Welcome to the College of Staten Island, a senior college of The City University of New York, offering courses of study that lead to associates, bachelors and masters degrees and, in collaboration with the Graduate School and University Center/CUNY, doctoral degrees. CSI affords students opportunities for success at every level, from our Honors Program for students who enter CSI with a high school average above ninety percent, to those who need extra support through peer counseling. Our mission is your success.

The College of Staten Island is committed to academic excellence and opportunity. The administration, the faculty, the staff, and I are all keenly aware of the role we play in our students’ lives, and the role you play in the period of time you are here. I realize that a student’s first responsibility is to get an education—to work, to leave us—and that my responsibility as president is to facilitate that process and to work with the faculty and staff to provide you an excellent education.

CSI offers outstanding programs in the sciences, health sciences, and technology. We have a state-of-the-art campus, offering students access to computer labs, scientific facilities, and modern communications. CSI can bring you an array of perspectives on the physical world with our technology; whether you want to explore the vastness of the heavens in the new observatory or view the microcosmic world in well equipped laboratories, the possibilities for exploration are limitless.

The College of Staten Island also speaks to the heart—and the heart aroused—with a wide range of liberal arts courses. We build upon many fine programs in the humanities and social sciences to bring our students to a new understanding of themselves. Recognizing too, that material well-being is important, the College strives to give you the skills and learning necessary to enhance your earning potential—to make your life better financially, even while fostering in our College community a sense of responsibility to the society in which we live.

Committed to pluralism and diversity, the College of Staten Island offers programs to further mutual understanding. A well-educated society is our hope for the future, for it is a society that can read skeptically and recognize sham, a society that can embrace differences in others, and a society that recognizes its responsibility to live collectively in an awareness of mutual dependence, both in the United States and abroad.

A life of the mind must be nourished by a healthy body and an appreciation for the arts. In addition to our excellent academic programs, we have a magnificent Sports and Recreation Center, which I hope you will use; the Center for the Arts is a spectacular facility offering a variety of programs to serve your cultural needs.

My vision for the College of Staten Island is of an institution that has an unwavering commitment to providing a quality education; a college continually evolving to meet the changing needs of our students; and a senior college that nourishes a culture of civility, respect, and tolerance. The education you will receive at CSI will prepare you for the future—give you the tools to cope and prevail; to change and enjoy. We prepare our students for life.

Eleanor Roosevelt said, “When you cease to make a contribution, you begin to die.” The College of Staten Island, through its faculty, staff, students, alumni, and friends is very much alive and contributing to the pluralistic society that is today and will carry us through the years ahead. Look at the offerings and information in this catalog as the beginning of a journey into your future—one filled with learning, diversity, excitement, and promise.

I wish you a very successful, joyful career at the College of Staten Island.

Marlene Springer
President
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## Fall 2001

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<th>Day(s)</th>
<th>Events</th>
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<tbody>
<tr>
<td>Aug 27</td>
<td>Mon</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Sep 1-2</td>
<td>Sat-Sun</td>
<td>No classes</td>
</tr>
<tr>
<td>Sep 3</td>
<td>Mon</td>
<td>College closed</td>
</tr>
<tr>
<td>Sep 17-19</td>
<td>Mon-Wed</td>
<td>No classes</td>
</tr>
<tr>
<td>Sep 26-27</td>
<td>Wed-Thurs</td>
<td>No classes</td>
</tr>
<tr>
<td>Oct 1</td>
<td>Mon</td>
<td>Last day to file for January 2002 graduation</td>
</tr>
<tr>
<td>Oct 8</td>
<td>Mon</td>
<td>College closed</td>
</tr>
<tr>
<td>Oct 9</td>
<td>Tues</td>
<td>Classes follow Mon schedule</td>
</tr>
<tr>
<td>Oct 24</td>
<td>Wed</td>
<td>Mid-term grades due</td>
</tr>
<tr>
<td>Nov 22-25</td>
<td>Thurs-Fri</td>
<td>College closed</td>
</tr>
<tr>
<td>Dec 14</td>
<td>Fri</td>
<td>Reading Day</td>
</tr>
<tr>
<td>Dec 16</td>
<td>Sun</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Dec 17-23</td>
<td>Mon-Sun</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>Dec 24</td>
<td>Mon</td>
<td>College closed, Winter Recess begins</td>
</tr>
<tr>
<td>Dec 25</td>
<td>Tues</td>
<td>College closed</td>
</tr>
<tr>
<td>Dec 31</td>
<td>Mon</td>
<td>College closed</td>
</tr>
<tr>
<td>Jan 1</td>
<td>Tues</td>
<td>College closed</td>
</tr>
<tr>
<td>Jan 15</td>
<td>Tues</td>
<td>College closed</td>
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## Spring 2002

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Jan 29</td>
<td>Tues</td>
<td>First day of classes</td>
</tr>
<tr>
<td>Feb 12</td>
<td>Tues</td>
<td>College closed</td>
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<tr>
<td>Feb 18</td>
<td>Mon</td>
<td>College closed</td>
</tr>
<tr>
<td>Feb 20</td>
<td>Wed</td>
<td>Class follow Mon schedule</td>
</tr>
<tr>
<td>Mar 1</td>
<td>Fri</td>
<td>Last day to file for June 2002 graduation</td>
</tr>
<tr>
<td>Mar 21</td>
<td>Thurs</td>
<td>Mid-term grades due</td>
</tr>
<tr>
<td>Mar 21-31</td>
<td>Mon-Sun</td>
<td>No classes, Spring recess</td>
</tr>
<tr>
<td>May 1</td>
<td>Wed</td>
<td>Last day to file for August 2002 graduation</td>
</tr>
<tr>
<td>May 15</td>
<td>Wed</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>May 16-17</td>
<td>Thurs-Fri</td>
<td>Reading days</td>
</tr>
<tr>
<td>May 18-24</td>
<td>Sun-Fri</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>May 27</td>
<td>Mon</td>
<td>College closed</td>
</tr>
<tr>
<td>June 6</td>
<td>Thurs</td>
<td>Commencement</td>
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T
he College of Staten Island is a four-year, senior college of The City University of New York that offers exceptional opportunities to all its students. Programs in the liberal arts and sciences and professional studies lead to bachelor's and associate's degrees. The master's degree is awarded in thirteen professional and liberal arts and sciences fields of study. The College participates in doctoral programs of the City University Graduate School and University Center in Biology, Chemistry, Computer Science, Psychology, and Physics.

A broad general education is assured through requirements that allow students to explore a range of fields of knowledge and acquire educational breadth in mathematics, the sciences, social sciences, arts, and humanities. Requirements for the bachelor's degree provide a disciplined and cumulative program of study in a major field of inquiry. Enrollment in baccalaureate programs requires freshmen admission standards consonant with those of CUNY senior colleges. Enrollment in associate's degree programs is open to all students with a high school diploma or the equivalent.

The Honors College offers a challenging curriculum and an enriched extra-curricular environment. It is designed for a limited number of students who have demonstrated a well-developed commitment to learning and who intend to continue their undergraduate education in graduate and/or professional schools. Students who have earned, or expect to earn, a high school academic diploma with an average of at least 90 are eligible to apply for admission to the Honors College.

The academic year follows a two-semester pattern, with a separate summer session. Classes are scheduled day, evening, and weekends. The College has an extensive Continuing Education program and offers off-campus courses with and without credit.

CSI was founded in 1976 through the union of two existing colleges—Staten Island Community College and Richmond College. Staten Island Community College, the first community college in the University, opened in 1955. Richmond College, an upper-division college that offered undergraduate and graduate degrees to students who had successfully completed the first two years of college study elsewhere, was founded in 1965. The merger of these two colleges resulted in the only public four-year institution of higher learning on Staten Island.

CUNY is governed by the Board of Trustees composed of 17 members, ten of whom are appointed by the Governor of New York State, and five by the Mayor of New York City. The chairperson of the University Faculty Senate serves ex officio, without vote, the chairperson of the University Student Senate serves ex officio, with vote. The individual colleges of CUNY have considerable latitude in governing their own affairs through various bodies representing faculty, students, and administrators. The Board of Trustees decides overall University policy and approves major new collegiate plans and programs.

CSI is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, 215-662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Accreditation.

The Computer Science program is accredited by the Computer Science Accreditation Commission (CSAC) of the Computing Sciences Accreditation Board (CSAB), a specialized accrediting body recognized by the Council for Higher Education Accreditation (CHEA). The Engineering Science program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET) and the Electrical and Civil Engineering Technology programs are accredited by the Technology Accreditation Commission of ABET. The Medical Technology program is accredited by the National Accrediting Agency for Clinical laboratory Sciences. The baccalaureate and associate degree programs in Nursing are accredited by the National League for Nursing Accreditation Commission, 61 Broadway, New York, NY 10006, 212- 363-5555. The Physician Assistant program is accredited by the Commission on Accreditation of Allied Health Education. The Physical Therapy program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Copies of these accreditation documents as well as the respective accreditation documents for the various academic disciplines are available for review in the College library.

Completed in 1994, the 204-acre campus of CSI/CUNY is the largest site for a college in New York City. Set in a park-like landscape, the campus is centrally located on Staten Island. Mature trees and woodlands, flowering trees and ornamental plantings, fields and outdoor athletic facilities, the great lawn, sculpture, and seating areas create a rural oasis in an urban setting.

Fourteen renovated neo-Georgian buildings serve as classrooms, laboratories, and offices. The academic buildings house 300 classrooms, laboratories and instructional spaces, study lounges, department and program offices, and faculty offices.

North and South Academic Quadrangles are connected by the Alumni Walk, with the Library and Campus Center as focal points.
The Center for the Arts is located midway between the Quadrangles at the fountain plaza. The Sports and Recreation Center and the athletic fields are located near the main entrance to the campus.

Sixteen works of art, a permanent collection of works either commissioned or purchased through the Art Acquisitions Program of the Dormitory Authority of the State of New York, are installed throughout the campus. The artists and their free-standing sculptures and reliefs are: Vincenzo Amato, Body of Hector/Glaucus, Miriam Bloom, Shoolidor, Fritz Bultman, Garden at Nightfall (extended loan), Chryssa, Untitled, Lucille Friedland, Big Stride (gift of the artist), Red Grooms, Marathon, Sarah Haviland, Staten Island Arch, Jon Isherwood, Borromini's Task, Zero Higashida, Maquette for a Small Universe, Valerie Jaudon, Untitled, Niki Ketchman, Red Inside, Win Knowlton, Ellipse, Mark Mennin, Torak, Don Porcaro, Moon Marker, Hans Van de Bovenkamp, Stele in the Wind, Daniel Wurtzel, Ark.

Astrophysical Observatory: The 16-foot dome astrophysical observatory was completed in 1996. In addition to serving students in astronomy courses, the facility is used for faculty and student research projects, environment monitoring projects, and community programs.

Biological Sciences/Chemical Sciences Building: An ultra-modern facility, the building contains classrooms, laboratories, faculty offices, research facilities for faculty and students, the Center for Environmental Science, and the Center for Developmental Neuroscience and Developmental Disabilities.

Campus Center: The Campus Center provides facilities for a complete student life including offices for student organizations; food services; health services, a study lounge; bookstore; and the studios of WSIA-FM, the student operated radio station.

Center for the Arts: Entered from the Great Lawn and from the Alumni Walk, the Center houses two academic wings for programs in the arts as well as superb public spaces: the Clara and Arleigh B. Williamson Theater, a 900-seat concert hall, a recital hall, an experimental theater, lecture halls, an art gallery, and a small conference center.

Library: Designed with inviting reading rooms, open shelves, and study carrels, its research and study facilities are enhanced by computer data-based operations available to all students. The Library Media Services make accessible pedagogical multimedia materials to distant classrooms and laboratories by means of the campus fiber-optic network.

Sports and Recreation Center: This 77,000 square-foot multi-purpose facility and surrounding athletic fields serve the intercollegiate and intramural sports and recreation programs for students. On a membership basis, faculty, staff, alumni, and the general public also have access to the facilities.

The College of Staten Island, one of the eleven senior colleges of The City University of New York, is, like the University, committed to both access and excellence. This double commitment is especially critical given CSI’s status as the only public college on Staten Island and the one instance in which CUNY is represented in a borough by one unit alone. The College offers the associate degree in selected areas, a comprehensive range of baccalaureate programs, selected master’s programs, and, in cooperation with the CUNY Graduate School, doctoral programs.

The College of Staten Island’s remarkable campus, with its superb laboratories, studios, and classrooms, serves the pivotal endeavors of teaching and research that promote discovery and dissemination of knowledge while developing human minds and spirits.

