommended that students in the Business Track who plan to pursue a bachelor’s degree with a major in accounting take ACC 211 and ACC 212.

sociology, anthropology and criminal justice

Full-Time Faculty: Patricia E. Erickson, Chair; H. James Birx, Patricia B. Christian, Candalene J. McCombs, Melissa A. Menasco, Erin E. Robinson.

The Department of Sociology, Anthropology and Criminal Justice offers courses leading to the bachelor of arts degree in sociology, anthropology and criminal justice. Minors are also available in each of the areas.

The Department is a part of the social science community of disciplines. These disciplines emphasize the empirical study of human society and of individual relationships in and to society. Each of the three majors offered in the department — sociology, anthropology and criminal justice — offers an academically rigorous curriculum that is in harmony with the Jesuit Mission of Canisius College. The curriculum is value-based in the sense that the curriculum encourages creative
participation, critical thinking and active learning. It is also designed to encourage collaborative linkages with other departments, community groups and organizations to provide students with additional intellectual and practical learning opportunities.

**Dual Majors**

Many of the department’s majors find it desirable to combine Sociology, Anthropology or Criminal Justice with a major in another department within Arts and Sciences. Recent examples have included Biology, History, Psychology, Political Science, Modern Languages and Communication Studies. The sequence of courses for dual majors is the same as for regular majors. To provide for maximum flexibility of scheduling, students interested in dual majors should consult with a member of the department to arrange their individual schedules. More information about dual majors can be obtained from Dr. Erickson (Sociology, Anthropology and Criminal Justice).

**Interdisciplinary Minors**

**CHILD, FAMILY AND COMMUNITY STUDIES**

An interdisciplinary social science minor in child, family, and community studies is offered through the departments of Psychology and Sociology, Anthropology and Criminal Justice and Communication Studies. More information about the minor can be obtained from Dr. Erickson (Sociology, Anthropology and Criminal Justice), Dr. Sanders (Psychology) or Dr. Wanzer (Communication Studies).

**COMPUTER FORENSICS**

An interdisciplinary minor in computer forensics is offered through the Criminal Justice Program and the Information Systems Department. More information about the minor can be obtained from Dr. Erickson (Criminal Justice) and Dr. Volonino (Information Systems).

**MINOR IN PEACE AND JUSTICE STUDIES**

A new interdisciplinary minor focusing on religious, social science and humanities perspectives needed to address peace and justice topics. Students pursuing this track will develop skills, knowledge and perspective to pursue “Justice in Action.” More information about the minor can be obtained from Dr. Robinson (Sociology, Anthropology, and Criminal Justice).

**Internships**

Many internship opportunities are available for juniors and seniors. As an urban center situated on the Niagara Frontier, Buffalo offers numerous and diverse opportunities for students to explore careers and get valuable experience, as well as connecting what they learn in the classroom with life in the “real world.”

**Foreign Language and Study Abroad**

The department encourages students who are majoring in sociology, anthropology or criminal justice to participate in the college Study Abroad Program and to enroll for at least one year of study in a foreign language of the student’s choice.

**Anthropology Major**

(H. James Birx and Candalene McCombs, advisors)

Anthropology is the scientific and holistic study of humankind, including its cultural, social, linguistic, biological-evolutionary, environmental and historical dimensions. Highly interdisciplinary, it draws on methods and theories from both the social sciences and humanities. Historically, anthropology differed from sociology
by focusing on the study of non-western, small-scale societies, using long-term participant observation among the people studied. Presently, the two fields are drawing closer together, using similar methodologies and theories to understand both western and non-western societies and their interactions. In addition to preparing the student who majors in anthropology for graduate study in anthropology, students are well-prepared for careers in business, law, health-related professions and human services.

**Student Learning Goals**

**Goal 1.** Anthropology majors will be able to understand and appreciate the value of anthropology as a comprehensive and holistic science for investigating our species within an evolutionary framework and from a cross-cultural perspective. Students will:

A. Recognize the value of science, logic, and rational speculation for anthropological inquiry;

B. Distinguish between empirical evidence and personal conjecture (opinions and beliefs);

C. Understand and appreciate the scientific method, and will apply critical analysis to anthropological information.

**Goal 2.** Anthropology majors will develop an understanding of anthropological research methodology. Students will:

A. Comprehend the value of converging evidence for biological anthropology and archaeology;

B. Critically evaluate the sociocultural differences among human groups, including the diverse structures of human languages;

C. Appreciate areas in applied anthropology, e.g., forensic anthropology and medical anthropology;

D. Students will be able to articulate the importance of ethics in conducting research.

**Goal 3.** Anthropology majors will be able to demonstrate a mastery of those essential concepts and the major theories that are found in each of the five distinct subfields in the discipline of anthropology. Students will:

A. Distinguish among overlapping perspectives, as well as complementary theories, e.g., evolutionism, structuralism, functionalism, naturalism, humanism, rationalism, relativism and configurationalism (culture and personality studies);

B. Demonstrate knowledge of the major theorists in each of the five subfields of anthropology;

C. Comprehend and integrate the significant findings and emerging trends in the subfields of anthropology.

**Goal 4.** Anthropology majors will gain a greater tolerance for human biosocial diversity and a deeper respect for the crucial role that anthropology plays in comprehending and appreciating the place of our own species within evolving nature. Students will:

A. Recognize the fallacy of both biological racism and socio-cultural prejudices;

B. Understand both the historical development and biological unity of our species, as well as the socio-cultural diversity of humankind;

C. Appreciate the complexity inherent in all languages, as well as the universal characteristics of languages.

D. Grasp both the intradisciplinary and interdisciplinary approach of the anthropological quest.

**Qualifications for the major**

Students must have a minimum grade of “C” in each required course in the major and an overall GPA of 2.0 in the major.

**Anthropology Curriculum**

1. **Core Curriculum Requirements:**

See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius
education.

2. Major Course Requirements (11 courses)
ANT 121 Biological Anthropology     3 credits
ANT 122 Sociocultural Anthropology     3 credits
ANT 250 Contemporary Linguistics     3 credits
ANT 230 Introduction to Archaeology     3 credits
ANT 351 Qualitative Research Methods     3 credits
ANT 451 Senior Capstone: Theories in Anthropology     3 credits
Anthropology electives: five courses     15 credits

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Anthropology Minor
The Anthropology minor is designed for the student who is interested in the study of anthropology but is not able to complete the requirements of the major. It is highly appropriate for students in Biology, Art History, Classics, Education, or for any student interested in human diversity and prehistory.
ANT 121 Biological Anthropology      3 credits
ANT 122 Sociocultural Anthropology      3 credits
ANT 230 Introduction to Archaeology      3 credits
ANT 250 Contemporary Linguistics      3 credits
Anthropology electives: one Anthropology electives approved by the student’s Anthropology advisor      3 credits
TOTAL  (5 courses)      15 credits

COURSES: 2009-2011

Anthropology
ANT 121 Biological Anthropology     3 credits
Our species in nature: evolutionary theory, principles of heredity, population genetics, human variations, fossil hominids, primate classification and behavior studies. (Field 6) Fall and Spring

ANT 122 Sociocultural Anthropology     3 credits
Explores importance of culture in explaining variation in human behavior and beliefs, looking at range of societies from “primitive” to modern industrial states. (Field 5) Fall and Spring

ANT 201 The Science of Linguistics     3 credits
Introduces the study of language as a uniquely human behavior, exploring the relationship between linguistic theory and scientific inquiry. Recommended for science majors and social science majors. (Field 5) Fall

ANT 202 The Science of Linguistics     3 credits
Focuses on the systematic study of language as a uniquely human behavior, exploring sociolinguistic behavior and language change. Explores the intersection of language and gender, examining gender-related stylistic variation in conversation and communication between and among
women and men as cross-cultural communication. (Field 5) Spring

ANT 230 Introduction to Archeology
3 credits
Old and New World sites provide insights into human lifestyles and modes of adaptation. (Field 5) Fall

ANT 250 Contemporary Linguistics
3 credits
Conveys an understanding of fundamentals of linguistic theory, developing a broader perception of the complexity of language for specialists in such neighboring fields as communication, education, ESL, composition, reading, foreign language, literature and social sciences. (Field 5) Fall

ANT 280 Language for Legal Professions
3 credits
Explores the use of language in the administration of law, including ways to read and brief cases and to read statutes. (Field 5) Spring

ANT 300 Special Topics in Anthropology
3 credits
Critical examination of a selected topic in anthropology. Subject matter determined by the instructor. (Field 5) Fall and Spring

ANT 333 Forensic Anthropology 3 credits
Anthropological methods and information used to survey the origin and history of crime science. Emphasis on the use of well-known case studies in order to understand and appreciate the value of forensic investigation. Spring

ANT 350 Psycholinguistics 3 credits
Explores the processes involved in the comprehension and production of language with an emphasis on language acquisition. Spring

ANT 351 Qualitative Research Methods
3 credits
Survey of research designs from a qualitative perspective, including field research, participant observation, content analysis, ethnomethodology, and focus groups. Analysis and reporting of qualitative data. Spring

ANT 355 Sociolinguistics 3 credits
Investigates the nature of the relationship between social behavior and language change within linguistic communities. Spring

ANT 360 African American English 3 credits
Explores the development and the structure of dialects of African American English, identifying phonological, morphological, syntactic, semantic and lexical differences that contribute to the richness and vitality of the language. Spring

ANT 365 Gender Issues in Language 3 credits
Explores the intersection of language and gender, examining gender-related stylistic variation in conversation and communication between and among women and men as cross-cultural communication. Spring

ANT 370 Origin and Evolution of Language 3 credits
Surveys theories of the origin and development of language, exploring early perspectives drawn from mythology, religion and philosophy as well as current views emerging from the social and natural sciences. Spring

ANT 380/580 History and Structure of the English Language 3 credits
Examines the structural changes and the political, social, and intellectual forces that have helped to shape the English language. Spring

ANT399 Field Work 3 credits
Offers practical experience in a variety of social situations and cultural settings. Observations and research logs are used to provide a basis for analysis. Prerequisite: Permission of department chair. Fall and Spring

ANT 400 Dialects of North America 3 credits
Compares the systematic differences in pronunciation, syntax and vocabulary and their cultural and historical context across a variety of dialects of English spoken in North America. Spring
ANT 451 Senior Capstone: Theories in Anthropology  3 credits
Survey of the major theories in anthropology that have played a leading role in shaping how we look at the history and diversity of our biological species, as well as other human societies with different cultures. Examines evolutionism, structuralism, functionalism, diffusionism, configurationalism and modern social or applied anthropology. Spring

ANT 499 Individual Reading and Research 3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. Prerequisite: Permission of the instructor, department chair and associate dean. Fall and Spring

The following courses offered by other departments count as satisfying the requirements for the anthropology major and minor: RST 221 Native American Religions; RST 222 African Tribal Religions; RST 360 Magic, Science and Religion; RST 332 Islam; RST 421 Hinduism; RST 450 Biblical Archeology.

Criminal Justice Major
(Patricia E. Erickson and Melissa A. Menasco, advisors)

Criminal justice is the study of criminal law, the law of criminal procedure and the procedures and activities having to do with the enforcement of criminal law. It includes understanding the social context of criminal behavior and the system of practices directed at upholding social control and sanctioning those who violate the criminal law. The major is grounded in a liberal arts curriculum; it emphasizes not only how the criminal justice system has developed in its present form, but also how changes in the system affect other parts of society. In addition, the major is constructed to prepare students for a broad spectrum of occupations, including law enforcement, corrections and allied mental health. Finally, students who wish to pursue careers as lawyers can major in criminal justice and also take advantage of the college’s Pre-Law program

d. Explain the goals and administration of American correctional institutions at the federal, state and local levels.