The College’s faculty, administration, and staff practice their commitment to educational excellence as they instill in students preparing to enter their chosen careers an enduring love of learning, a sensitivity to pluralism and diversity, a recognition of their responsibility to work for the common good, and an informed respect for the interdependence of all people.

1. To view the quality and success of the College’s educational mission not by the qualifications of entering students alone but by the qualifications of those we educate and those who receive degrees.
2. To foster and enhance faculty commitment to effective teaching and learning.
3. To encourage and support faculty scholarship, research, publication, creative work, and the involvement of students as partners in research and creative activities.
4. To extend the benefits of the College to the larger community by making educational, intellectual, and cultural activities available to all, and by supporting research programs that serve the people of Staten Island, its agencies and institutions.
5. To offer rigorous general education and degree programs in the liberal arts and sciences and in a range of professional disciplines, with particular attention to the following academic priorities: teacher education, the health sciences, international education, communications and media technologies, and applied mathematics.
6. To advance the effective use of technology in all aspects of the College’s operations, so as to strengthen support services, teaching, and research.
7. To provide, with efficiency and sensitivity, the broad range of academic and administrative services required by a commuting student population.

Mission of the College of Staten Island

Goals
8. To further, in all aspects of the College’s activities, an appreciation of the pluralism of American society and an awareness of the importance of global education and international understanding.

9. To cultivate civility and dialogue between and among all members of the College’s communities.

10. To build academic and research programs through collaborative initiatives with the community colleges, senior colleges, and the Graduate School of The City University of New York, and with national and international counterparts.

11. To forge professional relationships with educators at all levels, and to work collectively to seek new and effective approaches to K-12 education.

12. To strengthen student interest in life-long learning, their purposeful participation in the issues that face our society, and their lively commitment to their own physical and spiritual well-being.
Office of Recruitment and Admissions
Director: Ms. Mary Beth Reilly
North Administration Building (2A), room 404
718-982-2010 and 2259
Visit our website: www.csi.cuny.edu
Acting Registrar: Mr. Alan Hoffner
North Administration building (2A), room 110

Procedures for admission as a first-year or transfer student from another college with advanced standing differ and students are encouraged to call the Office of Recruitment and Admissions with any questions. Students are invited to visit the campus for a tour, scheduled by appointment Monday through Friday. Tours are also available on special visiting days and open houses for high school and transfer students are scheduled each semester. Students may also request to visit particular departments.

Admissions
Matriculated and Non-Degree (Non-Matriculated) Students:
Students are classified into two groups according to their enrollment status: matriculated and non-degree. Matriculated students are those who have met the College admission requirements and are registered and accepted in a program of study leading to a degree. Non-degree (non-matriculated) students are those who are enrolled for credit courses but who are not officially registered in a degree program. Credits earned as a non-matriculated student may later be transferred to a degree program.

Students may enroll as candidates for the bachelor's degree or the associate's degree. Bachelor's degree programs are designed to be completed in four years and associate's degree programs in two years. The programs for the junior and senior years of study, upper-division programs, are structured for smooth articulation for students graduating with associate's degrees and students transferring from community colleges. The College has also developed auxiliary and pre-entry programs with support systems for those students returning to the classroom after an interruption in their education and for the not-so-recent high school graduate.

Application for Admission
Admission to all undergraduate colleges in the City University is centralized. High school seniors attending New York City public schools will receive individualized application forms from their guidance offices. Other interested applicants may obtain an application by calling or visiting the Office of Recruitment and Admissions. Applicants should list one of the code numbers representing curricula of CSI as their first choice on the CUNY Freshman Application.

Transfer students who wish to apply for matriculated undergraduate status must file a Transfer Application. This can be obtained from the Office of Recruitment and Admissions. Credits earned at another institution and transferred to CSI are evaluated and certified by the Office of Recruitment and Admissions. (See section on Filing an Application.)

Freshmen
1. An applicant for admission to a bachelor's degree program must pass the three CUNY Basic Skills Tests, unless he/she qualifies for exemption based on a satisfactory performance on the SAT or ACT standardized tests or Regents Examinations.
2. Admission to a bachelor's degree program is determined by an applicant's score on the College's admissions index. The index is based on the applicant's high school courses and academic average and the combined verbal and mathematics SAT scores. An applicant whose score reaches or exceeds the College's minimum index number will be admitted to a bachelor's degree program. A faculty admissions committee may consider the admission of applicants whose scores approach the College's minimum index number.

Students admitted directly into four-year bachelor's degree programs are eligible for the Baccalaureate Program and may enroll in designated sections of general education courses. Applicants who are not admitted to a bachelor's degree program may enter an associate's degree program at the College.

Transfer Students
Students are encouraged to continue in bachelor's degree programs from associate's degree programs at CSI, and they may also transfer from other colleges and universities into bachelor's degree programs. Students must have passed the CUNY Basic Skills Tests in mathematics, writing, and reading prior to enrolling in a bachelor's degree program or if they are transferring from another college in the City University.

Final degree credit for transfer work depends on grades earned and College and departmental requirements. With some exceptions, a course with a grade of C or higher may be transferred. In the case of transfers from CUNY colleges, D grades are usually acceptable. Transfer credits carry a grade of Pass (P) on the CSI transcript. Transfer students from other CUNY colleges are encouraged to visit CUNY's online Transfer Information and Program Planning System (CUNY TIPPS) at www.tipps.cuny.edu for information about transfer credits.

Based on University policy, all liberal arts and sciences courses taken in one City University college are considered transferable, with
full credit, to each college of the City University, and full credit will be granted for these courses in all department and programs and recognized for the fulfillment of degree requirements. See section on General Education Requirements for details on transfer of courses in this category.

Students must earn a minimum of 30 credits at the College and, to qualify for a bachelor’s degree, at least half of the credits required for the major.

Work completed at other colleges may be used to fulfill general education and other requirements. The Office of Recruitment and Admissions will evaluate each student’s transcript. Every effort will be made to apply the coursework previously completed by transfer students to the general education requirements at CSI.

In many programs, particularly in professional and scientific disciplines, students are required to complete specific courses before being considered for admission to these programs. Generally, these courses are taken during the first two years of study as necessary preparation for the advanced work required. Students seeking admission to these programs may have to spend additional time completing pre-major courses.

### Academic Requirements for Admission to the Honors College

**Honors College**

First-time students may apply for admission to the Honors College. Applicants are expected to have an academic diploma with an average of at least 90. The admissions committee for the Honors College considers the following documents submitted by applicants: high school transcript; scores on Regents Examinations; scores on the SAT, ACT, and achievement tests; Advanced Placement courses; extracurricular activities; evidence of talents and interests; letters of recommendation; and personal essay. Personal interviews are also required. Admission is limited and competitive. For information or an application, please call 718-982-2222, or write the Honors College, CSI/CUNY, South Administration building (1A), room 206, 2800 Victory Blvd., Staten Island, NY, 10314.

### Academic Requirement for Admission to Associate's Degree Program (Two Year)

**Freshmen**

Applications for matriculation as a first-time student will be accepted from persons who have never attended any institution of higher education (with the exception of those students who have taken college courses while in high school) and who have either:

1. graduated from an accredited high school, or
2. earned an equivalency diploma (GED), or
3. are currently attending high school and will receive a diploma prior to enrollment.

A diploma from an accredited high school is required for admission to the College. Scores on either the New York State Equivalency Diploma Examination or the General Education Development Examination are accepted as substitutes for the high school diploma provided that the student attains a score of 35 or higher on each of the five tests, with a total score of 225 or higher.

### Transfer Students

Applicants who have attended another college must file a transfer application. Applications for matriculation will be accepted from transfer students who have an official transcript verifying attendance at another college. As a general rule, the College requires a grade point average equivalent to a C for transfer as a matriculated student.

The Office of Recruitment and Admissions will evaluate credits of transfer students for advanced standing. Final degree credit for transfer work depends on grades earned and College and departmental requirements. With some exceptions, a course with a grade of C or higher may be transferred. In the case of transfers from CUNY colleges, D grades are usually acceptable. Transfer credits carry a grade of Pass (P) on the CSI transcript. However, all students must complete a minimum of 30 credits at the College, including at least one-half the credits required for the core, in order to earn an associate’s degree.

### College Preparatory Initiative (CPI)

The College Preparatory Initiative (CPI), a collaborative effort between The City University of New York and the New York City Board of Education, was designed to strengthen the academic preparation of high school students. This requirement for all students entering CUNY colleges is 16 units. (See section on Degree Requirements for complete details.)

High school students should consult with guidance counselors to ascertain what courses meet the CPI requirements. GED students will receive units in English and mathematics based on their test scores. Students who have not completed the CPI requirements prior to enrolling in the University will be required to demonstrate skills and knowledge in the discipline areas in which they lack preparation. In most cases, this will be accomplished by taking college courses in designated academic areas. No student will be eligible for graduation from CSI until all CPI requirements are satisfied.

### Advance Placement

The College will grant placement and credits, to a maximum of 30 credits, on the basis of special examinations taken prior to admission. These include approved high school advanced placement examinations, Regents Examinations, Educational Testing Service examinations, Departmental Challenge examinations, New York State College Proficiency examinations, and the College Level Examination Program (CLEP). Further information is available from the Office of Recruitment and Admissions.
The Center for International Service at CSI facilitates admission and registration for international students. The Center is located in the North Administration Building (2A), room 206, telephone 718-982-2100.

The veterans advisement service is supervised by the Registrar. Assistance is available in interpreting regulations and policies of the Veterans Administration, and educational and financial counseling is offered. The office of the veterans advisre is in the North Administration Building (2A), room 110.

The SEEK program (Search for Education, Elevation, and Knowledge) is a New York State program for residents who are in need of both academic and financial assistance in order to obtain a college education. Information about the program and the application procedures may be obtained from the SEEK Office, South Administration Building (1A), room 112, telephone 781-982-2413.

Undergraduate students who do not register for a semester and then decide to return in a subsequent semester must file an application for readmission with the Registrar. Readmission is routine unless the student is applying for a different curriculum, which may entail a review of qualifications. To qualify for priority registration, applications for readmission must be filed by the deadline specified in the calendar in the Schedule of Classes.

**Permit Students**

Permit students from within the City University must submit a valid CUNY permit from their home college to the CSI Office of Recruitment and Admissions prior to registration. Permit students from outside the City University must submit documentation from their home schools that they have permission to enroll at CSI.

**Senior Citizens**

Senior citizens, 60 years and older, may be permitted to enroll in undergraduate courses as non-matriculated students, on a space available basis, without tuition and fees, provided they do so on an audit basis. Senior citizens enrolling as auditors are charged an administrative fee and a Consolidated Service Fee for the semester as indicated in the Fee Schedule.

A senior citizen may enroll in courses for credit but cannot be enrolled in the same semester for courses on both an audit basis (no tuition) and a credit or degree basis (tuition charged).

**Freshman Applications**

Students enrolled as seniors in New York City public schools and some private schools receive personalized application forms from their high school. These should be completed and returned to the high school along with the $40 application fee. The high school will send the applications to the University Application Processing Center (UAPC).

All other students may obtain a regular application form by mail or in person from CSI, UAPC, or the CUNY Office of Admissions Services (OAS). The application, a school transcript, and a non-refundable application fee of $40 must be mailed to the UAPC.

University Application Processing Center (UAPC)
Box 350136
Brooklyn, New York 11235-001
CUNY Office of Admission Services (OAS)
1114 Avenue of the Americas, 15th Floor
New York, New York 10036

Applicants may apply online at www.applyto.uapc.cuny.edu. CSI has continuous admissions; however, applications should be filed early.

**Transfer Applications**

The College of Staten Island accepts transfer applications from students who have attended an accredited postsecondary institution. Students who are currently attending or who have previously attended a college of The City University of New York should apply through the registrar’s office of the college attended, using the standard transfer application form of the CUNY Office of Admission Services.

Students must meet the standards of proficiency in the basic skills areas of reading, writing, and mathematics established by the University to transfer to a bachelor’s degree program.

Transfer students from colleges outside CUNY can obtain an application from the CSI Office of Recruitment and Admissions. This form and transcripts of all previous college work should be sent to UAPC (address above). The fee for transfer applications is $50. Please see also the statement on the CUNY Proficiency Examination in the section, Academic Policies and Procedures.

**Non-Degree (Non-Matriculated) Applications**

Non-matriculated (non-degree) students receive applications at the time of registration.
Orientation
An orientation program for all new students provides an introduction to the College, its programs, and student life. Orientation sessions are scheduled at the beginning of each semester, before or during the time periods devoted to testing, advisement, and registration.

Testing
CUNY Basic Skills Tests:
All new students are required to take the CUNY Basic Skills Tests in order to become degree (matriculated) students. The scores are used for advisement and placement into college courses. For information see the section on CUNY Basic Skills Tests in the chapter Academic Policies and Procedures. Entering students are scheduled for the Skills Tests. The tests are administered several times during the year by the Testing Office, South Administration Building (1A), room 104.

Placement Examinations
Special examinations are given to determine placement at the appropriate course level in several departments, such as Biology and Modern Languages. See the department chairperson or the Testing Office for further information.

Advisement
Upon acceptance into the College of Staten Island, each student is assigned an academic adviser. During the first semester and prior to registration for the second semester it is expected that students will meet with their assigned advisers to discuss educational and vocational goals and to develop long range academic plans. Thereafter, students meet with their advisers at least once each semester to discuss the following semester's academic program and to have their advisement registration form signed, and to discuss progress toward graduation. Once each semester students are sent an updated Academic Advisement Plan which details progress toward the degree. Students should review their plan and report any problem immediately to the Academic Advisement Office, South Administration Building (1A), room 101.

Registration
Students must register each semester. Registration and appointment materials are sent by the Office of the Registrar prior to registration to all current, readmitted, and newly admitted students. An open registration period is scheduled at the beginning of each semester for students who miss their registration appointments or who are returning to CSI too late for an appointment to be scheduled.

Students scheduled for registration using the College's telephone registration process may register and perform program changes following the procedures accompanying the registration appointment form. Instructions for telephone registration are also published in the Schedule of Classes.

A detailed registration schedule and class listings are published each semester in the Schedule of Classes. Registration is not complete until all financial obligations have been satisfied. The Registrar's Office is in the North Administration Building (2A), room 110.

Immunization Requirement
New York State Public Health Law requires immunization against measles, mumps, and rubella for some students. All students born on or after January 1, 1957, who are enrolling for six or more equated credits must have proof of immunization on file at the College Health Center, Campus Center, room 112, one week prior to registration. Transfer students must request that their health records be transferred to CSI. Information and the immunization forms are available at the Health Center and the Registrar's Office, and in the Schedule of Classes.

I.D. Cards
Each student will be provided with a photo identification card. Each semester the I.D. cards are validated upon completion of registration. Validated I.D. cards must be carried by a student on campus at all times. Duplicate I.D. cards are available at a cost of $5.00.

Student Enrollment, Retention, and Graduation
The College has an enrollment of just over 10,000 undergraduate students, full time and part time. About 2,000 new undergraduates enter each Fall as first-time freshmen or as transfer students. For the College's heterogeneous student population, progress toward a degree depends upon a number of factors: preparation for college, goals, and other commitments. These and other factors affect such student outcomes as retention, graduation, and post-collegiate success.

Approximately 61% of all first-time freshmen who entered associate and baccalaureate degree programs in Fall 1999 re-enrolled in Fall 2000. Members of this cohort who entered as full-time students were retained at a rate of 65%, while members of this cohort who entered as part-time students were retained at a rate of 48%. For transfer students who entered in Fall 1999, the retention rate was 62%.

The College awarded 1300 undergraduate degrees in the 1999-2000 academic year. More than 75% of these were bachelor's degrees, 24% were associate's degrees, and 0.5% were one-year certificates.
Tuition, Fees, and Expenses
Bursar: Dr. Cornell C. Frank
North Administration Building (2A), room 105
All tuition and fees listed in this Catalog and in any registration material issued by the College are subject to change without prior notice by action of the Board of Trustees.

Payment
A student is not registered until all financial obligations to the College have been satisfied. Before registration can be completed, students must have paid in full unless the student: (a) has been awarded financial aid sufficient to cover tuition and fees, (b) is enrolled in the University Payment Plan, (c) is eligible for a tuition waiver, (d) is in a special registration status, e.g., veteran. The registration dates are printed in the Schedule of Classes for each semester. During the registration process, a student’s bill is prepared with a payment/validation due date indicated. Students registering late will be given a bill at the time of registration and are expected to pay their bill within three or fewer days. If a student’s bill is not paid and a student is not covered by one of the above categories the registration will be canceled. A student who has not fulfilled all financial obligations to the College will be barred from obtaining any transcripts or from registering for the next semester.

Residency for Tuition Billing Purposes
A student may qualify for the resident tuition rate if he/she continuously maintained his/her principal place of abode in the State of New York for a period of at least twelve consecutive months immediately preceding the first day of classes. If a student has attended a high school in New York City or State for the two semesters immediately prior to the first day of classes, the student qualifies for the resident rate.

Determination of Last Semester Free
All resident senior or community college first-time freshmen who enroll in any City University of New York (CUNY) undergraduate degree program on or after June 1, 1992 shall be entitled to a waiver of 100 percent of all resident tuition charges for the final semester of study culminating in a baccalaureate degree, on a one-time basis only, regardless of original CUNY college or program of enrollment, subject to verification of completion of baccalaureate degree requirements at any CUNY college. Further information can be obtained from the Registrar's Office.

For purposes of determining eligibility for the last semester free, a first-time freshman shall be defined as any student entering a CUNY college on or after June 1, 1992 as either a degree student or a non-degree student without prior registration or credit accumulated as a college student from any accredited postsecondary institution.

For full-time students, the last semester is any semester of full-time attendance (12 or more credits) that will result in a student receiving a baccalaureate degree. If, for whatever reason, the student does not actually fulfill the degree requirements during the semester in which the last semester free benefit is conferred, the student will be required to pay the rates in effect at the time for all subsequent semesters or sessions of study.

For part-time students, the last semester begins at the point at which a student is 15 credits away from degree completion and ends after the next 15 credits for which a student registers. If, for any reason (failure, switched major, withdrawals, etc.) those next 15 credits do not actually result in a baccalaureate degree and the student must, or wishes to, take additional credits, then the normal charges per credit would apply from the 16th credit forward. Courses dropped after the first day of classes continue to count as part of the last semester free benefit awarded for the semester.

Definition of Residency Within a CUNY Baccalaureate Program for the Last Semester Free
Students who begin as first-time freshmen in any CUNY college on or after June 1, 1992, may earn non-CUNY credits towards the baccalaureate degree and still maintain eligibility for the last semester free if more than 50 percent of credits toward the degree are earned at CUNY and courses taken at non-CUNY colleges have the recorded approval of their departmental or academic adviser or college registrar prior to such attendance. Such advance recorded approval shall be necessary to protect eligibility for the last semester free and must be on file in the Registrar's Office.

Students who leave a CUNY college and enroll in any number of credits elsewhere without having received specific approval from their “home” college will be considered as advanced standing (non-CUNY transfer) students upon their readmission to CUNY and will have forfeited their eligibility for the last semester free.

Definition of New York State Residency for Eligibility of Last Semester Free
Documented New York State residency at the time of enrollment as a first-time freshman on or after June 1, 1992 shall qualify a student for the last semester free at the resident tuition rate regardless of subsequent changes in residency. Students who enter CUNY claiming New York State residency status for the last semester free, but not having documented such residency by the time of initial course registration as first-
time freshmen, shall have one year from their initial registration to do so.

Student Status

Full Time and Part Time
Undergraduate students are considered part time if they are registered for 11 equated credits or less. A student is considered full time if registered for 12 or more equated credits in a semester. To be eligible for TAP, six must be degree credits (three in case of first-time freshmen). See the requirements for TAP in the section on Financial Aid.

Part-time undergraduate matriculated students are charged the tuition rate on a per equated credit basis (1-11 equated credits).

Undergraduate full-time students are charged tuition on a per semester basis.

Summer session and non-degree students are billed on a per equated credit basis regardless of the number of equated credits for which they register. There are no maximum tuition limits for summer session or non-degree students. Non-degree students (as of June 1, 1992) pay a higher rate than matriculated students.

Senior Citizens
Individuals satisfying the New York City/State residency requirements and who are 60 years of age or older (as of the first day of the semester or session) are permitted to enroll in undergraduate courses on a space available basis. Proof of age is required by the College; the following forms of proof of age are acceptable, Medicare card, driver’s license, or birth certificate.

Administrative fee: A non-refundable administrative fee of $65 per semester or session is charged senior citizens who are enrolling on an audit basis. The application fee and student activity fee are not charged. Senior citizens as students are responsible for the consolidated service fee and any other fees they might incur.

Undergraduate courses: For senior citizens enrolled in undergraduate courses, tuition will not be charged provided credit is not given for the course(s). Senior citizens are enrolled on an audit basis and will receive an “AUD” grade. Senior citizens who wish to enroll for credit must pay the applicable tuition and fees, including the application fee and the student activity fee. Senior citizens cannot be registered on both an audit basis (no tuition) and a credits basis (tuition charged) during the same semester.

Graduate courses: Senior citizens are not permitted to register free of tuition or fee for graduate level courses. Senior citizens may register for graduate courses on a space available basis and are charged the graduate tuition rate regardless. No exception is made for matriculated or non-matriculated status. The student activity fee and application fee must also be paid.

Tuition

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<tr>
<th>Tuition</th>
<th>Resident</th>
<th>Non-Resident</th>
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<tbody>
<tr>
<td>UNDERGRADUATE, enrolled prior to June 1, 1992</td>
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<tr>
<td>full-time matriculated</td>
<td>$1,475/semester</td>
<td>$3,275/semester</td>
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<tr>
<td>part-time matriculated</td>
<td>$125/equated credit</td>
<td>$275/equated credit</td>
</tr>
<tr>
<td>UNDERGRADUATE, enrolled as first-time freshman or non-CUNY transfer student for semesters or sessions beginning on or after June 1, 1992</td>
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<td></td>
</tr>
<tr>
<td>full-time matriculated</td>
<td>$1,600/semester</td>
<td>$3,400/semester</td>
</tr>
<tr>
<td>part-time matriculated</td>
<td>$135/equated credit</td>
<td>$285/equated credit</td>
</tr>
<tr>
<td>UNDERGRADUATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>all non-degree</td>
<td>$160/equated credit</td>
<td>$325/equated credit</td>
</tr>
</tbody>
</table>

Tuition bills may be paid with a credit card, Master card or Visa.

The last date for submitting documentation for a residency status change for tuition billing purposes is the last day of final examinations (see the academic calendar in the Schedule of Classes).

All resident senior or community college first-time freshmen who enroll in any CUNY undergraduate degree program on or after June 1, 1992 shall be entitled to a waiver of 100 percent of all resident tuition charges for the final semester of study culminating in a baccalaureate degree, on a one-time basis only, regardless of original CUNY college or program of enrollment, subject to verification of completion of baccalaureate degree requirements at any CUNY college.

Continuing Student
A continuing student is one who registers on or after June 1, 1992 and whose previous college of attendance, either as a degree or non-degree student, was a CUNY institution. This student must have attended CUNY before June 1, 1992. Such previous attendance must have occurred within the six year period immediately prior to the start of the semester. This continuing student pays the lower undergraduate tuition rate and is not entitled to the last semester free. If any non-CUNY college was attended for purposes of degree study as the most recent previous institution of attendance, then said student is not a continuing student at CUNY upon return, but a non-CUNY advanced standing transfer student. This transfer student pays the higher undergraduate tuition rate and is not entitled to the last semester free.
Matriculated Status
If a student’s matriculation status changes on or after the first day of classes, the lower matriculation tuition charge will not be effective until the next semester’s registration. No refunds will be issued for the semester in which the reclassification occurs. Students who have satisfied their baccalaureate degree requirements (graduated) and wish to take additional credits beyond the degree, will automatically be coded non-degree and charged the higher non-degree rate per credit, unless they have filed for a second undergraduate degree in the Registrar’s Office by the last business day before the first day of classes.

The Student Activity Fee is billed to all students at the following rate:

full-time students: $74.00 part-time students: $48.00

Fees include a $4.00 contribution to the New York Public Interest Research Group (refundable through NYPIRG office) and an 85 cent University Student Government fee. Non-instructional fees are non-refundable.

Miscellaneous Fees and Charges
- Consolidated Service Fee $5 all students pay this fee
- Application Fees $40 payable upon filing application for admission or at the time of initial registration at the College
- Readmission $10 payable upon registration after an absence from the College of one or more semesters
- Program Change $10
- Senior Citizens $65
- Cooperating Teacher Waiver $25
- Late Registration $15 charged after the specified registration period or bill due date
- CUNY Accelerated Study Fee for credits in excess of 18:
  - $100 less than or equal to 2 credits
  - $230 greater than 2 but less than or equal to 4 credits
  - $460 greater than 4 but less than or equal to 6 credits
  - $690 greater than 6 credits
- Reinstatement $15
- Transcript $4 each (except for copies going to other CUNY colleges for which there is no charge)
- Payment Reprocessing $15 for bad checks
- Duplicate Bill $5
- Duplicate Diploma $15
- Duplicate I.D. Card $5
- Special Examination $15 for the first, $5 each additional

Special materials charges of $10 or more are required in some courses. Details may be found in each semester’s Schedule of Classes. Materials charges are not refundable.