Goal 2. Majors will be able to demonstrate how criminal justice research is conducted. Students will be able to:
A. Utilize legal research to examine laws and court decisions;
B. Develop a research question using appropriate conceptualization and operationalization techniques;
C. Select and apply appropriate methodology;
D. Analyze data and present conclusions.

Goal 3. Majors will be able to think critically and intelligently about the criminal justice system. Students will be able to:
A. Communicate and critically evaluate concepts of criminal justice;
B. Compare and contrast theories of crime;
C. Assess issues of diversity both historically and in their contemporary manifestations;
D. Explain and evaluate the major policies designed to control or reduce crime;

Goal 4. Majors will be able to recognize and analyze ethical issues and their implications. Students will be able to:
A. Articulate their own values and appreciate other values systems (including those of people from different cultures);
B. Think critically about ambiguous ethical situations they may encounter as a criminal justice professional;
C. Apply ethical principles and ethical codes of conduct of criminal justice professions to hypothetical situations;
D. Articulate the importance of ethics in conducting research.

Qualifications for the Major
Students must have a minimum grade of “C” in each required course in the major and an overall GPA of 2.0 in the major.

Criminal Justice Curriculum

1. Core Curriculum Requirements:
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. Major Course Requirements (12 courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 131 Statistics and Computers</td>
<td>3 credits</td>
</tr>
<tr>
<td>SOC 110 Introduction to Sociology</td>
<td>3 credits</td>
</tr>
<tr>
<td>SOC 342 or ANT 351 Research Methods</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 227 Introduction to Criminal Justice I</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 228 Introduction to Criminal Justice II</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 320 Criminology</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 449 Criminal Law</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 450 Criminal Procedure</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 482 Senior Capstone: Criminal Justice Ethics</td>
<td>3 credits</td>
</tr>
<tr>
<td>Criminal Justice Electives: three courses</td>
<td>9 credits</td>
</tr>
</tbody>
</table>

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Criminal Justice Minor
The Criminal Justice minor is designed for students who have chosen another academic major (e.g. Psychology, Political Science) but who may have an academic and/or career interest in the area of criminal justice. Three courses are required. The two CRJ electives can be chosen from any of the criminal justice offerings, with at least one course at the 300 or 400 level.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 110 Introductory to Sociology</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 227 Criminal Justice I</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ 228 Criminal Justice II</td>
<td>3 credits</td>
</tr>
<tr>
<td>CRJ elective (2 courses)</td>
<td>6 credits</td>
</tr>
<tr>
<td><strong>TOTAL (5 courses)</strong></td>
<td><strong>15 credits</strong></td>
</tr>
</tbody>
</table>
COURSES: 2009-2011

Criminal Justice

CRJ 227 Criminal Justice I 3 credits
Criminal justice system; justification for punishment, the police, constitutional rights, the prosecuting and defense attorney. Fall

CRJ 228 Criminal Justice II 3 credits
Trial, guilty pleas, sentencing, corrections; the extent and causes of crime, and proposals for change and reform. Spring

CRJ 300 Special Topics in Criminal Justice 3 credits
Critical examination of a selected topic in criminal justice. Subject matter determined by the instructor. Fall and Spring

CRJ 320 Criminology 3 credits
Classical and contemporary theories of criminal behavior. Fall

CRJ SL337 Violence and the Family 3 credits
How family dynamics can contain elements that give rise to violence, including “battered women” and abused children. Fall

CRJ 344 Violent Crime in American Society 3 credits
The nature of violence as a social act and problems in obtaining data on violence. Family violence, effects of the media and collective violence. Spring

CRJ 345 Gangs in American Society 3 credits
Examines the causes in growth of violent and criminal gangs. Topics include the extent of the problem and solutions offered. Spring

CRJ 351 Police and the Community 3 credits
How changes in community standards affect the business of policing. Topics include use of force and private policing. Fall

CRJ 354 Juvenile Delinquency 3 credits
Legal processes in delinquency field. Suggested programs for rehabilitation and prevention of delinquency. Fall

CRJ 356 Treatment of Offenders 3 credits
Correction theory, offender typologies, and nature and diagnosis of offenders and future trends in dealing with criminal offenders. Fall

CRJ 358 White Collar Crime 3 credits
Crimes committed by “respectable people” in positions of responsibility in private or public sector. Nature of these crimes, how regulatory bodies and legal systems treat these criminals and how they seek to avoid detection and prosecution. Spring

CRJ 359 Women and Crime 3 credits
Classical and contemporary accounts of the etiology of female crime, patterns of female criminal behavior, and the role and treatment of women in the criminal justice system. Fall

CRJ 449 Criminal Law 3 credits
The substantive criminal law, including offences against persons, property and public morality with emphasis on New York State Penal Law. Criminal responsibility and defenses. Prerequisite: CRJ 227, CRJ 228. Fall

CRJ 450 Criminal Procedure 3 credits
Key Supreme Court decisions on search and seizure, arrest, interrogation and identification of criminal suspects. Sentencing and punishment, appeal and post-conviction relief. Prerequisite: CRJ 227, CRJ 228. Spring

CRJ 482 Senior Capstone: Criminal Justice Ethics 3 credits
The personal, social and criminal justice contexts for understanding justice, crime and ethics. Skills necessary to deal effectively with ethical issues in criminal justice systems. Problems and case studies for active exploration of social issues. Prerequisite: Senior status; CRJ 227, CRJ
CRJ 498 Criminal Justice Internship
3 credits
Opportunity for selected students to participate in daily work in a law enforcement agency. Students must apply the semester before they take the internship. Prerequisite: Background check; G.P.A. of at least 2.75; junior or senior status; signature of major advisor. Fall and Spring

CRJ 499 Individual Reading and Research
3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. Prerequisite: Permission of the instructor, department chair and associate dean. Fall and Spring

The following courses offered by other departments or programs count as satisfying the requirements for the criminal justice major and minor: Ant 280 Language for Legal Professions; ANT 333 Forensic Anthropology; ANT 351 Qualitative Research Methods; PSC 103 Constitutional Foundations of American Government; PSC 320 American Constitutional Law I; PSC 321 American Constitutional Law II; PSC 345 International Crime after 9/11; SOC 342 Research Methods

The following psychology courses will count as satisfying the requirements for criminal justice majors pursuing a dual major with psychology: PSY 201 Basic Statistics for Behavioral Sciences; PSY 202 Experimental Psychology; PSY 303 Abnormal Psychology; PSY 307 Adolescent Psychology; PSY 369 Forensic Psychology.

Sociology Major
(Patricia B. Christian and Erin Robinson, advisors)

Sociology is the study of human behavior and of the social structures and social forces that influence human behavior. The sociologist looks beyond individual psychology and unique events to the broad patterns and regular occurrences of social life that influence our individual behavior and attitudes. For example, a sociologist might examine how women’s increased participation in the labor force has affected the distribution of tasks in the household. The sociology major prepares students for a wide variety of careers and graduate fields, including sociology, social work, education, business and law.

Student Learning Goals

Goal 1. Majors will be able to demonstrate a mastery of the sociological imagination.
Students will be able to:
A. Describe the structural and/or cultural factors that influence human behavior when presented with an issue or social problem.
B. Analyze structural and/or cultural factors that influence human behavior when presented with an issue or social problem.
C. Demonstrate the difference between public or society and private or individual sphere issues and problems.

Goal 2. Majors will be able to demonstrate an understanding of sociological research methodology. Students will be able to:
A. Conduct appropriate library research.
B. Develop a research question using appropriate conceptualization and operationalization techniques.
C. Select and apply appropriate methodology.
D. Analyze data and present conclusions.
E. Articulate the importance of ethics in conducting research.

Goal 3. Majors will be able to demonstrate mastery of major concepts and theories in the
**Sociology Curriculum**

**1. Core Curriculum Requirements:**
See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

**2. Major Course Requirements (12 courses)**
SOC 110 Introduction to Sociology 3 credits
SOC 111 Contemporary Social Problems 3 credits
SOC 342 Research Methods 3 credits
SOC 432 Theories in Sociology 3 credits
MAT 131 Statistics and Computers 3 credits
SOC 450 Senior Capstone: Community and Diversity 3 credits
Sociology electives: six courses

**3. Free electives:**
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

**Sociology Minor**
Sociology has a great deal to offer students from other disciplines who do not have room in their curriculum for a dual major. Pre-med students, business majors and education majors can all benefit from the insights into human behavior that come from a familiarity with sociological analysis.
SOC 110 Introduction to Sociology 3 credits
SOC 111 Contemporary Social Problems 3 credits
Sociology electives: 2 courses at the 200-400 level and 1 course at the 300-400 level 9 credits
**TOTAL (5 courses) 15 credits**
COURSES: 2009-2011

Sociology

SOC 110 Introduction to Sociology
3 credits
Topics include theory, methods, culture, socialization, race and ethnicity, groups and organizations, and social inequality; analysis of everyday events, using sociological imagination. (Field 5) Fall

SOC 111 Contemporary Social Problems
3 credits
Exploration of several selected social problems from competing points of view, emphasizing some of the sociological concepts employed in analyzing these problems. (Field 5) Spring

SOC 234 Environment and Society
3 credits
Explores connections between environmental issues and their social causes. Topics of analysis include environmental racism, environmental health, risk and uncertainty, political economy, globalizations and sustainability. (Field 5) Spring

SOC 273 Social Movements and Social Change
3 credits
Explores the development of social movements as a force of social change in society. Focus is on theoretical developments in movement theory, as well as explorations of social movements through history. (Field 5) Spring

SOC 291 Gender and Society
3 credits
Exploration of origin of gender roles; socialization into masculine and feminine roles; intersection of gender and social institutions such as family, work and education. (Field 5) Fall

SOC 300 Special Topics in Sociology
3 credits
Critical examination of a selected topic in sociology. Subject matter determined by the instructor. Fall and Spring

SOC 324 Visual Sociology
3 credits
Emphasizes a visual approach to analyzing social concepts. Analysis of visual media forms to explore core ideas in sociology such as, gender, race, environment, social class, family and global diversity. Spring

SOC 330 Perspectives on Health and Illness
3 credits
The social aspects of health, illness and health care. Epidemiology, the experience of illness, the evolving health care industry, and a comparison of alternative and traditional medicine. Fall

SOC SL340 Sociology of the City
3 credits
Exploration of how people experience and understand city life, how cities grow and develop, and various issues affecting cities today such as suburbanization and urban sprawl. Fall

SOC 342 Research Methods
3 credits
Overview of the major steps in constructing social science research, from developing a research question, operationalization and measurement through data collection and analysis. Fall

SOC 390 Marriage and Families
3 credits
Covers family development from relationship formation through marriage, divorce and remarriage. Includes sexuality, sexual orientation, cohabitation, parenting and the intersection between the family and major social institutions. Fall

SOC 432 Theories in Sociology
3 credits
Course emphasizes theory development as a tool to understand society. Focuses on major social theorists and their contributions as well as classical and modern theoretical schools in sociology. Prerequisite: Senior Status. Fall

SOC 450 Senior Capstone: Community and Diversity
The culminating experience for the major, in which students synthesize the knowledge they have acquired in their course work and the core, integrate cross-disciplinary knowledge, and connect theory and
application in preparation for graduate school or entry into a career. Prerequisite: Senior status. Spring

SOC 498 Internship 3 credits
Opportunity for students to participate in the daily work of an agency or organization. Prerequisite: Instructor’s signature; G.P.A. of at least 2.75. Fall and Spring

SOC 499 Individual Reading and Research 3 credits
Independent studies allow in-depth study of a specific topic and are most often reserved for seniors who cannot otherwise fulfill a graduation requirement. Prerequisite: Permission of the instructor, department chair and associate dean. Fall and Spring

The following courses offered by other departments or programs count as satisfying the requirements for the sociology major or minor: ANT 122 Sociocultural Anthropology; ANT 351 Qualitative Research Methods; ANT 355 Sociolinguistics; ANT 360 African American English; ANT 365 Gender Issues in Language; CRJ 354 Juvenile Delinquency, CRJ 254 Criminology.

sports medicine, health & human performance

Full-Time Faculty: Khalid W. Bibi, Chair; Michael G. Dolan, Dennis W. Koch, Peter M. Koehneke.