Overdue books:
- General circulation: 10 cents per day, including days on which the Library is closed, to a maximum of the current price of the item.
- Reserve items: $1.20 per overdue hour to a maximum of the current price of the item.
- Damaged book: Borrower must pay any overdue fines up to and including the date the item is reported as being damaged, plus an amount to be determined by the nature and extent of the damage, not to exceed the current price of the item, plus a processing charge of $10.
- Lost item: Borrower must pay a $10 processing charge in addition to the current price of the item.

When courses are canceled by the College, a full refund of appropriate tuition and fees will be made. In cases of student initiated withdrawals, the date on which the withdrawal application is received by the Registrar, not the last date of attendance, is considered the official date of withdrawal for the purpose of computing refunds. Withdrawal from a course before the beginning of classes allows a 100 percent refund of tuition and the CUNY accelerated study fee; and withdrawal from the College in order to register at another unit of City University during the same semester allows a 100 percent refund of tuition and CUNY accelerated study fee. Information about refunds for withdrawal under other circumstances is shown in the Academic Calendar printed in the Schedule of Classes each semester. Class non-
attendance, informing the instructor of withdrawal, or altering the bill to indicate intention to drop a course DOES NOT constitute an official withdrawal. If a portion of the tuition has been paid with federal financial aid funds, that portion of any tuition refund is returned to the appropriate financial aid program.

Students should be aware that withdrawal or failure to complete a course affects their financial aid obligations. Questions about financial aid obligations should be referred to the Office of Financial Aid.

**Return of Title IV Funds**

Title IV (Pell, SEOG, Direct and Perkins Loans) recipients who withdraw from all courses, officially or unofficially are subject to a calculation to determine earned Federal Financial Aid. This calculation may require a payment toward tuition and fees which previously were determined to have been satisfied.

**Medical Withdrawals**

Medical withdrawals, which must include documentation from a physician, should be addressed to the College Health Center. Medical withdrawals are subject to the regular College refund policy. See the *Schedule of Classes* for more details.
Office of Student Financial Aid
North Administration building 2A, room 104
Director, Mr. H. Sherman Whipkey
Telephone  (718) 982-2030

Application Procedures and Deadlines

Forms:
Two application forms for financial aid are required by the College of Staten Island of The City University of New York (CUNY):
Free Application for Federal Student Aid (FAFSA) is the application for federal aid;
TAP/APTS Application and the CUNY Supplement is the application for New York State Aid.

The FAFSA requires a college identification number: CSI is 002698 and it must be included on the form.
The FAFSA form is available at the Office of Student Financial Aid, from wall racks outside the service desk at room 104, North Administration Building (2A), by calling 718-982-2030, or you may apply over the web. The web address is www.fafsa.ed.gov.
The TAP/APTS Application and CUNY Supplement is mailed to the applicant by the University after receiving a student's FAFSA data.

When to File:
Students planning to attend the Summer or Fall terms should file by the Priority Deadline of March 31. Students planning to attend in the Spring semester, whether first time students or returning after one or more semesters absence, should file by the Priority Deadline of November 30. Filing after the Priority Deadline makes it less likely that financial aid will be in place by the date your tuition bill is due. This means that you may have to pay your tuition bill from your own resources before finding out your financial aid eligibility.

Student Service Center:
CSI provides a Student Service Center where prospective and current students may schedule an appointment to use our computers to file the FAFSA on the web. Filing the FAFSA on the web is easy, faster, and more accurate than a paper application. A trained technician is available in the Student Service Center to assist you. To make an appointment, call 718-982-2601. The Student Service Center is located in the North Administration building 2A, room 407.

New York State Aid:
The TAP/APTS Application and CUNY Supplement is sent to each applicant after the data from their FAFSA Application is received by the University. Review this application, correct any inaccurate data, provide additional information where questions are unanswered, obtain all applicable signatures, and return in the envelope provided.

Transfer Students:
Students transferring to CSI for a Spring term should call the Federal Student Aid Information Center at 1-800-433-3243 and have a duplicate Student Aid Report (SAR) sent to CSI. The CSI Federal Code is 002698. Also, request a TAP Change Form from your current college or CSI, complete it, and send it to the address provided. The CSI NYHESC code is 1417. Complete these documents and submit them by the Priority Deadline of November 30.
Transfer students for the Summer or Fall terms -- follow the instructions and meet the deadline, March 31, as indicated above.

Workshops:
To address any problems and answer your questions about this process, workshops are held every Tuesday at 11:00 AM, Wednesday at 3:00 PM and Thursday at 5:30 PM in the North Administration building 2A, room 406.

Eligibility:
To be eligible for any of the federal financial aid programs, a student must:
1. be a U.S. citizen, or
2. be an eligible non-citizen, and
3. be matriculated, and
4. take at least six equated credits a semester, unless otherwise noted below; and
5. not be in default of a Federal Loan (Perkins, Stafford or Direct Loan) or have completed the required process to obtain “Renewed Eligibility” and
6. not owe a refund on any Title IV Grant, and
7. be making satisfactory progress towards a degree, and
8. provide proof of high school graduation or its equivalent.
Students who withdraw from all classes, either officially or unofficially, will have their records reviewed to determine if the federal aid disbursed to them exceeds the amount they were entitled to receive. Overpayments will be billed to the student. Failure to repay these overpayments within 30 days will result in the College withholding all academic privileges, and the overpayment will be reported to the National Student Loan Data System (NSLDS). This system will withhold all future federal aid until the overpayment is resolved.

Changes in tax laws now require that students report some grants, scholarships, and fellowships to the Internal Revenue Service as taxable income. Recipients of funds from these sources are strongly urged to consult their tax advisors or the Internal Revenue Service to determine the impact on their personal tax circumstances. In addition, all students are urged to maintain accurate records of financial aid received and receipts for expenses related to attendance at college, such as books, supplies, tuition and fees.

In order to make satisfactory academic progress toward a degree, for purposes of receipt of Title IV Federal Student Assistance, an undergraduate student must achieve at least the GPA required for probationary status at the institution: after two years of enrollment at the college, have at least a C average, or its equivalent, or academic standing consistent with the requirements for graduation; and have accumulated credits toward the degree according to the following standards:

1. Attempted credits are equal to or greater than two-thirds of the cumulative credits attempted at the institution;
2. Attempted credits are not more than 150% of the credits normally required for completion of the degree. If the standards in 1. and 2. are not met, eligibility may be retained by meeting conditional standards;
3. For baccalaureate programs, accumulated credits are equal to or greater than \( \frac{.75 \text{ cumulative credits attempted}}{18} \) or for associate degree programs, accumulated credits equal to or greater than \( \frac{.875 \text{ credits attempted}}{21} \).

Students will be measured against the satisfactory progress standard at the end of the Spring term to determine eligibility for receipt of Title IV student financial assistance for the upcoming year.

**Appeals/Probation:** Undergraduate students who fall below the conditional standard may appeal through the Registrar's Office to retain eligibility for receipt of Title IV federal student assistance. There is no limit to the number of times a student may appeal.

**Transfer Students:** Transfer students shall have their status initialized for purposes of satisfactory academic progress measurement by using the number of credits determined to be acceptable toward the degree as both the cumulative attempted credits and cumulative earned credits.

**Readmitted Students:** Upon readmission after at least a one year period of non-enrollment, the student will receive assistance for the terms in the academic year of readmission and will be evaluated for future eligibility at the end of the Spring term against the appropriate standard for the degree program in which the student is enrolled. If a student is readmitted after less than one year of non-enrollment, the academic record will be evaluated for satisfactory academic progress under these standards as the record stood at the end of the last term of attendance.

**Federal錄 Grant Program:** For eligible students, the grant will vary depending on whether the student is less than half-time, half-time, three-quarter time, or full-time. A student must be an undergraduate who has not already earned a bachelor's degree. A student receives half of the Federal Pell Grant in the Fall semester and half in the Spring semester. College seniors who will graduate at the end of the Fall semester are eligible to have their first disbursement of a Federal Pell Grant in the Summer and the last disbursement in the Fall, provided that the student notifies the Financial Aid Office in writing so the proper arrangements can be made. Students who received only one semester of Federal Pell Grant for a particular academic year (Fall-Spring period) may have the last disbursement made to them for the Summer term following the academic period defined above. The request must be made in writing by the last working day in May.

**Federal Supplemental Educational Opportunity Grant Program:** Grants are targeted to Federal Pell Grant recipients. Students who already have a bachelor's degree are ineligible.

**Federal Work-Study Program:** This program provides on- and off-campus employment opportunities for needy students. At the time this catalogue was written, on-campus wage rates were $6.00 per hour for undergraduate and $8.00 per hour for graduate students. Work schedules are developed around a student's class schedule and the average work schedule consists of ten hours per week. A student pursuing a second undergraduate degree is not precluded from the Federal Work-Study Program.

**Federal Perkins Loan Program:** This is a loan program and funds received under this program MUST be repaid. All students receiving a Federal Perkins Loan must attend a Federal Perkins pre-loan conference and take and pass the CUNY Default Reduction Test before the first disbursement of the loan proceeds each year. No Federal Perkins loans will be disbursed to students who do not comply. Students are required to disclose their driver's license number when applying for a Federal Perkins Loan and must provide, in writing, changes of address to the Office of Student Financial Assistance within ten days of the change. Federal Perkins Loan borrowers must report
to the Office of Student Financial Aid and request an Exit Interview eight weeks prior to graduation, if they plan to transfer to another institution, leave the college for any reason, or continue their education as a less than half-time student (less than six equated credits). Students should be aware that federal regulations require the University to report the disbursement/default of a Federal Perkins Loan to credit bureaus. Deferments and cancellations are available on these loans in certain circumstances and are discussed in detail at the Exit Interview. Federal Perkins Loans are awarded to students by the University. If a student defaults on a loan, all future college services will be withheld.

Federal Direct Loan: The elements listed below are common to all the Federal Direct Loan programs unless otherwise noted:
1. The applications may be obtained from the Financial Aid Office or at a Federal Direct Pre-loan session, for first time borrowers.
2. Promissory Notes must be completed, signed, and returned to the processor before any loan funds are credited to your tuition bill or disbursed to you.
3. These are loans and must be repaid.
4. For the first loan, a pre-loan interview is required, this can be done on the web. The address is http://ed.gov/offices/OPE/DirectLoan/ or you may attend one of our workshops.
5. Prior to graduation, transferring to another college, leaving this College for any reason or taking fewer than six equated credits a term, you must request an Exit Interview.
6. You must immediately notify the Financial Aid Office and the Federal Direct Loan Servicer if you change your address.
7. If the College is notified that you have defaulted on your loan, all College services will be withheld.

Federal Direct Subsidized Loans: FAFSA data must be received before a Federal Direct Loan can be processed. Undergraduate students who:
1. have not completed the freshman year may borrow $2,625 annually, not to exceed need (independent students may borrow up to an additional $4,000 in unsubsidized funds);
2. are in their sophomore year may borrow $3,500 annually, not to exceed need (independent students may borrow up to an additional $4,000 in unsubsidized funds);
3. are in their junior or senior year may borrow $5,500 annually, not to exceed need (independent students may borrow up to an additional $5,000 in unsubsidized funds);
4. the aggregate undergraduate loan limit is $23,000.

Federal Direct Unsubsidized Loans: A student applicant must establish his/her eligibility or ineligibility for the Federal Direct Subsidized Loan before applying for the Federal Direct Unsubsidized Loan. A student may borrow an Unsubsidized Loan, using the same schedule listed under Federal Direct Subsidized Loans, the amount he/she was ineligible to receive as a Federal Direct Subsidized Loan. Example – a student borrower who has not completed his/her first year and has been determined to be eligible for $1,500 under the Federal Direct Subsidized Loan may borrow the remaining $1,125 from the Federal Direct Unsubsidized Loan if the college budget permits. The difference between these programs is that no interest is due on the Federal Direct Subsidized Loan while the student remains in an eligible status. The student pays the interest on the Federal Direct Unsubsidized Loan from the day the loan is disbursed. The student may either pay the interest while in school or capitalize the interest, adding it to the principal each month.