The Department of Sports Medicine, Health and Human Performance offers a bachelor of science degree with a major program for athletic training and a minor in health and human performance. The major program is designed to prepare students to enter the athletic training and allied health fields. Emphasis is placed on the development of cognitive knowledge and psychomotor skills which includes practicum, laboratory and internship experiences. The major is accredited by the Commission on Accreditation of Athletic Training Education and prepares students for the National Athletic Trainers’ Association Board of Certification (BOC) examination. The Health and Human Performance minor provides an option for students interested in applied human physiology, clinical exercise physiology, health and physical fitness careers, as well as for students interested in graduate school.

Athletic Training Major
The athletic training major may be combined with another major within the college, such as teacher education. The student will be required to complete additional coursework and time at the college. A plan of study must be devised as early as possible with the academic advisors in the chosen majors.

Student Learning Goals and Objectives
Upon graduation and completion of the major the student will:
1. be prepared by knowledge, skill, behavior and experience to enter the allied health profession of athletic training,
2. possess problem-solving skills and techniques,
3. possess broad-based communication skills,
4. possess a practical knowledge of the clinical
disciplines in athletic training, sports medicine, and allied health care,

5. be prepared by background coursework and knowledge to pursue graduate work in health care, education, and sports medicine disciplines, and

6. be prepared to contribute to the athletic training profession through participation in public relations, education, governmental/association activities, research or other professional activities.

Assessment Plan
- Preparation to enter the profession will be assessed through BOC examination results and student placement following graduation.
- Problem solving will be assessed through examinations, group discussions, practical examinations and clinical decision making.
- Communication skills will be assessed through course presentations and clinical interactions with patients, physicians and clinical staff.
- Practical knowledge will be assessed through practical examinations, clinical experience documentation and evaluation.
- Graduate school preparation will be evaluated through placement results of Canisius College graduates annually.
- Preparation for contribution to the profession will be assessed through examinations, course presentations, and submission of student/faculty projects for presentation and publication.

Admission requirements
Admission is competitive and is based upon academic performance, skill and competencies acquired in BIO 107, BIO 107L, BIO 108, BIO 108L, ATH 170 and ATH 132. A minimum of C (2.0) must be obtained in each of the courses as well as an overall GPA of 2.0. Specific admission criteria for the program may be obtained from the program director. Course transfer credit will be evaluated on an individual basis for the required pre-professional courses BIO 107-108.

Transfer credit will not be allowed for ATH 170 and ATH 132. There are a limited number of student professional openings each year in the program.

Transfer student admission is also competitive with a limited number of openings available. Students must apply for admission by December 1 of the fall semester in which they are enrolled. Admission is made at the end of the spring semester each year. A two-year (four-semester) minimum time period must be allowed for the completion of the required clinical hours once the student is admitted. An off-campus clinical practicum experience and an off-campus internship experience are required of all majors. Costs for transportation to these experiences as well as for required clothing is the responsibility of the student. A criminal background check may be required at the expense of the student. Additional health requirements and physical and cognitive technical standards are described on the admission application, on the program website and in the student handbook.

Professional Standards for Applicants and Students
All applicants and students in the athletic training major must meet and continue to meet the professional standards of the program. No one who jeopardizes the health or well-being of a patient, classmate or self, will be accepted into the program or continue as a student in the program. All applicants and students must possess the necessary physical attributes and exhibit qualities of good judgment, mental strength and emotional stability.

All applicants to the professional phase of the program are required to submit a written acknowledgment indicating that they have read and understood the technical standards related to the professional duties of the discipline. These
documents are available on the program website. The athletic training program website also provides additional information for program applicants. The program faculty will be responsible for applying the standards for their students and prospective students.

The health care professional’s self-presentation is a vital part of the complex relationship among the patient, the health care provider and the health care delivery site. The athletic training program reserves the right to limit attire and adornments (such as clothing, jewelry, piercing, tattooing) of the body and its parts (such as hands, face, oral cavity). The program handbook outlines the enforcement of this policy. In all cases, the final appeal may be made to the dean of the School of Education and Human Services.

Athletic Training Curriculum

1. Core Curriculum

Students in all majors are expected to fulfill Core requirements. See pages 38-40 of this catalog for the Core Curriculum requirements. Please go to http://www.canisius.edu/core_curriculum/mission/asp for complete information about the Core Curriculum.

2. Major course requirements: (23 courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 107 &amp; Lab Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIO 108 &amp; Lab Physiology</td>
<td>4</td>
</tr>
<tr>
<td>ATH 170 Emergency Care &amp; Intro. to Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>HED 205 Wellness/Fitness</td>
<td>3</td>
</tr>
<tr>
<td>HHP 235 Kinesiology (prereq. BIO 107)</td>
<td>3</td>
</tr>
<tr>
<td>HHP 336 and Lab Physiology of Exercise</td>
<td>4</td>
</tr>
<tr>
<td>ATH 132 Practicum in Athletic Training</td>
<td>2</td>
</tr>
<tr>
<td>ATH 231 Practicum in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>ATH 232 Practicum in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>ATH 261 Assessment of Injuries/Illnesses I</td>
<td>3</td>
</tr>
<tr>
<td>ATH 262 Assessment of Injuries/Illnesses II</td>
<td>3</td>
</tr>
<tr>
<td>ATH 309 Pathophysiology &amp; Pharmacology in A.T.</td>
<td>3</td>
</tr>
<tr>
<td>ATH 331 Practicum in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>ATH 332 Practicum in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>ATH 342 Therapeutic Modalities (Lab)</td>
<td>3</td>
</tr>
<tr>
<td>ATH 343 Therapeutic Exercise (Lab)</td>
<td>3</td>
</tr>
<tr>
<td>ATH 361 Sports Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ATH 372 Health Issues for Athletic Trainers</td>
<td>3</td>
</tr>
<tr>
<td>ATH 373 Nutritional Issues for Athletic Trainers</td>
<td>3</td>
</tr>
<tr>
<td>ATH 398 Statistics and Research Design for A.T.</td>
<td>3</td>
</tr>
<tr>
<td>ATH 431 Practicum in Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>ATH 482 Administration of Athletic Training</td>
<td>3</td>
</tr>
<tr>
<td>ATH 498 Internship in Athletic Training</td>
<td>3</td>
</tr>
</tbody>
</table>

Capstone
3. Free Electives (4-6 courses) 12-18 credits
Courses/credits in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 hours for graduation. Students may graduate with more but not less than 120 credit hours.

Recommended Schedule
In selecting courses for the major, students should consult carefully with their advisor each semester about the best selection of courses for the coming semesters. In addition, students will want to consult the on-line advisement guide, which is published each semester and contains valuable information about course offerings for the coming semester.

Health and Human Performance Minor
The minor provides students with preparation for the fields of exercise physiology and wellness, and other related health professions and graduate work. It also helps students prepare for health and fitness specialty certifications through the American College of Sports Medicine and/or the National Strength and Conditioning Association. Health and Human Performance courses have specific pre-requisites, which are stated in the course descriptions.

Admission to the health and human performance minor is competitive due to a limited number of student slots available and is based on skills and knowledge competencies acquired in BIO 107, BIO 108, and HHP 235. Each course must be completed with a grade of C (2.0) or higher. The applicant must attain minimum C (2.0) cumulative G.P.A. in these three courses and an overall College G.P.A. of C (2.0) or higher. Majors from other departments are eligible for selection by meeting the above requirements. Students interested in health and human performance at Canisius College must complete an application in the Sports Medicine, Health and Human Performance Department. Application for the minor must be completed following enrollment in HHP 235.

Health and Human Performance Minor Courses
BIO 107 Human Anatomy with lab 4 credits
BIO 108 Human Physiology with lab 4 credits
HHP 235 Kinesiology 3 credits
HHP 336 Physiology of Exercise 3 credits
HHP 337 Research in Physiology of Exercise 3 credits
ATH 373 Nutritional Issues For Athletic Trainers 3 credits
HHP 420 Exercise Testing & Prescription 3 credits
TOTAL 23 credits

COURSES: 2009-2011
ATH 132 Practicum in Athletic Training 2 credits
Didactic and psychomotor skill instruction with practical examinations. Examinations are an integral portion of the acceptance criteria for the program.
Prerequisites: BIO 107 and ATH 170 with a grade of C or better and an overall G.P.A. of 2.0.
Spring
ATH 170 Emergency Care and Introduction to Athletic Training
Recognition and immediate care of common illnesses
and injuries. Content meets National Safety Council requirements for Standard First Aid and CPR. Fall

ATH 231-232 Practicum in Athletic Training
1-1 credits
Clinical experiences in athletic training. Instruction provided by professionals from various academic institutions, e.g., secondary schools and colleges. Experiences and course material provide acquisition of clinical competency of previously instructed psychomotor skills. Prerequisite: Acceptance into the Athletic Training Education Program. Fall, Spring

ATH 261 Athletic Injuries/Illnesses I 3 credits
Theoretical, practical, empirical study of lower extremity, abdominal and lumbar spine assessment. Includes lab. Prerequisites: ATH 170, BIO 107, Registration concurrent with ATH 231. Fall

ATH 262 Athletic Injuries/Illnesses II 3 credits
Theoretical, practical, empirical study of upper extremity, thorax, head and cervical spine assessment. Includes lab. Prerequisites: ATH 261, ATH 231. Spring

ATH 309 Pathophysiology and Pharmacology for Athletic Trainers 3 credits
Discussion of the physiologic changes that occur following injuries and illness. Discussion of indications, contraindications and legal issues regarding medications used in the management of athletic injuries. Registration concurrent with ATH 231 or ATH 331. Fall

ATH 331-332 Practicum in Athletic Training 1-1 credits
See ATH 231-232 for description.

ATH 342 Therapeutic Modalities 3 credits
Therapeutic modality use in treatment of athletic injuries. Physics, physiological effects, rationale and application of modalities in health care of patients. Practical examinations. Includes lab. Prerequisites: BIO 107-108, Registration concurrent with ATH 231. Fall

ATH 343 Therapeutic Exercise 3 credits
Contemporary exercise techniques and equipment in health care of patients. Biomechanics, physiological effects, rationale and application of exercise techniques and devices. Practical examination. Includes lab. Prerequisite: HHP 235, Registration concurrent with ATH 232. Spring

ATH 361 Sports Psychology 3 credits
Review of psychological and sociological processes, principles and problems influencing behavior in sport. Fall, Spring Other approved psychology courses may be substituted.

ATH 372 Health Issues for Athletic Trainers 3 credits
Current theories, principles and practices related to personal, school and community health. Fall

ATH 373 Nutritional Issues for Athletic Trainers 3 credits
Fundamental theories and practices of nutrition, diet construction and research findings applicable to athletic performance. Spring

ATH 398 Statistics and Research Design for AT 3 credits
Review of statistical interpretation of literature and the development of research design techniques as related to evidence-based practice. Includes the use of statistical software, development of research skills to conduct a scientific study related to athletic training and the creation and presentation of a research poster. Spring

ATH 431 Practicum in Athletic Training 3 credits
See ATH 231-232 for description.