The maximum yearly amount a student can borrow for Federal Direct Subsidized and Direct Unsubsidized Stafford Loan is:

<table>
<thead>
<tr>
<th>Year</th>
<th>Dependent Student</th>
<th>Independent Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year undergraduate</td>
<td>$2,625</td>
<td>$6,625</td>
</tr>
<tr>
<td>2nd year undergraduate</td>
<td>3,500</td>
<td>7,500</td>
</tr>
<tr>
<td>3rd &amp; 4th year undergraduate</td>
<td>5,500</td>
<td>10,500</td>
</tr>
</tbody>
</table>

Federal Direct Plus Loans: Parents of dependent students can borrow Federal Direct PLUS Loans to pay for their children’s education. To apply, the students’ parents must complete a separate application available at the Office of Student Financial Aid. Before receiving any loan funds, parents will receive promissory notes that must be completed, endorsed, and returned to the processor. The College will verify that the student for whom the parent is borrowing the money meets all applicable loan requirements. Parents are not required to attend a pre-loan or Exit Interview.

Federal Aid To Native Americans: For information regarding this program, interested students should contact the Office of Student Financial Aid.

The State of New York offers a number of grant programs that provide assistance to eligible students. To apply, complete the Free Application for Federal Student Aid (FAFSA), which is available at the Office of Student Financial Aid. In addition, you must complete the TAP/APTS Application and CUNY Supplement, which will be mailed to you once the FAFSA data has been received by the University. The criteria listed...
Before Being Certified For This Payment

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<th>4th</th>
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<tbody>
<tr>
<td>To Meet Program Pursuit Standards</td>
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</tbody>
</table>
A student must have completed this percentage of 12 equated credits if full-time, or this percentage of entire course load if part-time. | 0   | 50% | 50% | 75% | 75% | 100%| 100%| 100%| 100%| 100% |

To Meet Academic Progress Guidelines

A student must have accrued at least this many credits:

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<th>9th</th>
<th>10th</th>
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<tbody>
<tr>
<td>With at least this grade point average</td>
<td>0</td>
<td>0</td>
<td>1.00</td>
<td>1.20</td>
<td>2.00</td>
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<td>2.00</td>
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<td>2.00</td>
</tr>
</tbody>
</table>

*The TAP “C” average regulation requires that a student must have a “C” average (2.00) prior to receiving their 5th TAP semester. Transfer students who have received two or more years of TAP are eligible for TAP for their initial term at CSI but must meet the “C” average requirement thereafter. Students not meeting the “C” average requirement may seek a waiver through the Registrar’s Office. This waiver may be granted more than once and is different from the single waiver for TAP Progress and Pursuit.*
below are common to all of State Aid programs listed unless otherwise noted. A student should:

1. be a New York State resident for the year preceding the award, and
2. be a U.S. citizen or permanent resident alien or paroled refugee, and
3. be a matriculated student, and
4. meet the TAP Progress and Pursuit guidelines, and
5. not be in default on a Federal Loan or if in default, have completed the required process to obtain “Renewed Eligibility,” and
6. be economically eligible based on current New York State criteria.

**Tuition Assistance Program (TAP):** This program is designed to provide tuition grants for full-time students. These grants are awarded by the New York State Higher Education Services Corporation. Students must meet the TAP Progress and Pursuit guidelines prior to the start of each term. These guidelines are also published in the Schedule of Classes each semester.

If a student does not meet either the Progress or Pursuit standard(s), he/she loses his/her TAP eligibility. The Registrar will notify a student if he/she fails to meet these standards and outline how he/she may apply for a waiver. The Committee on Course and Standing reviews all appeals. Only one waiver may be issued during a student’s undergraduate years.

A student may use the following reasons when applying for a waiver: illness, illness in immediate family, emotional problem, employment problem; military, incarceration, other government involvement; incorrect choice of major led to poor grades; generally acceptable record with one poor semester; other.

TAP will not pay for a student to repeat a course to get a better passing grade unless the College requires that the course be repeated. Students who take several remedial courses which carry no credits must make sure that they also take at least three degree credits for their first TAP and six degree credits for all other TAP awards. See the TAP/APTS Progress/Pursuit Chart to determine the number of degree credits you must have accumulated before TAP/APTS award can be credited to your tuition bill.

**Aid for Part-Time Study (APTS):** Undergraduate students enrolled for at least six but not more than 11 equated credits are considered for this award at CUNY. Notification is first provided on your semester bill as a credit against your tuition charge. The award is determined each semester and may vary from semester to semester, based on usage throughout the entire University. This award uses up a portion of a student’s TAP eligibility.

**Part-Time TAP:** A Part-Time TAP pilot program for CUNY has been established effective 2000-2001 to 2002-2003. For this program, a part-time student is defined as one who:

1. is enrolled as a first time freshman during the 1998-99 academic year or thereafter at CUNY, and
2. has earned at least 24 credits at CUNY by the time of the award, and
3. has a cumulative grade point average of at least 2.00, and
4. is enrolled for at least 6 but less than 12 credits per semester.

Awards will be calculated as a percentage of the full-time award for which the student would be eligible if enrolled full time.

**Vietnam Veteran Tuition Awards:** Vietnam Veterans Tuition Awards provide up to $500 per semester (full-time attendance) or $250 per semester (part-time attendance) to Vietnam veterans enrolled in an undergraduate program at a degree-granting institution in New York State.

Eligibility:

1. residency in New York State on April 20, 1984, or at the time of entry into service and resumption of residency by September 1, 1987;
2. service in the U.S. Armed Forces in Indochina between January 1, 1963 and May 7, 1975;
3. discharge from the U.S. Armed Forces under other than dishonorable conditions;
4. enrolled in an approved undergraduate program in a degree-granting institution in New York State;
5. files an application for TAP and PELL.

If a TAP award is also received, the combined awards can be no greater than tuition. Where the combined awards exceed tuition, the TAP award will be reduced accordingly.

**Search for Education, Elevation and Knowledge (SEEK):** Students wishing to enter the SEEK program must meet family income and academic guidelines. When filling out the application for admission, the student should indicate a desire to enter the SEEK program. Applicants will be contacted by the College’s SEEK Office and invited to a SEEK financial aid workshop where the SEEK program will be explained in detail. At this workshop, applicants will be guided through the financial aid applications and asked to supply required documentation. Financial aid reserved for students in the SEEK program is in the form of grants for stipends, to purchase books; and to pay
the student activity fee. To be eligible for the SEEK financial aid, you must apply for PELL using the Free Application for Federal Student Aid form (FAFSA) and TAP using the TAP/APTS Application and CUNY Supplement.

**Other New York State Programs:** Regents Nursing Scholarship, Regents Award for Children of Deceased or Disabled Veterans, State Aid to Native Americans. Information on these programs is available from the New York State Higher Education Services Corporation, 99 Washington Avenue, Albany, New York 12255.
The scholarship program at the College of Staten Island recognizes academic excellence and college or community service. In addition to scholarships offered directly by the College, the CSI Foundation, and departments and associations of the College, memorial scholarships have been endowed through the generosity of many individuals and organizations who value higher education. Scholarships support, in varying ways, the education of the men and women of our community.

Eligibility: General Standards
Scholarship awards generally require a minimum grade point average of 3.5. College and/or community service is also generally required. Financial need is required only when indicated. Scholarships are awarded to students enrolled for 12 or more credits at all levels of study - first-year students, sophomores, juniors, seniors. Some scholarships are also available for graduate students.

Requirements:
Registered for at least 12 credits (matriculated).
Academic excellence (G.P.A. 3.5 or above).
School and/or community service.
Incoming students: high school average of 85% or above.

Relationship to Financial Aid
In most instances, scholarship awards do not affect TAP awards. New York State TAP regulations require that tuition-based scholarships be used as a resource in determining eligibility for a TAP award. Because most of the awards offered by CSI are not designated as tuition scholarships, they need not be reported to TAP and do not affect TAP awards. Only awards specifically designated as tuition awards affect eligibility for TAP. Students who wish additional information on the relationship between these awards and financial aid should be in touch with the Office of Student Financial Assistance.

How to Apply
Scholarship applicants must be current students at the College of Staten Island or must have applied for admission. Application forms and information about scholarships are available from the Office of the Vice President for Student Affairs and from department and student services offices. In the high schools, application forms are available from the College Adviser.

Notification to Recipients
Applicants will be notified by the Scholarship Committee in May of the year of application. An awards presentation ceremony is held early in the Fall semester following notification. The ceremony brings together award recipients with donors who have made the awards possible.

Other Awards
Study Abroad: Scholarships and awards for study abroad are available through the Center for International Service. CSI students are also eligible for Study/Travel Opportunities for CUNY Students grants, a CUNY program promoting short term (summer or January intersession) study abroad, and for scholarships offered by the College Consortium for International Studies. Information is available from the Center for International Service.

Graduate Students: assistance is available in the form of financial aid and assistantships to selected students in master's degree programs: Adult Health Nursing, Biology, Cinema Studies, Computer Science, Education, English, Environmental Science, History, Liberal Studies, Physical Therapy. Graduate fellowships and assistantships are available to qualified students enrolled in doctoral programs offered in conjunction with the Graduate School. See the department chairperson or the graduate program coordinator for further information.

Commencement Awards: awards and prizes have been established by the faculty to recognize the exceptional achievements of graduating students. Information on commencement awards is available from the Office of the Vice President for Student Affairs and from department chairpersons.
Dvisions and Departments
Interrelationships between fields of knowledge are emphasized by grouping academic departments together within the larger categories of humanities and social sciences or science and technology. The Division of Humanities and Social Sciences includes the following departments: Business; Education; English, Speech, and World Literature; History; Media Culture; Modern Languages; Performing and Creative Arts; Political Science, Economics, Philosophy; Psychology; Sociology, Anthropology, and Social Work. The Division of Science and Technology includes the following departments: Biology, Chemistry, Computer Science, Engineering Science and Physics, Mathematics, and Nursing.

Offices of the division deans are located in the South Administration Building (1A): Dean David Podell, Division of Humanities and Social Sciences, and Dean José Torres, Division of Science and Technology. Offices of department chairpersons and faculty are located in department buildings.

Department of Biology
Biological Sciences/Chemical Sciences Building - South Academic Quadrangle
Jacqueline LeBlanc, Chairperson and Professor

The department offers the bachelor's degree in Biology; Biology with an option in Bioinformatics, and in Physician Assistant; a combined bachelor of science/master of science degree in Physical Therapy; a master of science degree in Biology; and the associate's degree in Medical Laboratory Technology. The department participates in the joint program for the bachelor's degree in Biochemistry and a minor in Biochemistry, and in the interdisciplinary program leading to the bachelor's degree in Medical Technology. A Medical Assistant one-year certificate program is offered by the department. The department participates in the University's doctoral program in Biology (subprogram in Neuroscience). The Medical Laboratory Technology program is accredited by the National Accreditation Agency for the Clinical Laboratory Sciences; the Medical Technology program is accredited by the Committee on Allied Health Education Accreditation; the Physician Assistant program is accredited by the Commission on Accreditation of Allied Health Education; and the Physical Therapy program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

The B.S./M.S. program in Physical Therapy is coordinated by Professor Jeffrey Rothman. The M.S. program in Biology is coordinated by Assistant Professor Richard Veit. Associate Professor Charles Kramer serves as co-chair of the advisory committee for pre-medicine students.

Department of Business
Business Building - North Academic Quadrangle
Laura S. Nowak, Chairperson and Professor

The department offers the bachelor of science degree in Accounting and in Business with concentrations in Finance, International Business, Management, and Marketing; and the bachelor of science degree in Information Systems in collaboration with the Department of Computer Science. In cooperation with the Economics faculty, a Business Concentration is offered within the bachelor's degree program in Economics. The B.S. degree program in accounting prepares students for careers in managerial accounting or advanced study toward the CPA examination. The CPA track is New York State accredited, permitting graduates carte blanche entry to the examination. The associate's degree is offered with options in Accounting, Finance, Information Systems, International Business, Management, and Marketing. Graduates with an A.A.S. degree may enter the job market directly or continue to study toward the bachelor's degree, and should consult an adviser and plan their programs accordingly.

Department of Chemistry
Biological Sciences/Chemical Sciences building - South Academic Quadrangle
John Olsen, Chairperson and Associate Professor
Distinguished Professor: Fred R. Naidor.


The department offers the bachelor's degree in Chemistry and participates in the joint program leading to the bachelor's degree in Biochemistry. Minors are offered in Chemistry and Biochemistry. The department also participates in the interdisciplinary program leading
Computer Science/Engineering Science Building - North Academic Quadrangle
Emile Chi, Chairperson and Associate Professor

The department offers programs leading to the bachelor's and master's degrees in Computer Science. The bachelor's degree in Computer Science/Mathematics is offered jointly with the Department of Mathematics; the bachelor's degree in Information Systems is offered jointly with the Department of Business; and the department participates in the University doctoral program. Baccalaureate students majoring in other disciplines may also minor in Computer Science. The department offers an associate's degree program in Computer Technology that provides sound career preparation as well as a solid foundation for continued study in the field. Faculty in the department participate with the Interdisciplinary Coordinating Committee for the associate in applied science degree programs in Civil and Electrical Engineering Technology. The bachelor's degree program is accredited by the Computer Science Accreditation Commission (CSAC) of the Computing Sciences Accreditation Board, Inc. Associate Professor Miriam Tausner is coordinator of the master's degree program.