ATH 482 Administration of Athletic Training 3 credits
Theoretical, practical and empirical study of administrative requirements of the athletic trainer relative to facility design, duties, liability, drug testing, nomenclature and injury epidemiology. Prerequisites: ATH 262, ATH 331. Spring
ATH 498 Internship in Athletic Training
3 credits
Field-based experience in athletic training or related health care field. Requires 150 clock hours over twelve weeks. Prerequisites: ATH 342, ATH 343, Permission of instructor; application. Summer, Fall, Spring

HHP 235 Kinesiology 3 credits
Scientific study of human movement, emphasizing the basic principles of musculoskeletal anatomy, neuromuscular physiology and biomechanics. Prerequisite: BIO 107 with a minimum grade of C. Fall, Spring

HHP 336 Physiology of Exercise 3 credits
Effects of physical activity upon the functioning human body. Restrictions upon levels of physical activity by normal metabolic limitations. Lab required (HHP 336L) for Athletic Training majors. Prerequisite: BIO 108 with a minimum grade of C. Summer, Fall

HHP 336L Physiology of Exercise Lab
1 credits
Laboratory experiences in physiology of exercise. Lab required (HHP 336L) for Athletic Training majors. Prerequisite: Concurrent registration in HHP 336. Summer, Fall

HHP 337 Research in Physiology of Exercise 3 credits
Required for HHP Minors. This course may be substituted for HHP 336L. Laboratory experiences in physiology of exercise culminating in a scientifically based research report. Prerequisite: Concurrent-registration in HHP 336. Permission of instructor. Summer, Fall

HHP 420 Exercise Testing and Prescription 3 credits
Required for HHP minors. Instruction in the guidelines for exercise testing and prescription. Didactic instruction and practical training will be used to educate students in the various methodologies and competencies required to safely assess adult health and fitness. Practical experiences include the assessment of cardiovascular risk, coronary artery disease risk stratification, body composition assessment, functional capacity assessment and muscular fitness assessment. Prerequisite HHP 337. Summer, Fall
technical and liberal studies

Patricia Clayback, Director.

The Technical and Liberal Studies degree is designed to supplement eligible professional and technical training programs with a core of liberal arts courses that lead to a baccalaureate degree. Canisius College believes that the values inherent in the liberal arts should be extended to those individuals whose formal learning has included training or associate’s degrees in allied health and other technology programs.

This degree program includes up to 60 credit hours of academic work accepted by the college for professional or technical training programs that are offered by community colleges, government agencies, or corporate and business training units. The remainder of the program is composed of liberal arts courses and free electives. The free electives may be used to concentrate in a particular area of study.

The college assesses any professional or training program and grants an appropriate award of credit. Individuals who have completed such a program may apply to the associate dean for adult academic services. These individuals must meet the general admission requirements and submit official verification from the supervisor or registrar of the professional or technical training program that the program’s requirements have been completed satisfactorily. In general, only those programs with state or national certification or licensure are accepted as part of the Technical and Liberal Studies major. Each applicant whose training program is accepted toward the degree will be given a statement summarizing the degree requirements that must be completed. Students in this major will usually complete at least 60 credit hours at Canisius. Students who have had additional coursework from four-year colleges will have these credits evaluated on an individual basis.

urban studies

Kevin R. Hardwick, Department of Political Science, Director; Patricia B. Christian, George Palumbo, Craig Rogers, Nancy J. Rosenbloom.

Contemporary American society is an urban society. The future American society, with all its problems and prospects, will also be urban in nature. The Urban Studies program is designed to prepare students for professional work in urban and public administrative fields, and to give students who enter other fields a broad understanding of the urban context in which they will live their lives.

The program concentrates on issues that are very close to our experience — economic growth and decline, public education, health, housing, land-use planning, poverty, racial and ethnic relations,
transportation, crime, community development and others. Since no one approach to understanding and resolving such complex problems is sufficient, the Urban Studies program acquaints students with a variety of approaches to, and tools for, analyzing the interrelationships of the 21st century urban milieu. As half of a dual major, the program allows for a necessary specialized grounding in a traditional discipline, while providing a planned, interdisciplinary program in place of free electives. The student must major in one of the traditional disciplines such as Criminal Justice, Economics, Political Science, History, or Sociology/Anthropology, and then use free electives in a coordinated, interdisciplinary program comprising a major in Urban Studies.

The Urban Studies program offers a solid preparation for graduate programs in public administration, community development and planning, social work, public policy, criminal justice and urban affairs. It is also a recommended choice for pre-law students, and for those aspiring to careers in journalism, communications, teaching, government service, social work, law enforcement, community organization and land-use planning, as well as those industries that are increasingly conscious of the influence of urban society upon them and their impact on urban society.

Extensive internship and professional research experiences are an integral component of the Urban Studies program. Such activities are a vital aspect of preparation for graduate school and/or a professional career. Also, an intensive study of computer programming as applicable to the social sciences is provided.

**Student Learning Goals**

The Urban Studies major will be able to:

Goal 1: Demonstrate knowledge of urban history, economics and politics.

Goal 2: Effectively communicate and work with others.

**Qualifications for the major**

The first course for the Urban Studies major will normally be URS 200 - Urban Plunge. Students must maintain at least a “C” average in all coursework to remain in the program. Satisfactory performance in basic Urban Studies courses is required for admission to the Internship and Independent Study.

*(NOTE: Students in those few majors that require thirteen or more courses for their majors may find difficulty fitting the Urban Studies program into their schedules.)*

**Urban Studies Curriculum**

1. **Core Curriculum Requirements:**

   See pages 38-40 of this catalog or go to [http://www.canisius.edu/academics/core.asp](http://www.canisius.edu/academics/core.asp) for the Core Curriculum requirements. All students complete these requirements as part of their overall Canisius education.

2. **Major course requirements:** (24-21 courses)

   **A. Major requirements:**
   - URS 200 Urban Plunge 1 credits
   - PSC 103 Constitutional Foundations of American Government 3 credits
   OR
PSC 104 American Political Process
ECO 102 Principles of Microeconomics 3 credits
PSC 237 State and Local Politics 3 credits
PSC 334 Public Administration 3 credits
PSC 336 Urban Government and Politics 3 credits
HIS 373 Urban Portraits: Topics in Urban History 3 credits
ECO 311 Regional Economics and GIS 3 credits

OR
ECO 312 Spatial Economics and GIS

OR
ECO 411 State and Local Finance

Urban Studies Electives: three courses to be chosen from the following: 9 credits
CRJ 327, ECO 101, ECO 311, ECO 312, ECO 411, FAH 109, HIS 378, HIS 381, HIS 382, HIS 396,
PSC 103, PSC 104, PSC 215, PSC 217, URS 201, URS 201, URS 498, URS 499, RST 225, SOC 111, SOC 340

B. Requirements of a second major (varies)

3. Free electives:
Free electives are courses in addition to the Core Curriculum and major requirements sufficient to reach a minimum of 120 credit hours for graduation. Students may graduate with more but not less than 120 credit hours.

Note: Additional courses may be substituted with permission of the Urban Studies director. Not more than two elective courses may be double counted with the first major electives.

Dual Majors
A second major is required. Common second majors include Criminal Justice, Economics, English, Political Science, History, Religious Studies or Sociology/Anthropology

COURSES: 2009-2011

URS 200 Urban Plunge 1 credit
48-hour immersion into the inner city, observing and working with city, church and community organizations that strive to meet the needs of the poor. Spring

URS 201 Planning for Urban Revitalization 3 credits
Dynamics, concepts and strategies of urban revitalization. Introduction to planning and policy-making with emphasis on neighborhoods, housing and economic development. Spring

URS 498 Urban Internship 1-9 credits
Participant observation and evaluation of an urban program or agency. Students devote 10 hours per week to significant activities related to their skills and interests. Prerequisite: Placement by Urban Studies Director. Spring & Fall

URS 499 Independent Study 1-9 credits
Research and/or directed reading under direction of faculty members associated with Urban Studies Program. Prerequisite: Permission of Urban Studies Director. Spring & Fall
As computers increase their impact on all areas of life, knowledge of how to apply computers to the task at hand is an increasingly important skill. The Computer Science Certificate Program gives students a strong foundation in computer science concepts without sacrifice to their primary field of study. Students who complete the certificate program will have an in-depth knowledge of programming, an understanding of computer hardware and theory and advanced study in topics related to the student’s future plans.

The Computer Science Certificate Program is a 29-credit-hour curriculum designed to be taken independently or in conjunction with another degree at Canisius College. There are both majors and minors in computer science for students who would like a greater or lesser background in the field.

Qualifications for the Certificate Program

Students interested in earning a Computer Science Certificate apply through the program director and complete a Computer Science Declaration application form. This form is available in the Computer Science Department, WTC 207.

Accepted students will be assigned an advisor in the department. The performance of all certificate students is subject to review relative to their continuation in the program. Academic record (at least a 2.0 overall G.P.A.), computer science course record (at least a 2.0 G.P.A. in all computer science courses and labs), a grade of at least B- in both CSC111 and CSC 111L, and the demonstration of necessary skills will be the basis of the evaluation. Students not meeting these requirements should work with their advisor to discuss possible options.

Computer Science Certificate Program (8 courses)

One course from:
- BIF 101 Introduction to Bioinformatics
- CSC 107 Computer Programming for Science
- CSC 108 Introduction to Web Computing
- CSC 111 Introduction to Programming
- CSC 212 Data and Files Structure
- CSC 213 Large Scale Programming

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>CSC 109 A Robotics Introduction to Computer Science</td>
<td>3 credits</td>
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<tr>
<td>CSC 110 Introduction to Computing</td>
<td>4 credits</td>
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<tr>
<td>CSC 127 Introduction to Game Programming</td>
<td>4 credits</td>
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<tr>
<td>CSC 212 Data and Files Structure</td>
<td>4 credits</td>
</tr>
<tr>
<td>CSC 213 Large Scale Programming</td>
<td>4 credits</td>
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women’s studies

Dr. Jane E. Fisher, Department of English, Director.

Women’s Studies is designed for students planning careers in which diversity is an important aspect (e.g. business, law, health related professions or education) and for students who want to enrich their understanding of how gender roles have shaped their world. For this reason, the Women’s Studies Program is multi-disciplinary and comparative.

All Women’s Studies courses except WST 201 are offered in traditional academic departments and meet the criteria established by those departments with regard to field studies or majors. The program provides the student with a multi-disciplinary program in place of free electives and a strategy for coordinating a number of courses in the core curriculum to reflect an interest in gender and diversity.

The Women’s Studies Program offers a Certificate and a Minor which are described below. The director of the program will assist students as they choose appropriate courses to complete either the Women’s Studies Certificate Program or the Minor.

**Qualifications for the minor and certificate:**

A grade of C or better is required in WST 201

**Student Learning Goals**

At the conclusion of the WST Program, WST Certificate students will be:

**Goal 1: Original thinkers who can re-envision how gender roles interact with social structures, time, race or ethnicity.** Students will:

A. Distinguish the difference between sex and gender.

B. Interpret the ways social structures (such as religion and social class) impact women and men’s lives.

C. Explain how historical context interacts with gender roles.

D. Examine how race or ethnicity interacts with gender roles.

E. Analyze how socially-constructed gender norms influence power relationships experienced by individuals.

**Goal 2: Problem solvers who investigate culture and society using the lens of gender and social justice.** Students will:

A. Evaluate human interactions using gender as a framework;

B. Apply gender-based analysis to offer solutions to issues in society and culture.

Women’s Studies Certificate Program
WST 201 Introduction to Women’s Studies 3 credits
Women’s Studies electives: seven courses approved for Women’s Studies credit 21 credits
TOTAL (8 courses) 24 credits

Women’s Studies Minor
WST 201 Introduction to Women’s Studies 3 credits
Humanities electives: two courses approved for Women’s Studies credit 6 credits
Social and natural sciences electives: 2 courses approved for Women’s Studies credit 6 credits
TOTAL (5 courses) 15 credits

COURSES 2009-2011

WST 201 Introduction to Women’s Studies 3 credits
An interdisciplinary introduction to the field that focuses on how gender roles have been impacted by historical and cultural circumstances, concluding with an emphasis on contemporary gender and diversity issues.

WST 498 Internship

WST 499 Independent Study

Courses approved for Women’s Studies credit are as follows. Course descriptions may be found in the appropriate departmental listing.

BIO 221 Biology of Women
CLS 300 Roman Law (Oral Communication Attribute)
COM 304 Family Communication
COM 327 Gender Differences in Communication
CRJ 337 Violence and the Family
ENG 223 Images of Women in Literature and Film (Field 3)
ENG 311 Women Writers
ENG 313 Literature and Psychology
FAH 159 Women and Art (Field 3)
HIS 211 Women in the Western World (Field 4)
HIS 290 The Family in American History
HIS 367 Slavery
HIS 395 History of American Women
PHI 358 Contemporary Philosophy
PHI 382 Gender and Philosophy (Field 2)
PHI 404 Women and Work
PSY 318 Social Psychology
PSY 329 Leadership and Motivation
RST 420 Feminine Role in Religion
RST 345 Bio-Moral Problems (Field 1)
SOC 291 Gender and Society (Field 5)
SOC 295 Women and Crime
SOC 390 Marriage and Families
pre-professional programs

pre-engineering

2+2 Program 3+2 Program

Full-Time Faculty: H. David Sheets, Director (’09–’10), Kenneth Scherkoske, Director (’10–’11); James C. Lauffenburger, Robert Selkowitz, Michael Wood

3+2 Dual Degree Physics-Engineering Articulation Programs
The 3+2 Dual Degree Engineering programs are ideal for students interested in scientific or industrial research and development careers. The dual degree programs, which provide extensive grounding in both science and engineering, consist of three years of study at Canisius and two subsequent years at one of our cooperating institutions. This leads to a B.S. in Physics from Canisius and a B.S. in Engineering from the partner institution. There are currently four articulation programs:

• B.S. in Physics, from Canisius and B.S. in Mechanical Engineering from Pennsylvania State University at Erie
• B.S. in Physics from Canisius and B.S. in Electrical Engineering from SUNY at Buffalo
• B.S. in Physics from Canisius and B.S. in Industrial Engineering from SUNY at Buffalo
• B.S. in Physics from Canisius and B.S. in Mechanical Engineering from SUNY at Buffalo.

2+2 Engineering Transfer Programs
These programs cover the first two years of a four-year engineering major. The 2+2 program covers the science, mathematics and engineering courses that form the basis of study for the first two years of most engineering school curricula.

The completion of the engineering degree normally takes an additional two years of study at an engineering school. Most students have chosen to transfer to SUNY at Buffalo, but students have also completed engineering degrees at a wide variety of schools such as Cornell, Clarkson, RIT and RPI. Canisius also maintains an articulation agreement in engineering with the University of Detroit Mercy.

Student Learning Goals and Objectives

Goal 1: Students in the Pre-Engineering program will be able to produce analytical solutions to engineering problems using sound critical-thinking skills. Students will:

A: Clearly identify what the problem is; i.e., what is being sought; generating equivalent statements of the problem;

B: Delineate the principles of science and analytical techniques which will be used to obtain a solution;

C: Correctly apply the principles and techniques delineated in Objective B to obtain a solution;

D: Test the correctness of the solution by
showing that it yields expected results in limiting and special cases.

**Goal 2: Students in the Pre-Engineering program will be able to produce non-analytical solutions to engineering problems.**

Students will:

A: Be able to apply numerical methods, graphic approaches and other approximations for solving engineering problems too complex to allow for analytical solutions;

**Goal 3: Students in the Pre-Engineering program will be able to communicate ideas in engineering with precision and clarity.**

Students will:

A: Be able to produce precise and clear expository written material about engineering.

B: Be able to produce a well-organized and clear oral presentation of engineering material.

**Advisement:**

Students should consult with their major advisor every semester to discuss course offerings and the courses needed to meet graduation requirements. Some courses, including CSC107 and most 300 and 400 level physics courses are offered only in alternating years.

**Recommended Schedule: 2 + 2 Program**

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<th>FALL</th>
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<td><strong>Freshman Year</strong></td>
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<tr>
<td>CHM 111</td>
<td>CHM 112</td>
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<td>3 credits</td>
<td>3 credits</td>
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<tr>
<td>CSC 107 or Elective</td>
<td>PHY 223</td>
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<tr>
<td>3 credits</td>
<td>4 credits</td>
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<tr>
<td>MAT 111</td>
<td>MAT 112</td>
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<tr>
<td><strong>Sophomore Year</strong></td>
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<tr>
<td>MAT 211</td>
<td>MAT 222</td>
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<tr>
<td>4 credits</td>
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<tr>
<td>PHY 224</td>
<td>PHY 225</td>
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<tr>
<td>EGR 211</td>
<td>PHY 226 or Elective</td>
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<tr>
<td>3 credits</td>
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<tr>
<td>Elective or CSC 107</td>
<td>EGR 208 or Elective</td>
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<tr>
<td>EGR 207 or Elective</td>
<td>EGR 214 or Elective</td>
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<td>3 credits</td>
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**Recommended Schedule: 3 + 2 Program**

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<td><strong>Freshman Year</strong></td>
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<tr>
<td>CHM 111</td>
<td>CHM 112</td>
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<td>4 credits</td>
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<td>MAT 111</td>
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<tr>
<td>CSC 107</td>
<td>PHY 223</td>
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<td>4 or 3 credits</td>
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<td><strong>Sophomore Year</strong></td>
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<td>MAT 211</td>
<td>MAT 222</td>
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<tr>
<td>CSC 107</td>
<td>PHY 226</td>
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<td>3 or 4 credits</td>
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**Junior Year**
Students must complete the following list of courses during their third year at Canisius, and during their subsequent studies at an Engineering institution. Some courses will satisfy electives in both the Physics Major and the Engineering Major, many are offered on a two-year alternating cycle. Careful advising is necessary to insure timely completion. The courses are: PHY 330, PHY 331, PHY 332, PHY 443, PHY 350, PHY 351, PHY 447, PHY 499, MAT 335, MAT 336.

**COURSES: 2009-2011**

**EGR 111 Introduction to Engineering Design**  
3 credits  
Introduction to the subject of robotics as well as some of the quantitative tools engineers use to solve problems; including model classification, optimization methods and deterministic, probabilistic and economic models. *Fall*

**EGR 211 Thermodynamics**  
3 credits  
Fundamental concepts and laws of thermodynamics, equilibrium. Applications to physical and chemical systems. *Prerequisite: PHY 223. Fall*

**EGR 207 Engineering Statics**  
3 credits  
Forces and torques on rigid bodies, couples, moments, centroids and moments of inertia. Equilibrium conditions, friction, free body diagrams. Applications to beams, trusses, frames and other structures. *Prerequisite: PHY 223, MAT 112. Fall*

**EGR 208 Engineering Dynamics**  
3 credits  
Kinematics of particles and rigid objects. D’Alembert’s Principle, moving reference frames, work-energy methods, impulse and momentum, vibration. Applications to engineering problems. *Prerequisite: EGR 207. Spring*

**EGR 214 Strength of Materials**  
3 credits  
Behavior of materials under mechanical loading. Stress and strain relationships, shear, bending moments, torsion and deflection. Beams, columns, energy methods and failure criteria. *Prerequisite: EGR 207. Spring*

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**pre-law**

The Frank G. Raichle Pre-Law Center

**Faculty:** Robert Klump, Director, Department of Political Science; Patricia E. Erickson, Criminal Justice/Sociology; Peter J. Galie, Department of Political Science; Robert Klump, James V. Jones, Director, Career Center; Walter G. Sharrow, History.

Students wishing to choose law as a career may major, as undergraduates, in any field or fields. They should bear in mind, however, that their aim must be the attainment of a broad liberal education. Specifically, they should attain considerable skill in language, knowledge of human institutions and values and an ability to reason critically. The committee therefore recommends that students wishing to choose law as a career include in their undergraduate programs of study the following:

1. Courses which develop skills of accurate comprehension and
2. Courses in which knowledge of human
institutions can be attained, with special reference to American constitutional law and history.

3. Courses which develop abilities in logic and appreciation of ethical and political values.

4. Courses in elementary accounting and economics.

Recommended Electives

- Philosophy: Ethics, Logic
- Economics: ECO 101 & 102: Micro and Macro Economics
- English: CMP 302: The Art of Successful Writing
- Political Science: PSC 103: American Constitution; PSC 320 & 321: Constitutional Law
- Accounting: ACC 201 & 202: Financial and Managerial Accounting

The Frank G. Raichle Pre-Law Center assists students who wish to enter the legal profession by offering counseling and advisement regarding law schools and the Law School Admissions Test and by providing scholar incentive awards.

The center also sponsors an annual lecture series on problems of law and American society.

Students interested in law are encouraged to contact a member of the pre-law committee at their earliest opportunity and are encouraged to join the pre-law fraternity, Phi Alpha Delta.

The Program

Freshman Year:
Pre-law student advisement

LEG 100 Exploring Legal Careers 1 credit
A one credit course providing pre-law students with information on the following:
- What is the Raichle Pre-law Center?
- What is the legal profession all about?
- What opportunities does the practice of Law provide?
- Should I go to law school?
- Building a resume that will help get you into law school
- Choosing a curriculum that will be attractive to law school admissions committees
- Choosing internships wisely
- The LSAT (Law School Aptitude Test)

Sophomore Year

CMP 302 Basics of Writing for pre-Professionals 3 credits
This course serves pre-law students, among others, who need to sharpen their writing skills. Students will draft prose and develop effective strategies for revising editing and proofreading.

Junior Year

Spring Semester

Getting into Law School: A Strategy for Success Non-credit
A service provided by the Raichle Pre-Law Center consisting of sessions on the following topics:
Selecting the right law school
Applying to law school
Preparing for the LSAT
Writing the personal statement
Updating resumes
Obtaining letters of recommendation
LSAT preparation
Prep courses offered by Kaplan and Princeton on campus

Senior Year
Fall
Advisement sessions: Applying to Law school

pre-med (and related health sciences)

Laura J. Hechtel, Director; Susan M. Aronica, Biology; James Lauffenburger, Physics; Mary C. O'Sullivan, Chemistry; Richard H. Escobales, Mathematics; Jessica L. Childs-Disney, Biochemistry, Justine D. Price, Fine Arts; Terri L. Mangione, Dean of Students.

Students interested in professional careers in medicine, dentistry, podiatry, optometry, physician assistant and veterinary medicine most frequently major in biology, chemistry or biochemistry. Further information can be found in the catalog sections for each of those departments. Recently, a growing number of students have majored in psychology, physics, mathematics, English and philosophy. A general plan for these non-science majors appears below. Specific course requirements vary somewhat from one professional school to another, but there are some common requirements:

**Biology:** At least one year of general biology with laboratory (BIO 101-102).

**Chemistry:** One year of general chemistry and one year of organic chemistry with laboratories (CHM 111-112, 227-228).

**Physics:** One year of introductory physics with laboratory (PHY 201-202 or 223-224).

**English:** One year of college English which stresses composition (EN 111). Calculus: Many of the more competitive medical schools require one year of college level calculus.