Education Building - South Academic Quadrangle
Theodora Polito, Chairperson and Associate Professor

The department provides initial preparation and graduate programs for teaching at the preschool level and in elementary and secondary schools; graduate programs in Elementary Education, Secondary Education, Special Education, and Education Supervision and Administration; and in-service education. Programs in the department meet the Competency Based Teacher Education guidelines of the New York State Department of Education.

Graduate program associate professors are Associate Professor Jed Luchow for the master's degree program in Elementary Education, Associate Professor Eileen Donoghue for the master's degree program in Secondary Education; Associate Professor Effie Simmonds for the master's degree program in Special Education, and Professors David Seeley and Assistant Professor Susan Sullivan for the Sixth-Year Certificate Program in Education Supervision and Administration.

Engineering Science/Computer Science Building - North Academic Quadrangle
Alfred M. Levine, Chairperson and Professor

The department offers programs leading to the bachelor's degree in Engineering Science and in Physics and participates in the University doctoral program in Physics. The associate's degree is offered in Engineering Science and faculty in the department participate with the Interdisciplinary Coordinating Committee for the associate in applied science degree programs in Civil and Electrical Engineering Technology. Courses in astronomy, geology, and integrated science are offered by the department, and faculty in the department direct the programs and research at the Astrophysical Observatory. The B.S. in Engineering Science is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), and the engineering technology programs are accredited by the Technology Accrediting Commission of ABET. The interdisciplinary master's degree program in Environmental Science is coordinated by Professor Alfred Levine.

English, Speech, and World Literature/Modern Languages Building - South Academic Quadrangle
Arnold Kantrowitz, Chairperson and Professor

The department offers the bachelor's degree in English, with options in Literature, Writing, and Linguistics; and the master's degree.
The department offers non-credit courses in reading and writing for both native and non-native speakers of English. A general course of study provides students in career programs and in baccalaureate programs with essentials in the important areas of writing and literature. A more advanced series of courses is available for students interested in obtaining a deeper and broader understanding of the discipline, including those students who will pursue English as a major. Students with majors in other disciplines may minor in English, or English with a literature, linguistics, or writing option. The department offers a program in Communications jointly with the faculty of the Department of Media Culture and programs in Dramatic Arts and Dramatic Literature jointly with faculty of the Department of Performing and Creative Arts. The master's degree program is coordinated by Professor Richard Currie.

**Department of History**

History/Political Science, Economics, and Philosophy Building - North Academic Quadrangle

Michael Greenberg, Chairperson and Professor


The department offers a bachelor's degree and a master's degree in History. Its courses combine the traditional function of the scholarly examination of the past for its value in general education with the utilitarian concern for preparing students with the basic skills to enable them to live more meaningfully. It seeks to train future historians, to update the teaching of history by secondary school teachers, and to provide opportunities for life-long education. History may also be taken as a minor. Associate Professor Stephen Stearns coordinates the master's degree program in History and Professor David Traboulay coordinates the interdisciplinary master's degree program in Liberal Studies.

**Department of the Library**

Library - South Academic Quadrangle

James W. Marcum, Chief Librarian and Professor


The Library supports the entire range of academic programs at the College through its collections, periodical subscriptions, and microforms. Computer facilities for data base searching provide access to City University and national catalogs. The Library's own resources are supplemented by an array of modern networking arrangements at regional, state, and national levels. The Library is the center for the implementation of multimedia programs in pedagogy.

**Department of Mathematics**

Mathematics Building - South Academic Quadrangle

Bruce Chandler, Chairperson and Professor


The department offers the bachelor's degree in Mathematics and the bachelor of science degree in Computer Science-Mathematics jointly with the Department of Computer Science. A minor in Mathematics is available for students with majors in other disciplines.

**Department of Media Culture**

Center for the Arts

George Custen, Chairperson and Professor

Professors: Mirella Affron, Sherry Millner, Leonard Quart, Ella Shohat. Assistant Professors: David Gerstner, Edward Miller, Jason Simon, Valerie Tevere, and Cindy Wong.

The department offers the bachelor's degrees in Cinema Studies and Communications and a master's degree program in Cinema Studies. Programs in this new department focus on the principles of media, interactions with the media, and the cultures dependent upon communications technologies. The department serves students interested in the history and theory of film and various electronic and computer-related media and in producing work with these media. The program in Communications is offered in collaboration with the Department of English. A minor is also awarded in the baccalaureate programs. The master's degree program in Cinema Studies is coordinated by Professor Ella Shohat.

**Department of Modern Languages**

Modern Languages/EnglishBuilding - South Academic Quadrangle

Kathryn M. Talirico, Chairperson and Associate Professor

Distinguished Professor: Robert S. Dombroski


The department offers the bachelor's degree in Spanish and courses in French and Italian. Minors in these languages are also
offered. Courses in American Sign Language are under the aegis of the department. In addition to mastery of the language, through classroom and language laboratory work, the literature, culture, and history of the countries are studied.

Marcus Hall - South Academic Quadrangle
Linda Reese, Chairperson and Associate Professor

The department offers an upper-division program leading to the bachelor of science degree in Nursing and a master of science degree program in Adult Health Nursing. The department also offers an associate's degree program, which prepares students for the New York State Board of Nursing Examination for license as a Registered Nurse. The associate's and bachelor's degree programs are accredited by the National League for Nursing and all programs hold New York State Certification. Health education courses and courses fulfilling the Physical Education requirement are offered by this department. Assistant Professor Roberta Cavendish serves as co-chair of the pre-medical advisory committee. Professor Margaret Lunney is coordinator of the master's program in Adult Health Nursing.

Center for the Arts
Robert Hulton-Baker, Chairperson and Associate Professor

The department offers bachelor's degrees in Art, Dramatic Arts, and Music; a concentration in Photography with the Art major; a concentration in Electrical Technology with the B.S. in Music; and a Dramatic Literature concentration jointly with the Department of English. Students may minor in Art, Dance, Dramatic Arts, and Music; a program for Psychology majors interested in dance therapy provides for a minor in Dance.

The department serves the needs of students who wish to pursue both the practice and the theory of the arts. In addition to preparing students majoring in the arts and those planning to continue in graduate school, the department's courses meet the needs and interests of students in the liberal arts and sciences and in career programs, and foster the role of the arts within the framework of a liberal education.

Political Science, Economics, and Philosophy/History Building - North Academic Quadrangle
Vasilios Petratos, Chairperson and Associate Professor

The department offers bachelor's degrees in Economics, Political Science, and Philosophy; and it offers bachelor's degree programs in Economics with a Business specialization and a Finance specialization jointly with the Department of Business. A dual major is offered in Philosophy and Political Science. Minors are offered in Economics, Philosophy, Political Science, and Public Administration; and geography and legal studies courses are offered by this department. Courses meet the needs of students in a variety of programs in the liberal arts and sciences, and the department's programs provide a solid background for a number of careers as well as for graduate or professional school. Professor emeritus Larry Nachman and Assistant Professor Richard Flanagan serve as advisers to students planning to apply to law school.

Psychology, Sociology, Anthropology, and Social Work Building - South Academic Quadrangle
Judith H. Balfes, Chairperson and Professor

The department offers the bachelor's degree in Psychology, a combined bachelor's degree in Sociology/Anthropology, and the bachelor's degree in Social Work. Minors are offered in Psychology and Sociology. Students interested in dance therapy may minor in a program offered with the Department of Performing and Creative Arts.

South Administration Building
Carol Jackson, Chairperson, Professor, and Vice President for Student Affairs

The department offers courses in new student orientation, career development, and personal growth and development. The SEEK Program and Counseling Center are located in the South Administration Building.
The Division of Student Affairs is concerned with all aspects of student life at the College and provides a comprehensive program of support services that includes orientation, counseling, career development, job placement, and SEEK. The Division coordinates student recruitment and admissions, student activities, services for disabled students, the CLUE program, pluralism and diversity programming, health services, intercollegiate and intramural sports, and the commencement exercises. Management of the Sports and Recreation Center and the Campus Center are under the auspices of the Division. The Department of Student Services offers courses in Issues in College Life, Career Development, Personal Growth and Development, and internships.

**Campus Center**

The Campus Center is the focal point of extra- and co-curricular student life. It houses the Office of Student Life, Student Government, and clubs, student publications, the CSI Association Inc., and the Auxiliary Services Corporation. Such services as the bookstore, cafeteria, Park Cafe, the College Health Center, the Wellness Program, and the Peer Drop-in Center are located in the Campus Center. Lounges for entertainment and studying, a computer lab, game rooms, conference and meeting rooms, and lockers are available for student use. WSIA-FM (88.9) broadcasts from the Campus Center. Questions regarding use of facilities and locker rentals may be directed to the Campus Center, room 107. The telephone 718-982-3070.

**Career Placement**

The Office of Career Placement offers a comprehensive range of career services to students and alumni. The office has developed its own job search resource through the CSI webpage; students may explore internet links with a roster of businesses for information about companies and employment opportunities, and where resumés may be sent directly. Services available to students and alumni include job search assistance, on-campus recruitment, annual job fairs, computerized job and internship listings, and full-time job postings. Help is available to students in organizing job-search campaigns, preparing resumés and cover letters, and improving interview skills. Seniors may maintain a dossier file at the office for job referrals. Placement staff and employers conduct a variety of career-related workshops throughout the year. The office maintains a library of company literature and videotapes.

**Children's Center**

The Children's Center is sponsored by the CSI Association and provides educational child care services for students who may be attending classes, working, participating in other school related activities, or for personal time. The programs for infant/toddler and preschool children are licensed by the Bureau of Day Care of the NYC Department of Health. The program for school age children is registered with the School Age Division of the NYC Department of Health. The Center is funded through the student activity fee, city, state, and federal grant money, and parent fees. The Center is located in the Sports and Recreation Center Building, and the telephone is 718-982-3190.

**Clubs**

The CSI Student Government and the Office of Student Life charter and recognize student clubs and organizations. Any group of students with a common interest may request a charter for a student club or organization from the Student Government Office, and students may join any of the existing groups that receive a charter each year. Members of clubs associate around a broad range of interests and identifications. Approximately 40 clubs are organized by student groups with common interests rising out of academic studies, social commitments, or personal values. Sports-related clubs file for a charter initially with Student Government before applying for funding from the Intramural and Recreation Program.

**College of Staten Island Association, Inc.**

The College of Staten Island Association, Inc. is a non-profit corporation that administers the student activity fee. The Association is governed by a board of directors comprising six students, three administrators, three faculty, and the President or designee. The Association allocates designated portions of the fee, traditionally applied to graduation exercises, intercollegiate athletics, intramural programs, the Children's Center, Health and Wellness, WSIA, and the Program Development Committee.

**Counseling Services**

Comprehensive academic and personal counseling services are provided by professionally trained counselors to help students achieve academic success. In individual or group sessions, students are assisted in improving their study skills, choosing a curriculum compatible with their interests and career goals, and handling problems that impede their progress toward a degree. Career counseling services help students to gain a better understanding of themselves, career options, and the world of work. Individual counseling may include testing and other assessment techniques. Information and counseling in preparation for graduate and professional schools is also provided by counselors. The office maintains a library of information on careers and job market resources.
Disability Services
The office has responsibility for providing services for students with a documented disability. All documentation is kept confidential and should be submitted directly to the Office of Disability Services. Services include pre-admissions counseling and accessibility information, advisement, priority registration, testing accommodations. Software for tutorial programs, personal computers, scientific calculators, tape recorders, and a Braille writer are available. The Resource Center for the Deaf serves the specific needs of deaf and hearing impaired students by providing interpreters, tutors, and notetakers. Interpreters are available for academic advisement, teacher conferences, or college business. The College’s policy for students with disabilities conforms to federal guidelines and the office offers services mandated by federal and state law. All students with disabilities are encouraged to use the services of the office. Services are available also to students who are temporarily disabled. The office is located in The Center for the Arts, room 101.

Health Services
The College Health Center, located on the main floor of the Campus Center, room 112, is staffed by a part-time nurse practitioner (funded by the student activity fee) in collaboration with Staten Island University Hospital and College personnel. A Nurse Practitioner and a full-time Registered Nurse are available for emergency care, consultations, immunizations, HIV/AIDS counseling and testing, and other services. The telephone is 718-982-3045.

Intercollegiate and Intramural Athletics
CSI fields women’s and men’s teams in competition throughout the East Coast, primarily in the New York/New Jersey metropolitan area. Team and individual sports include baseball, basketball, soccer, softball, swimming, tennis and volleyball. The College is a member of the National Collegiate Athletic Association (NCAA Division III), the Eastern College Athletic Conference (ECAC), and the City University of New York Athletic Conference (CUNYAC). The intercollegiate athletic program is supported by funding from the CSI Association.

To be eligible for intercollegiate competition, a student must be matriculated as a full-time student. The following criteria must also be met:
1. Proof of good health: physician’s examination and review by CSI medical staff;
2. Academic qualification:

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<th>Credits Attempted</th>
<th>Minimum Cumulative GPA</th>
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<tr>
<td>13-24</td>
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<td>25-graduation</td>
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3. Maintenance of satisfactory progress toward completion of a bachelor's degree.

The recreation and intramural sports program provides opportunity for all students to participate in individual and team sports, including competitive, non-competitive, and recreational.

Liberty Partnerships Program
The program is a collaborative effort of the College and the Staten Island Branch of the New York Urban League, the local school district, and community-based organizations and individuals that provides a broad range of educational and social services for high school and junior high school students who are at risk of dropping out of school.

New Student Orientation/College Life Unit Experience (CLUE) Program
The New Student Orientation/CLUE Office maintains up-to-date records on students’ progress toward meeting the New Student Orientation Requirement as described in the catalog section on Degree Requirements. Students may obtain information about current and planned CLUE certified events, programs, and activities, and may also check on their status in meeting the requirement. Two enrichment programs called CLUE Challenge and CLUE Pathways encourage students to commit themselves to a broad involvement in the out-of-the-classroom life of the College and its surrounding community. Information about orientation and the CLUE program is available at the office, North Administration Building (2A), room 208.

Pluralism and Diversity
The Office of Pluralism and Diversity seeks to develop in all aspects of the College’s activities a climate that fosters respect for the pluralism and diversity of American society. The office offers programming, workshops, and training sessions on sensitivity and diversity.

Program Development Committee (PDC)
The Program Development Committee, a joint committee of the CSI Association and the CSI Student Government, is a student programming board that allocates a designated portion of the student activity fee for social, cultural, and educational programs. The Committee develops programs that culturally enlighten, intellectually stimulate, and entertain. The planning and decision-making process is one in which students learn many skills, especially those related to working with other students on campus-wide projects. Proposals for programs, events, and activities may be made by students and members of the College community.
Publications
Students at CSI publish a weekly newspaper, *The Banner*; a political journal, *The College Voice*; a literary arts magazine, *Third Rail*; a literary journal focusing on woman’s studies, *All Ways a Woman*; and the College yearbook. Publications are funded by Student Government. Students interested in participating in the production of these publications as writers, photographers, editors, or layout artists are invited to visit the Office of Student Government in the Campus Center.

SEEK Program
SEEK (Search for Education, Elevation, and Knowledge) is a special program designed to provide higher education opportunity, through academic and financial support services, for eligible students. The SEEK Program provides intensive remediation in basic skills, including special summer classes, special testing, guidance, counseling, supplemental instruction and tutoring, and financial assistance for students accepted to the program.

Sports and Recreation Center
The Sports and Recreation Center houses a full range of facilities and equipment for individual and team sports and games: a gymnasium with seating capacity for 1200 spectators, an auxiliary gymnasium, two fitness rooms, racquetball courts, and a 25-meter pool. Outdoor facilities include a track, tennis courts, and ball fields.

Student Life
The Office of Student Life assists and advises students involved in student organizations, governance committees, and campus activities to develop a rich and diverse co-curricular campus life. The student life team involves also staff from the Association, the Student Government, and the Program Development Committee. The Office sponsors leadership programs for chartered clubs and the general student population and is responsible for the operations of the Campus Center. The telephone is 718-982-3088.

Student Government
The College of Staten Island Student Government is composed of twenty representatives (senators) elected by the student body each Spring semester. Organized into commissions with a specific mandate (e.g., Academic and Curricular Affairs, Clubs, Elections, Finance, Part-time Students, Publications, Student Center, and Student Services), Student Government represents student interests to the administration and faculty of the College and serves as an advocate for student services. Through its commissions Student Government charters and funds all student clubs and associations; administers student elections; allocates a designated portion of the student activity fee; advocates for the special needs of students; advises the College on the utilization of campus space to serve students in their co-curricular activities; and funds all student publications. Student Government senators also serve on planning and decision-making committees with faculty and members of the CSI administration.

Wellness Program
The Wellness Program office presents an integrated array of special events, seminars and workshops, and counseling services with a common goal of educating the College community about wellness issues. Professional counseling and intervention services concerning substance abuse, HIV/AIDS, domestic violence, stress management, date rape, and other wellness issues are coordinated by this office. A Peer Drop-In Center is staffed by trained Peer Educators who meet with students and provide information.

WSIA - 88.9 FM
WSIA, the only radio station on Staten Island, is licensed to the College. The station broadcasts at 88.9 FM and on the web at www.wsia.fm. The station is staffed by student volunteers who work under the guidance of professional broadcasters. The state-of-the art studios, located in the Campus Center, include a digital recording facility, music studio, computerized news operation, and a 20,000 volume record and CD collection. Station programming emphasizes diverse and creative music, local news and public affairs, and Staten Island sports. Students interested in working as DJs, newscasters, sportscasters, and engineers should visit the studio in room 106 of the Campus Center and fill out an application. The telephone number is 718-982-3050.

E-mail Accounts
Students seeking to establish an E-mail account in the College’s system apply at the Office of Information Technology, North Administration Building (2A), room 306; or apply by telephone at 982-3695. A paid bursar’s bill for the current semester is required.
Academic Advisement
Acting Director, Dr. Marianne B. Carlin, South Administration Building (1A), room 101
The Office of Academic Advisement serves new students as well as those who have not declared a major. Advisement is provided to students in groups and individually by appointment. The Office staff also provide students with individualized degree program plans each semester to guide them in their course selections.

Center for the Arts
Managing and Artistic Director, Mr. Numa Saisselin, The Center for the Arts, room 116
The Center for the Arts contains, in the instructional wing, the Department of Performing and Creative Arts, the Department of Media Culture, studios, performance and rehearsal spaces, a screening room, a recital hall, a studio theater, film and video production facilities, and laboratories for communications and graphics. The workshops include facilities for print making, painting, sculpture, photography, electronic music, and recording.

The Center houses the Clara and Arleigh B. Williamson Theatre, a 450-seat, proscenium-stage theater; a 900-seat concert hall; an art gallery; and a small conference center.

Center for International Service
Director, Ms. Ann Helm, North Administration Building (2A), room 206
The Center for International Service encourages and supports the international component of the academic life of the College. The Center provides direction and assistance in matters affecting the College's international student population; sponsors study abroad programs; directs scholar and student exchange programs; and facilitates international development programs. Guidance for the Center's activities is provided by a faculty advisory committee.

English Language Institute
The Institute, a member of the American Association of Intensive English Programs offers intensive English language study and programs in American language and culture to international students and professionals. The Institute is supported by course fees. Admission to the English Language Institute does not constitute admission to the College.

Foreign Student and Scholar Services
The staff, serving foreign students and scholars, process immigration documentation; facilitate admission procedures; provide academic advisement, counseling, and college orientation; and assist in off-campus adjustment.

International Faculty Development Programs
The Center coordinates a faculty exchange program with Shanghai University in China on behalf of the City University. The Center has responsibility also for CSI exchange programs and faculty development projects in various countries. Programs for faculty and students are offered by the Eastern European Working Group, the Southeast Asia Working Group, and the World on Wednesday lecture series.

Study Abroad
There is no foreign language prerequisite for overseas programs. However, students who have language proficiency appropriate to the program are placed in courses suitable to their level of ability. A minimum grade point average of 2.5 is required for participation in a study abroad program. Staff of the Study Abroad program provide assistance and information about admissions, financial aid and scholarships, orientation and re-entry. To prepare effectively for participation in the program, students are encouraged to investigate the overseas study opportunities early in their academic careers. Most student financial aid plans are applicable to Study Abroad programs and special scholarship funds are available for eligible students.

The Center offers year-round programs in China, Ecuador, Greece, and Italy with partner institutions: Nanjing University in China; the Catholic University of Guayaquil and the University of San Francisco de Quito in Ecuador; The American College of Thessaloniki in Greece; Scuola Lorenzo de Medici in Florence and the American University of Rome in Italy. Overseas study programs in more than 25 countries are open to CSI students through membership in the College Consortium for International Studies.

Director, Ms. Dorothy Brower, North Administration Building (2A), room 204
A wide choice of courses have regularly scheduled evening, summer, and weekend classes as integral components of the College's offerings. Degrees in more than 20 disciplines may be earned by attending evening and weekend classes. Courses are scheduled to accommodate matriculated students in graduate, baccalaureate, and associate's degree programs who can attend only in the evening or on weekends, as well as those students whose classes are mainly on weekdays.

The Summer Session offers undergraduate and graduate courses in a mix of schedules: four-week courses meet day and evening Monday through Thursday in June and July; six-week courses meet Saturday and Sunday mornings during June and July; eight-week courses meet day and evening Monday/Wednesday or Tuesday/Thursday during June and July.
Adults Returning to College Program (ARC)
To welcome adult students, the College offers a gateway program for adults returning to college after a hiatus or entering college for the first time. The ARC program provides personalized, comprehensive support services from pre-admission counseling to registration in ARC classes as well as other college courses. The goals of the ARC program are to ease the process of enrolling at the College and to facilitate the transition of adult students into the College.

Network
The Network program provides academic programs and support services for specific student populations. The programs are offered at off-campus sites in collaboration with external organizations and agencies.

Honors College
Coordinator: Assistant Professor Ellen Goldner, South Administration Building (1A), room 206
Introduced at the College in 1997, the Honors College is designed for capable and highly motivated students who meet rigorous admissions criteria. During their first and second years, Honors College students enroll in a variety of innovative and challenging courses and develop with their faculty a cohesive intellectual community. In their third and fourth years, Honors College students pursue their fields of study in a wide range of majors and specializations, and may elect to meet a program’s criteria for graduation with honors.

The curriculum for the Honors College follows two designs: one plan for students who intend to pursue a course of study leading to the Bachelor of Arts degree and one plan for students who intend to pursue a course of study leading to the Bachelor of Science degree.

Please see the sections on Admissions and on Programs and Course Descriptions for details about the requirements. Currently enrolled CSI students and transfer students should make inquiries with the Director of the Program.

In September 2002, entering CSI students will be provided with the opportunity to enroll in the CUNY Honors College: University Scholars Program. Eligible students may attend the CUNY Honors College and CSI’s Honors College simultaneously.

Laboratories
The Biological Sciences/Chemical Sciences Building, home of the Department of Biology, the Department of Chemistry, the Center for Environmental Science, and the Center for Developmental Neuroscience and Developmental Disabilities, contains 74 state-of-the-art laboratories for study and research. The ten departmental buildings in the academic quadrangles house instructional, tutorial, and research laboratories; and personal computer classrooms.

Library/Media Services
Chief Librarian, Professor James W. Marcum, Library, room 109
The Library is the focal point of the South Academic Quadrangle. The building, with its distinctive rotunda, is designed to house 300,000 volumes, computer facilities for database searching, periodical subscriptions, and Media Services. The general reference center is located on the first floor. The archives, the microform collections, and the periodicals reference center are located on the second floor. The circulating book collections and the print journal holdings are housed on the top floor. Areas for individual and small group study spaces are being developed on the second and third floors.

Hours of Service:
Monday-Thursday 8:00 a.m. - 10:00 p.m.
Friday 8:00 a.m. - 8:00 p.m.
Saturday 8:30 a.m. - 5:00 p.m.
Sunday 12:00 noon - 5:00 p.m.

Hours during summer session, intersession, and holidays are posted at the Library entrance and on the Library homepage, www.library.csi.cuny.edu. Normal hours of operation may be subject to change.

Borrowing Privileges: Students and faculty must present current ID cards in order to borrow books that circulate. ID cards are obtained from the College Office of Public Safety. Overdue books, lost books, or unpaid fines may result in the suspension of borrowing privileges.

The Collection: The collection totals 208,000 bound volumes of books, 1,400 current print journal subscriptions, 10,000 full text journals online, 800,000 titles in microform, 2000 videos and films, and over 4000 sound recordings.