**Behavioral Science:** One year of either psychology or sociology.

The Dr. George E. Schreiner Pre-Medical Center has been established to enhance the quality of the undergraduate experience for students who wish to enter the various fields of medicine. Its greatest impact is in helping pre-medical students to crystallize their ideas concerning medicine as a
profession and to provide them with some understanding of the unique aspects of the various medical specialties. This crystallization is accomplished with information about various medical schools, medical specialties and medical practices.

The center assists students in choosing the right medical school and helps them to prepare for entrance examinations to these institutions. Through an increasing number of scholarships, the center provides financial assistance to qualified students pursuing medical and health-related professional degrees. The Pre-Medical Center also sponsors a distinguished lecture series where nationally and internationally known speakers address significant topics in the medical field.

Students interested in medicine should contact members of the Health Science Advisory and Recommendations Committee (listed above) at their earliest opportunity.

**Early Assurance Program**

The Pre-Medical and Pre-Dental Early Assurance programs at Canisius are offered in conjunction with the State University of New York at Buffalo Medical School and Dental School and the State University of New York Upstate Medical School in Syracuse, New York. Since these are public institutions which are financially supported by the State of New York, they give preference to students who either are residents of the state or who attend college in the state.

During their sophomore year, students with the required overall GPA and SAT scores may apply for the early assurance admission. Upstate Medical School requires SATs of 1300 or more and a GPA of 3.5 in order to apply. Once accepted, students must maintain this GPA until graduation. SUNYAB Dental School requires a 3.5 GPA and 1250 SATs. Students must maintain this GPA and also must take the Perceptual subtest of the DAT and achieve a score equal to the average of the previous year’s entering class. SUNYAB Medical School requires 1400 SATs and a GPA of 3.75 in order for students to apply for Early Assurance. Once accepted, students must maintain a 3.7 overall GPA. For both medical schools, Early Assurance students are not required to take the MCAT. These are highly competitive programs that accept few students.

**Joint Degree Programs**

Canisius College has a seven-year joint-degree program with a growing list of professional schools including the State University of New York at Buffalo Dental School, Lake Erie College of Osteopathic Medicine, the Ohio College of Podiatric Medicine, the New York College of Podiatric Medicine and the SUNY State College of Optometry. The first three years are spent at Canisius and the last four years at the professional school. A bachelor’s degree (B.A.) will be awarded from Canisius College after completion of the first year of dental, osteopathic, optometric or podiatric medical school. The D.D.S., D.O., D.P.M., or O.D. degree will be awarded at the end of seven years. To remain in good standing, students must fulfill all requirements established by the professional school.

For further information on any of the above programs, students should consult one of the advisors listed above.

During the past ten years, Canisius graduates have enjoyed an overall acceptance rate of 92 percent, with an acceptance rate of 94 percent specifically for medical school.
**Pre-Med Professional Program for Non-Science Majors**

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<th>Fall</th>
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<tr>
<td><strong>Freshman Year</strong></td>
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<td>FYS 101</td>
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<td>CHM 101</td>
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| Sophomore Year                           |                                         |
| PHI 101                                   | RST 101                                 |
| 3 credits                                 | 3 credits                               |
| CHM 227                                   | CHM 228                                 |
| 4 credits                                 | 4 credits                               |
| Courses in major                          | Courses in major                        |
| and/or Core                               | and/or Core                             |
| 9-11 credits                              | 3 credits                               |
| Total                                     | Total                                   |
| 16-18 credits                             | 16-18 credits                           |

| Junior Year                               |                                         |
| PHY 201                                   | PHY 202                                 |
| 4 credits                                 | 4 credits                               |
| BCH 301 or BIO 203                        | Courses in major                        |
| 3 credits                                 | and/or Core                             |
| Courses in major                          | 12 credits                              |
| and/or Core                               | Total                                   |
| 10 credits                                | 16 credits                              |
| Total                                     |                                        |
| 17 credits                                |                                        |

| Senior Year                               |                                         |
| Courses in major                          | Courses in major                        |
| 15 credits                                | 15 credits                              |
| Total                                     | Total                                   |
| 15 credits                                | 15 credits                              |

**Total**                                   **125-129 credits**

The program is flexible; it represents a model that could easily be modified to meet the requirements of most departments. Once students have decided upon a major, they must design their own curriculum with the guidance and approval of both the chair of that major and a Health Science advisor. The program must meet the requirements of the core curriculum, the particular major chosen (i.e., English, philosophy, psychology, etc.) and the requirements of the health-professional schools. In place of the core curriculum, the All-College Honors Program is highly recommended.

**Note:** This program satisfies both the 120-credit hour and 40-course requirements for graduation.
Students interested in a career in Pharmacy have the option of completing a four-year degree in any major or completing only two years of study before starting pharmacy school, as long as the required courses are taken. Most students at Canisius College choose the 4 year option majoring in either Chemistry (Health Professions Track), Biochemistry, or Biology. Further information can be found in the catalog sections for each of those departments. A general plan for pre-pharmacy appears below. Specific course requirements vary somewhat from one professional school to another, but there are some common requirements:

**Biology:** One year of general biology with laboratory (BIO 101-102). Some schools also require one year of Anatomy and Physiology with laboratory (BIO 107-108) and Microbiology with laboratory (BIO 307).

**Chemistry:** One year of general chemistry and one year of organic chemistry with laboratories (CHM 111-112, 227-228). Some schools also require Biochemistry (BCH 301).

**Physics:** One to two semesters of introductory physics with laboratory (PHY 201-202 or 223-224).

**English:** One year of college English which stresses composition (FYS 101 and ENG 102).

**Mathematics:** One to two semesters of Calculus (MAT 111 and 112) and 1 semester of Statistics (MAT 141 or PSY 201).

**Humanities and/or Social/Behavioral Sciences:** One to four semesters of psychology, sociology, anthropology, speech communications, U. S. history, theology and/or philosophy.

**Economics:** One semester of micro- or macro-economics.

### Pre-Pharmacy Program

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<th>FALL</th>
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<tr>
<td><strong>Freshman Year</strong></td>
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<td>FYS 101</td>
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<td>3 credits</td>
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<td>BIO 101</td>
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<td>Calculus</td>
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### Sophomore Year

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<th>Course</th>
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<tbody>
<tr>
<td>PHI 101</td>
<td>3</td>
<td>RST 101</td>
<td>3</td>
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<tr>
<td>CHM 227</td>
<td>4</td>
<td>CHM 228</td>
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<tr>
<td>PHY 201</td>
<td>4</td>
<td>PHY 202</td>
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<tr>
<td>Courses in major and/or Core</td>
<td>5-7 credits</td>
<td>Courses in major and/or Core</td>
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### Junior Year

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<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BCH 301</td>
<td>3</td>
<td>ECO 101 or 102</td>
<td>3</td>
</tr>
<tr>
<td>BIO 307</td>
<td>4</td>
<td>Course in major and/or Core</td>
<td>13</td>
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<tr>
<td>Courses in major and/or Core</td>
<td>10 credits</td>
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### Senior Year

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<th>Course</th>
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<tr>
<td>BIO 107</td>
<td>4</td>
<td>BIO 108</td>
<td>4</td>
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<tr>
<td>Courses in major</td>
<td>11 credits</td>
<td>Courses in major</td>
<td>11 credits</td>
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**TOTAL 125-129 CREDITS**

The program is flexible; it represents a model that could easily be modified to meet the requirements of most departments. Once students have decided upon a major, they must design their own curriculum with the guidance and approval of both the chair of that major and a Health Science advisor. The program must meet the requirements of the core curriculum, the particular major chosen and the requirements of the health-professional schools.
The Catholic Studies minor at Canisius College examines the doctrinal, historical, legal, spiritual and cultural traditions of Catholicism. In addition, it includes dialog with people of other faiths and the examination of intellectual disciplines that have been influenced by Catholicism, such as art, history, law, literature, politics, philosophy and the sciences. As a result, this program requires study in several departments of the college and highlights the Catholic tradition upon which the college was founded.

Any person who wishes to know more about the Catholic heritage, to further one's personal development, or to pursue a principle-based career in public service, medicine or law would find this minor relevant. Those with church-related career or academic objectives would also want to complete this program. Future seminarians, lay ministers, teachers especially interested in the Catholic educational system, those preparing for graduate work in theology or religious studies and anyone planning to pursue a career in a Catholic organization such as a social work agency or health care system would be the types of people whom this program would help. The program director will help the student choose appropriate courses or appoint an advisor to do so.

All courses in the Catholic Studies minor except CTH 400 are offered in traditional academic departments and usually meet the criteria established by these departments for field studies or major credit. Most courses in the minor are part of the college's core curriculum and therefore can be taken as a way to fulfill and focus core requirements.

Students who complete this minor will be able to 1) be knowledgeable about some facet of Catholic doctrine or piety and the relevance of a concept that originates from the Catholic philosophical or social traditions; 2) be able to think critically about the Catholic contribution in one area of history or culture; 3) become an effective scholarly researcher and writer about Catholicism and its intellectual heritage.

**Structure of the Catholic Studies Minor**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RST 231 Introduction to Catholic Studies</td>
<td>3</td>
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<tr>
<td>CTH 400 Research in Catholic Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

One course in each of four areas:
- Catholic Theology and Life;
- Catholic Culture: Literature, Art, Music & Science;
- Catholic History & Politics; and
- Catholic Social Thought & Philosophy — but no more than two courses from any one department in these areas.

**TOTAL (6 courses) 18**

**COURSES: 2009-2011**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RST 231 Introduction to Catholic Studies</td>
<td>3</td>
</tr>
<tr>
<td>Major movements and personalities in Catholic theology, history, culture and spirituality. The Catholic worldview and its relation to society. (Field 1) <strong>Prerequisite:</strong> RST 101.</td>
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</tr>
<tr>
<td>CTH 400 Research in Catholic Studies</td>
<td>3</td>
</tr>
<tr>
<td>Capstone course in which a student does independent research and a project on a person or topic of interest within the Catholic Studies minor under the supervision of a faculty advisor. <strong>Prerequisite:</strong> Director's approval.</td>
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</table>

**Internships:** May be done with special readings and reflection as an extra course for 3 or included within a project for CTH 400. **Prerequisite:** Consent of director.

Courses in specialty areas follow. Course descriptions and the semesters when offered will be found in the appropriate departmental listing.

**I. Catholic Theology and Life**

| RST 230 Catholic Belief Today (Field 1)     | 3       |
| RST 350 or HON 327 Christian Concept of God (Field 1) | 3       |
| RST 352 The Church in the Modern World (Field 1) | 3       |
| RST 353 Sacramental Theology (Field 1)      | 3       |
| RST 354 Jesus Christ and Modern Culture (Field 1) | 3       |
| RST 359 Revelation and Faith (Field 1)      | 3       |
| RST 365 Christian Spirituality (Field 1)    | 3       |

**II. Catholic Culture: Literature, Art, Music and Science**

| ENG 233 Medieval Literature (for non-majors) (Field 3) | 3       |
| ENG 303 Medieval Literature                        | 3       |
| ENG 320 Contemporary Catholic Fiction (Field 3)     | 3       |
| ENG 330 The Bible as Literature (Field 3)           | 3       |
| FAH 224 Medieval Art (Field 3)                      | 3       |
| FAH 245 Renaissance Art (Field 3)                   | 3       |
| FAM 216 Medieval & Renaissance Music (Field 3)      | 3       |
| HON 328 Age of Michelangelo                         | 3       |
| RST 314 New Testament in Literature/Art (Field 1)   | 3       |
| RST 343 Religion & the Challenge of Science (Field 1) | 3       |

**III. Catholic History and Politics**

| CLS 308 Pagans & Christians (Field 1)             | 3       |
| HIS 106 The Medieval World (Field 4)              | 3       |
| HIS 131 History of Latin America to 1830 (Field 4) | 3       |
| HIS 306 History of Religion in America (Field 1)  | 3       |
| HIS 316 Reformation                               | 3       |
| HON 319 Religion and Politics: U.S. Roman Catholic Perspectives | 3 |
| HON 356 Jesuit Spirituality and History           | 3       |
| RST 235 Religion and Politics (Field 1)           | 3       |
| RST 325 Early Christianity (Field 1)              | 3       |
| RST 328 The Jesuits: History, Spirituality and Culture (Field 1) | 3 |
| RST 329 Religions in North America to 1865 (Field 1) | 3       |
| RST 330 Religions in North America 1865-present (Field 1) | 3 |

**IV. Catholic Social Thought & Philosophy**

| HON 234 Contemporary Catholic Social Ethics        | 3       |
| HON 355 Religion's Public Role: Catholic Perspectives | 3       |
| PHI 302 Medieval Philosophy                        | 3       |
| PHI 267 Catholic Social Thought (Field 2)          | 3       |
| RST 340 Moral Issues Today (Field 1)               | 3       |
| RST 341 Catholic Social Ethics: Theological Perspectives (Field 1) | 3 |
| RST 345 Bio-Moral Problems (Field 1)               | 3       |

- 340 -
The Canisius All-College Honors Program provides a challenging education for a select group of accomplished and highly motivated students. What is distinctive about the program is that it brings together students from every major to participate in an accelerated and enriched curriculum that offers an intensity, depth, and perspective that cannot usually be achieved in regular courses. More information about the Honors Program can be found at its website: www.canisius.edu/honors.

Honors students are chosen from the top 10 percent of entering freshmen. Selection is based on SAT or ACT scores, high school average and rank in class, and the strength and diversity of the student’s curriculum and extra-curricular activities. Students who complete the Honors curriculum with a GPA of 3.25 in all Canisius courses graduate with special distinction.

The Honors curriculum consists of 12 Honors courses and 2 foreign language courses. It parallels, but is different from, the college’s core curriculum, which all Canisius students are required to complete. Like the core curriculum, the Honors Program seeks to provide breadth and coherence to the student’s education. But Honors offers many advantages that are difficult to find in a conventional educational setting. The Honors Program fosters interdisciplinary study in small classes, encouraging students to make connections between the disciplines and stimulating faculty to present innovative courses, some of which are team-taught. A prime goal of the Honors Program is to move students from a structured learning environment to independent learning, all the while maintaining high academic achievement.

At the conclusion of their studies, Honors students will demonstrate the following competencies:
1. Academic maturity
2. Strong critical thinking
3. Appropriate writing
4. Intellectual honesty

Honors students supplement their classwork with extraordinary co-curricular and extracurricular opportunities, including a fall retreat; architectural tours, luncheons with community leaders; a film series; theatrical, jazz, symphonic and operatic performances in Buffalo and Canada; sports contests; a Christmas party and an annual banquet; and overnight travel to large metropolitan cities. Camaraderie among Honors students is not only promoted by this rich diet of outside activities, but continues in Honors living space in two on-campus residences.

**Honors Curriculum**

(14 courses, including two of the same foreign language)

The Honors curriculum, which has no prerequisites for any course, includes three courses in the first year and four in the second year. In the third and fourth years, students take a total of four seminars. In addition, there is a Senior Thesis on which each Honors student works closely with a faculty mentor. The specific courses may change from year to year. The following list gives the required areas and some of the courses that are scheduled for 2009-2011.

**First Year**

- English (HON 101)
- Western Tradition I (HON 110)
- Western Tradition II (HON 111)

**Second Year**

- History (HON 220, 221, 223, 224, 225, 226, 227)
- Philosophy (HON 211, 216)
- Religious Studies (HON 240, 241, 247, 249)
- Social Science (HON 221, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239)

**Third/Fourth Years**

- Fine Arts (HON 320, 321, 322, 323, 324, 326, 328)
- Literature (HON 370, 371, 372, 373, 374)
- Religious Studies (HON 354, 355, 356, 357, 358, 359)
- Science or Mathematics or Technology (HON 224, 345, 351, 353, 396)

**Fourth Year**

- Senior Thesis (HON 451)
- Senior Seminar (HON 415)

Honors students may receive course credit for (a) qualifying test scores in Advanced Placement or International Baccalaureate, (b) satisfactorily completing courses on college campuses, or (c) satisfactorily completing coursework at foreign universities.

Unless exempted by a qualifying test score, all students in Honors (except Education majors) are required to satisfactorily complete two courses in the same foreign language. Education majors take one course in a foreign language.

**COURSES: 2009-2011**

**HON 101 English Literature**

Various literary genres. Works by writers representing wide variety of places, times, nationalities, philosophies. Student’s writing refined through these readings and composition assignments.

**HON 110 Western Tradition I**

The first of two courses that examine the Western tradition that has been instrumental in shaping the core ideas and values of
American society and the modern world. Presents an integrated approach drawing on the art, history, literature, music, philosophy and religion of the ancient Greeks through the medieval period.

HON 211 Western Tradition II

The second of two courses that examine the Western tradition that has been instrumental in shaping the core ideas and values of American society and the modern world. Presents an integrated approach drawing on the art, history, literature, music, philosophy and religion of the Renaissance through the 20th century.

HON 211 Masters of the Modern Mind: Marx, Nietzsche, Weber and Freud

Careful study of major works by these seminal thinkers and an analysis of their influence on modern thought.

HON 216 Philosophy

Selected topics in philosophical inquiry, such as rationalism, empiricism, epistemology or metaphysics.

HON 220 Problems in Modern European History

Relationship between culture and society in modern Europe.

HON 221 Violence in American History

Explores the violent streak that has always existed in American society. Attention is paid to massacres, riots, lynchings, executions, juvenile delinquency, domestic abuse, serial killings and domestic terrorism, as well as how the media and popular culture have promoted such violence.

HON 223 Revolutions in Latin America

Considers the Mexican and Cuban revolutions and addresses the question of why real revolutions have been rare in Latin America.

HON 224 History of Disease and Medicine in America

Treats life and death issues—literally—from the deadly smallpox brought by Columbus to the bio-terrorism of today. The theory of this course is that the way Americans define and treat disease reflects contemporary historical events and our social and cultural values, as well as the existing science, education and technology.

HON 225 Imperialism & Decolonization

A study of the origins of Western imperialism in the 19th century, the rise of anti-colonial attitudes among subjugated peoples and the collapse of colonial systems after World War II.

HON 226 America’s First Families

This course focuses on five of America’s “First Families”—John & Abigail Adams, Thomas Jefferson, Theodore & Edith Kermit Roosevelt, Franklin & Eleanor Roosevelt, and John & Jackie Kennedy. It explores the political and public roles of these families, each in its own historical context, and examines how their internal dynamics helped shape the ideals of the larger society to which each belonged.

HON 227 Holocaust in Literature, Film, Music and Art

Examines first-person memoirs of the Holocaust and provides a synthetic and comprehensive overview of how the Holocaust has been portrayed in literature, film, art, and music since World War II.

HON 230 Economics of Public Issues

This course seeks to develop rudimentary economic principles and to use them to analyze an array of public policy issues, such as income inequality, environmental pollution, health care, education, and international trade.

HON 231 War & Peace after 9/11

In exploring the nature of world politics and U.S. foreign policy after 9/11, the course focuses on what the United States must do to maintain its traditional reserves of “hard” and “soft” power in an age of globalization and terrorism.

HON 232 Great Trials of the Millennium

Examines some of the great trials of the West to assess the degree to which the quest for justice was achieved.

HON 233 Left, Right and Center: The Political Spectrum in America

After examining the signal events in U.S. history, the course considers the range of political thought in America today.

HON 234 Economics of Sport

Tools used by the economist will be examined and then applied to topics that include player salaries, the effect teams have on a region, the value of team franchises, the need for competitive balance and the role of sports on college campuses.

HON 235 American Schools—A Nation Still at Risk


HON 236 Education and Culture: Russia

The premise of this course is that there is an interlocking relationship between the culture in which education is conducted and the influence of education on that culture. The focus of this course is Russian culture, and students will be exposed to the works of great artists, writers, philosophers, scientists, and religious thinkers.

HON 237 The Individual & Community

Uses the resources of the social sciences to explore our “crisis of community,” that is, the apparent retreat into disengagement and unnatural privatism often associated with the age of television, the internet and “virtual” reality. The course begins with the intellectual traditions of communitarianism, libertarianism, and American exceptionalism, and then considers the consequences of an individualistic society and the role of government in our own time.

HON 238 The American Presidency

A careful examination of the American Presidency and how it has been shaped over time, especially the administration of Barack Obama.

HON 239 American Modernism

A multidisciplinary investigation of the problems and possibilities of American culture from 1900 to September 11, 2001. Employs a rich variety of texts from literature, architecture, art, history, sociology and film to analyze American responses to urbanism, war, economic depression, suburban development and contemporary terrorism.

HON 240 Old Testament: Cultures, Contexts, and Criticism

Explores the texts of the Hebrew Bible and the people who wrote them in light of their cultural and historical setting. To understand these texts, archeological findings and parallel materials from other cultures will be examined.

HON 241 The Western Religious Tradition

Introduction to and survey of the Western political tradition. How scholars compare the phenomena of religion. Survey of belief systems in the Western political tradition.

HON 247 Islam: Religion, History, and Culture

In this course, we will study Islamic scriptures, Muslim cultures, social institutions, religious practices, and Muslim and Western writings about them in order to better understand Islam and Muslims in the U.S. and throughout the world.

HON 249 Magic, Science and Religion

Introduces students to the ways that diverse peoples around the world tap into the realm of the extra-human. Why we fail to perform these operations well.

HON 320 The Nude in Modern Art: Sex, Spectatorship and Difference

The subject of the nude provides a guide into the history of modernist art, from the mid-19th century in France to post-WWII New York.

HON 321 Through a Lens Darkly: Critical Issues in the History of Photography

Considers the long-standing critical issues surrounding the many discursive spaces that photography occupies in our shared culture.

HON 322 Critical Mess: 20th Century Art & Philosophy

This interdisciplinary course introduces major movements and controversies in the European and American art world of the 20th century and relates them to the theoretical and philosophical underpinnings that motivated and affected artistic production.
HON 323 Opera
Introduces students to opera. Students will develop an understanding of the aesthetics of opera by studying its elements, aspects of the operatic voice, the genre's history and examples of the art form in live and recorded performance. No previous musical knowledge or experience is required.

HON 324 Symphony
Introduces students to the symphony. Students will develop an understanding of the symphonic form from the classical period to the present through a study of major composers and their works. No previous musical knowledge or experience is required.

HON 326 Sex & Religion in Baroque Art
Explores the dramatic and passionate art of 17th century Europe, especially the Dutch masters and the deeply spiritual art of the Catholic Counter-Reformation in Italy and Spain. Works of art are examined for their visual beauty and their relationship to the history and society of that period.

HON 328 Age of Michelangelo
A seminar about the art of Michelangelo, Leonardo da Vinci, Raphael and Bramante, and the culture of the Italian High Renaissance period in which they lived.

HON 343 Explorations in the Development of Mathematics
Explores famous problems in mathematics to consider the role of culture in changing motivation, concept, and technique of influential mathematicians.

HON 351 Biotechnology & Society
An examination of recent developments in Biotechnology and how they have shaped contemporary society.

HON 352 Age of Robotics
Introduces students to important and innovative robot creations, as well as explores the future of robotics through fact and fiction. Asks questions about the nature of cognition, and examines non-human intelligence through readings in psychology, computer science, and philosophy of mind. Hands-on experience with robots.

HON 354 Religion & Politics: U.S. Roman Catholic Perspectives
Contemporary approaches to Roman Catholic understanding of religion and politics in the United States, with an eye toward evaluating political and legal issues of importance.

HON 355 Religion's Public Role: A Catholic Perspective
Important contemporary social issues, such as poverty, a living wage, globalization, access to health care, and war & peace, will be presented from a Roman Catholic perspective. Materials from papal encyclicals and contemporary Catholic theologians, especially from the United States, will be used to learn about and evaluate these issues.

HON 356 Jesuit Spirituality & History
Introduction to the life and work of Ignatius of Loyola and the history of the order he founded—the Society of Jesus (the Jesuits).

HON 357 Global Pentecostalism
Through the interdisciplinary lenses of history, theology, anthropology and sociology, this course examines the nature, history and global manifestations of Pentecostalism—“The Third Force in Christianity.”

HON 358 Women & Religion
A cross-cultural look at the roles that women play and the ways that women have been depicted in various religions.

HON 359 Spiritual Autobiography
This course considers the characteristics and patterns of spiritual autobiographies, analyzes these texts within the historical, cultural and religious developments of each author’s time period, and evaluates modern spiritual autobiographies for their connections to the students’ own experiences.

HON 370 Battle of the Books
Contradicting the egalitarian dogmas of our day, this course claims the ideas of great men have great consequences. It looks particularly at the centuries-long quarrel between those who advocated modernity and those who criticized it.

HON 371 Art & Philosophy
Investigates the newer and the older traditions of criticism by the same standard: does a given critical theory account for the practice of writers and artists from Sophocles and Aristotile to Rousseau and Nietzsche.

HON 372 Contemporary Poetry
A study of American poetry from the end of World War II to the present.

HON 373 Biography and Autobiography
In-depth study of biographical and autobiographical texts in a variety of forms and traditions from Plutarch to the present.

HON 374 Nineteenth Century Novel
Probes major authors in the 19th century who use the novel as both a record and a reenactment of individual, cultural and psychic memory, and explicitly defend such fictional self-reflection as the means to forge a sane individual and societal future.

HON 376 Technology and Literature
Modern science and technology and how they are envisioned in representative literary works.

HON 381 Senior Thesis
Independent research on topic selected by student, culminating in research paper. Student works closely with their faculty advisors.

HON 415 Senior Seminar
A capstone seminar which uses interdisciplinary work to offer points of synthesis in the student’s four-year Honors program experience. Recent topics include the Philosophy of Human Rights, Wandering in Literature & Film, Great Books & Films in Modern America, the City in Literature and America’s Greatest Scandals.
The Urban Leadership Learning Community (ULLC) enables the best and brightest students from Buffalo’s inner city to enroll in a unique educational opportunity at Canisius. The ULLC offers students a four-year program to help create the next generation of leaders in Buffalo and Western New York from a population that historically has been denied positions of influence or power in Buffalo. The program provides its students with partial and full scholarships to cover tuition, room and board and fees. Moreover, through its many activities throughout a student’s undergraduate career, the program fosters academic excellence, extra-curricular involvement and service to others, all through collaboration. ULLC students consider each other “family” who cooperate rather than compete with each other.

The ULLC enrolled its first class in Fall 2000 and experiences an impressive 79 percent four-year graduation rate. 68 ULLC students have graduated since 2004, and currently there are 45 ULLC students pursuing undergraduate degrees in a wide-range of majors. Graduates have gone on to graduate programs and professions in education, medicine, business and social work or are employed in a variety of occupations.

ULLC students take a number of “Team Learning” courses, non-lecture courses in a range of disciplines. The TL courses are writing intensive and emphasize a number of “levels of engagement” with course materials to promote “mastery” through teamwork. The leadership activities that ULLC students participate in are many and varied and include: a Leadership Workshop Series, four workshops that investigate and apply leadership concepts to the demands of careers and good citizenship; a Summer Leadership Training Program for incoming freshmen, two weeks of intensive preparation for the demands of college life; the ULLC Council, class representatives to plan and promote program activities, such as the Annual Banquet, the Senior Reception, the Parent Reception and the Program Newsletter. All ULLC students participate in one or more internships either related or ancillary to their career plans. In addition, ULLC students travel to the Shakespeare Festival in Stratford, Ontario, annually; they hold offices in a wide range of campus activities; many of them study a semester abroad; and many participate in the Winter Service Week and Alternate Spring Break opportunities offered by the Office of Campus Ministry.

For further information, please contact
Dr. Kenneth M. Sroka (srokak@canisius.edu, 716-888-2661) or
Dr. Roger Stephenson (stephene@canisius.edu, 716-888-2655).
The Canisius College Center for Professional Development offers personalized, professional training and consulting programs that can be delivered in house at your facility or off-site at our Amherst Campus. These programs, including leadership and management development programs, technical courses such as lean/six sigma, human resource training and computer and soft skill training, taught by faculty and qualified professionals, provide participants the critical skills necessary to effectively lead their organizations.

We design, develop and conduct training programs for the general public as well as specific businesses, associations and not-for-profit organizations.

Public Workshops, Training Programs and Video Teleconferences
Workshops and continuing education programs are open to the general public and are offered during the day, evening and on the weekends. These programs are offered at both the Main Street and Amherst campuses. Programs are also offered as live video conferences throughout New York State and as asynchronous web based programs. Public workshops are non-credit-bearing.

Public Workshops Topics
Leadership Development Certificate Program for Women, Lean Manufacturing — Greenbelt, Blackbelt and Six Sigma, Fundamentals of Fundraising, Society for Human Resource Management (SHRM) Learning System Course (both classroom and online programs are available), Developing and Implementing a Strategic Plan, Paralegal Certificate course, Insurance courses, Management Development Program, ASTD Certified Professional in Learning and Performance (CPLP™) and Project Management are examples of the programs offered. New programs are added each year. The next Western New York Leadership Conference is scheduled for Fall 2010. Please contact Joan Kwiatkowski, program coordinator, regarding any public workshops at 888-8490 or Email kwiatkof@canisius.edu.

Customized Training and Consulting
Business Programs provide knowledge and skills in core competencies:
- Accounting & Financial
- Communications
- Human Resources
- Lean
- Information Technology
- Management & Leadership
- Marketing
- Six Sigma

Customized programs are designed to specifically meet the needs of the organization.

How The Center Works With You
The Center for Professional Development specializes in customized training programs, tailored to meet the specific needs of your employees.

1. Senior staff will meet with the president, HR manager or other executive to complete a needs assessment and develop expected outcomes. There is no obligation on the part of the organization.
2. The Center for Professional Development will prepare a proposal outlining a training program covering content and expected outcomes.
3. Senior staff will meet with you and/or your key staff to design your unique workshop and materials.
4. Programs can be conducted at your site, at the Canisius Amherst Conference Center or at the Canisius Main Street campus.
5. The program will be evaluated for outcomes with a written summary provided to your organization.

To discuss how our training opportunities can benefit your organization, contact Pamela Zablonski, Training and Consulting Manager at 716-888-8493 or Email to zablonsp@canisius.edu. To discuss not-for-profit consulting opportunities, contact Maureen Millane, associate dean, at 716-888-8490 or Email millane@canisius.edu.

CANISIUS AMHERST CONFERENCE CENTER
300 Corporate Parkway, Suite 130, Amherst NY 14226 | 716-888-8490
www.canisius.edu/amherst

Canisius Amherst Conference Center provides organizations
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The Canisius Amherst Conference Center, located at 300 Corporate Parkway (off Maple Road near Sweet Home), is an 8,000 square foot class A conference facility with five conference rooms, boardroom and 24-seat computer lab. The rooms, all with Internet access, are available for rent to the general public on a 1/2 day and full day basis. Free ample parking. Catering service is available.

To discuss your conferencing needs, call Amy Diati, conference manager, at 716-888-8490 or email diatia@canisius.edu.

WOMEN’S BUSINESS CENTER
Demerly Hall  |  2365 Main Street  |  Buffalo NY
14214-2326  |  716-888-8280

Maureen Millane, Associate Dean; Melinda Rath Sanderson, Executive Director; Maggie Burkard, Program Coordinator; Amy Rath, WIN Coordinator; Laurie Zabel, Director of Business Development.

www.canisius.edu/wbc
Email: wbcinfo@canisius.edu

The Women’s Business Center, located in Demerly Hall at the corner of Main and Leroy, was established to support the success of entrepreneurs and small business owners with a focus on, but not limited to, women in Erie County and surrounding areas including Buffalo, Rochester, Jamestown and Niagara Falls. The WBC provides services in the five areas of small business development: training, counseling, coaching, networking and The Forum Series. Networking serves as a major component of all programs to ensure that every participant has made appropriate connections with business and community resources.

Training includes academic and non-academic programs. Some topics include New Venture Creation, Going Global and Sales & Marketing Essentials. Additional business workshops include Access to Capital, Certification and Finance and Operations for Small Business.

Small Business Counseling is available every Wednesday from 12 – 1pm for both start-up and existing businesses. Counseling is provided by SBDC advisors, SCORE representatives and WBC Staff. The center also has computers available to participants with access to all college-subscribed databases.

The Business Coaching program is designed to help existing business owners take their businesses to the next level. The program participants are matched with a coach based on knowledge, skills and abilities and receive one-on-one mentoring, along with bi-monthly small business training. Selection for the program is based on the candidate’s application and interview.

Women in Networking (WIN) is designed for women business owners to network, pass leads, support, motivate and inspire each other. This peer-to-peer mentoring model includes non-competitive businesses. There are 5 WIN groups in the Western New York region, and each WIN group meets once a month. Additional WIN Member benefits includes the online directory listing at www.canisius.edu/wbc, creative problem-solving, brainstorming, strategic planning and organizational development.

The Forum Series is a confidential peer group program which specifically serves women entrepreneurs and partners who own or have an equity position in an existing business, a professional practice or family business. Forum meetings take place monthly, and each forum will be guided by an experienced facilitator who is specially trained to bring out the most creative thinking and strategic problem solving within each session.

WBC Online Directory - Affiliate Membership offers clients their own branded influence networking webpage through Canisius College. The Canisius College WBC “Affiliate Membership” also gives clients access to a professional on-line directory presence, VIP invitation, first notification and priority for all programs and events.

Scholarships may be available for those who qualify.

The WBC at Canisius College acts as a bridge between academia and the entrepreneurial business community. All programs are available to undergraduate entrepreneurship majors at a reduced fee or at no charge. Other annual events include a fall conference or forum and networking events.

The United States Small Business Administration (SBA) partially funds the Women’s Business Center.
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Visitors are cordially welcome at the college. The administrative offices are open Monday through Friday, 8:30 a.m. to 5:00 p.m., 4:30 p.m. in the summer (except for legal holidays). Members of the staff are available for interviews at other times by appointments arranged in advance.

The main telephone number for the college is 716-883-7000 or you can visit us on the Web at www.canisius.edu.