The Online Catalog: The CSI Library is a member of the CUNY-wide integrated library system. Access to CUNY+, the online union catalog portion of the system, is located on workstations throughout the library. CUNY+ is also known as CUNY+WEB and is available from remote locations via the Library homepage.

Reference librarians are on duty at the General Reference Desk on the first floor at all times when the library is open to assist with traditional sources of information and with computerized databases. Students and faculty have free access to ERIC and other databases on CD-ROM or via the Internet. The library instruction component of reference includes orientation tours, the compilation of bibliographic aids, and lectures by reference specialists in connection with specific course assignments.
Media Services
Library, room 201
Media Services provides viewing and listening facilities and classroom services for its collections of videotapes, films, sound filmstrips, slides, audiotapes, and recordings. The media distribution system provides access to the media collections via fiber optic technology, connecting over 40 classrooms, laboratories, and conference rooms. Media Services operates the video conferencing lab and oversees the Center for Excellence in Learning Technologies which assists faculty in using technology to promote better learning.

Director, Professor Ivan Smoolak, South Administration Building (1A), room 1A-104
The Testing Office tests in the following areas: the CUNY Basic Skills Tests in writing, reading, and mathematics; the departmental placement examination in Biology; occupational/career and interest testing; tests required for graduate school admission or for certification purposes (GRE subject tests, LSAT, MCAT, PRAXIS); and the test that enables students to earn college credits, the College Level Examination Program (CLEP).

Vice President for College Advancement, Mr. Richard Truitt, South Administration Building (1A), room 401
The Office of College Advancement is responsible for advancing the mission of the College and developing financial support for the College from alumni, faculty and staff, the community, and private industry. The CSI Foundation, Inc., was established to provide leadership and volunteer assistance to the College in its fund-raising programs.

Alumni Relations
Director, Ms. Francine Raggi, South Administration building, room 110
The Office of Alumni Relations maintains communication with alumni through activities and newsletters. The office also assists the CSI Alumni Association, which was established in 1977, to develop and maintain a partnership among alumni, students, faculty, and staff of the College. All persons who have received a degree or certificate from the College of Staten Island or its antecedent institutions, Richmond College and Staten Island Community College, are eligible for membership in the Alumni Association. An elected Alumni Council provides leadership for the Association.

Assistant Vice President for Technology Systems, Professor Michael Kress, North Administration Building (2A), room 303
The Office of Information Technology advances and supports the use of information technology at the College. OIT administers 20 general purpose computer laboratories and 23 specialized computing laboratories in conjunction with academic departments for student use. The microcomputers, approximately 3000 on campus, are connected to local area networks that connect through a high speed local area network. This hardware configuration allows students, faculty, and staff full access to specialized software, the Internet, on-line library resources, and e-mail. Forty-five classrooms, two conference rooms, and two portable units are equipped to run multimedia presentations from a central location. One of the conference rooms is equipped for two-way video conferencing. Most microcomputers on campus use Windows 2000, Windows 98, or Windows 95. The OIT homepage is http://oitweb.it.csi.cuny.edu.

Director, Ms. Allyson Straker-Banks, Library, room 117
The Office of Instructional Support Services offers a variety of programs to enhance the academic preparation of all students, with a special emphasis on first-year students. The office coordinates the Immersion Programs, University-wide initiatives offering tuition-free, intensive reading, writing, and mathematics workshops to newly admitted freshmen or qualified post-freshmen who have not passed all three CUNY Basic Skills Tests. A broad range of support services, including supplemental instruction, tutoring, study groups, mentoring, and the First-Year Seminar and Workshop Series, are also provided to students throughout the academic year.

Director, Professor Leonard Ciaccio, South Administration Building (1A), room 211
The Discovery Center offers several pre-college programs that strengthen the academic preparation of students while they are still in high school and others that encourage college students to consider teaching careers. The Center also provides opportunities for teachers to develop new teaching strategies. The programs are supported by the resources of the College and by grants from a variety of state, federal, and private institutions.

Collegiate Science and Technology Entry Program:
CSTEP provides academic support and enrichment for minority and/or economically disadvantaged freshmen students considering careers in science and technology.

Science and Technology Entry Program:
STEP provides pre-college preparation in science and technology for minority and economically disadvantaged high school students.
This chapter covers College policies that govern meeting the academic standards and requirements to maintain matriculated status and to qualify for a degree.

Grades

Grading Symbols

The following grading symbols are used:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Identification</th>
<th>Quality Points per Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2.0</td>
</tr>
<tr>
<td>D</td>
<td>Pass</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>Failing/unsuccesful completion of course</td>
<td>0.0</td>
</tr>
<tr>
<td>P</td>
<td>Passing</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Withdrew with no penalty</td>
<td></td>
</tr>
<tr>
<td>WA</td>
<td>Administrative Withdrawal</td>
<td></td>
</tr>
<tr>
<td>WU</td>
<td>Withdrew Unofficially (counts as failure)</td>
<td>0.0</td>
</tr>
<tr>
<td>INC</td>
<td>Incomplete (temporary grade)</td>
<td></td>
</tr>
<tr>
<td>AUD</td>
<td>Auditor</td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>No grade submitted by instructor</td>
<td></td>
</tr>
<tr>
<td>PEN</td>
<td>Grade Pending</td>
<td></td>
</tr>
<tr>
<td>FIN</td>
<td>Failure (changed from Incomplete)</td>
<td>0.0</td>
</tr>
</tbody>
</table>

A brief explanation of the grades receiving no quality points follows:

F  No credit is received for a course in which the student is assigned a grade of F. If a student wishes to receive credit for the course, it must be repeated with a passing grade; however, the F remains on the transcript (see section on Repeating Courses).

P  Course requirements have been satisfied. This grade is used only for specially designated courses and for courses taken at another college for which a student receives advanced standing.

W  Students may withdraw without academic penalty from any course up to the end of the eighth week of the semester (see College calendar for W date). Students may withdraw from a course without academic penalty between the eighth and tenth week only with the consent of their faculty adviser or a counselor. Under no circumstances will a W be assigned after ten weeks without positive action by the Committee on Course and Standing or its designee. Consult the Office of the Registrar for the procedures to be followed when withdrawing from a course. If these procedures are not followed, students may receive a penalty grade (WU).

In cases of illness, students may apply to the Medical Office for a medical withdrawal.

WA  Students not in compliance with the New York State immunization requirement receive the grade of WA. This grade carries no academic penalty.

WU  An unofficial withdrawal results in a grade of WU. No credit is received for a course in which this grade is assigned; it is equivalent to a grade of F.

INC  The grade INC is a temporary grade assigned when, in the instructor's judgment, course requirements are not completed for valid reasons. Recipients of INC are required to complete all assignments before the end of classes during the succeeding semester. Students should not register a second time for a course in which an INC is given. Rather, arrangements should be made with the instructor to complete the remaining work. If a student registers again for a course in which an INC was awarded, the INC will become a FIN and the course will appear a second time on the student's transcript with the grade earned.

FIN  If a grade of INC is not changed before the last day of classes of the succeeding semester, it will automatically be changed to a grade of FIN. If the required work is not completed for continuing valid reasons, the course instructor may grant an extension. Such extensions shall not exceed a period of more than two years beyond the original due date of the uncompleted work.
AUD Students may audit courses for which they are registered by presenting a written statement to the Registrar declaring their status as auditors within the first three weeks of the semester. This statement must be countersigned by the instructor of the course. No credit is received for an audited course.

Z An administrative symbol assigned when no grade has been submitted by the instructor.

PEN The pending grade is used in the first semester of a two semester course.

Grade Appeals
Students wishing to appeal a grade other than WU or FIN must do so within sixty school days, excepting summer session, following the end of the semester. Appeals must be submitted in writing to the chairperson of the department in which the course was offered. Upon receipt of the appeal, the chairperson shall direct the student to discuss the issue with the instructor who assigned the grade. If the issue remains unresolved, the student may request a review by the Department Committee on Grade Appeals.

This Committee on Grade Appeals shall review all information presented by the student and shall meet with the instructor. The committee shall render a decision within 30 days after the student requested the grade review by the committee because the student and instructor had not resolved the matter. If the committee upholds the appeal by a vote of 3-0, the chairperson shall change the grade to reflect the decision of the committee. If the committee does not uphold the student, there is no further appeal within the College.

In all deliberations on grade appeals, the burden shall be on the student to prove that a violation of the College’s regulations occurred or that the instructor’s own stated criteria for grading, which shall have been enunciated at the beginning of the semester, have not been followed. Students needing advice on the procedure may consult an academic and personal counselor.

Students wishing to appeal a WU or a FIN grade must file a written petition supported by documentation to the Committee on Course and Standing.

Grade Point Average (GPA)
The grade point average (GPA) is determined by dividing the total quality points earned by the total number of credits attempted. All credits for which the student is officially registered after the change of program period of each semester shall be considered “attempted credits,” except where the grades carry no penalty, i.e., grades of W, WA, INC, AUD, and PEN. For example:

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade</th>
<th>Credits</th>
<th>Quality Points per credit</th>
<th>Total Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>A</td>
<td>3</td>
<td>x 4</td>
<td>= 12</td>
</tr>
<tr>
<td>COR 100</td>
<td>B</td>
<td>4</td>
<td>x 3</td>
<td>= 12</td>
</tr>
<tr>
<td>ART 100</td>
<td>C</td>
<td>3</td>
<td>x 2</td>
<td>= 6</td>
</tr>
<tr>
<td>ANT 100</td>
<td>D</td>
<td>3</td>
<td>x 1</td>
<td>= 3</td>
</tr>
<tr>
<td>PED 190</td>
<td>F</td>
<td>1</td>
<td>x 0</td>
<td>= 0</td>
</tr>
<tr>
<td>Total Credits</td>
<td>14</td>
<td>Total Quality Points</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>GPA = Quality Points = 33 = 2.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students may calculate current and prospective grade point averages using the GPA calculator feature on the College’s web site, www.csi.cuny.edu.

Transcripts and Grade Reports
At the end of each semester, students receive grade reports that reflect academic work undertaken. Once each year, in July, all students in attendance during the previous school year are sent a transcript. Students may request that their transcript be sent to other institutions (see Fee Schedule). To be official, transcripts must be signed and sealed by the Registrar.

Students may access their transcript records and review semester grades via the College’s web site (www.csi.cuny.edu) by clicking first on Current Students and then on Registrar’s Office.

Declaration of Major
Each matriculated student in the College is recorded in the Registrar’s Office as enrolled in a specific curriculum or major leading to a degree. Students are responsible for informing the Registrar of their specific curriculum or major. Assignment of an academic adviser is based upon this official listing. All students who have completed 60 credits and who expect to receive a bachelor’s degree from the College should declare a bachelor’s degree major. Students who have completed fewer than 60 credits may also declare a bachelor’s degree major.

The Major
provided they meet the following criteria:
- have passed the three CUNY Basic Skills Tests
- 13-24 credits completed and 3.0 Grade Point Average
- 25-39 credits completed and 2.5 Grade Point Average
- 40-59 credits completed and 2.0 Grade Point Average

**Change of Curriculum or Major**
Students who wish to change their major or whose academic advisement plan or transcript shows that they are recorded incorrectly in a curriculum or major should file a Change of Curriculum or Major form with the Registrar's Office. There is no fee.

**Credits Toward the Major**
All courses listed as major requirements, including courses that apply toward concentrations, specializations, or options are counted toward completion of the minimum credits meeting requirements for the major. Credits for pre-major courses are not included.

**GPA in the Major**
The GPA in the major is calculated in the same manner as the overall GPA using only the courses that fulfill major requirements: all courses listed in the major requirements, including courses in concentrations, specializations, options, and all courses taken in the discipline other than those in the pre-major. Students are required to achieve at least a 2.0 GPA in their core or major requirements in order to earn an undergraduate degree. Some programs require a GPA higher than 2.0.

**Second Major**
Students wishing to declare a second major may obtain a form from the Office of the Registrar and file upon completion of at least 50% of the courses required for the second major.

**Credit Load**
Students may attend full time or part time as either matriculated or non-degree students. They may attend day, evening, or weekend sessions in any combination.

A full-time student is one registered for 12 or more equated credits in a semester; six must be degree credits (three in the case of first-time freshmen). Equated credits are generally the same as degree credits except for courses below the 100 level. In courses below the 100 level, equated credits are equivalent to the contact hours of the course.

Students with less than a 3.0 (B) average and/or fewer than 30 credits who wish to take more than 18 credits must request permission. The Registrar's Office, room 110, North Administration (2A), will direct such students to the appropriate office. Students on academic warning or probation may not register for more than 14 credits a semester; and may not register for more than a total of eight credits in the summer sessions and may not register for two four-week courses simultaneously.

**Class or Standing**
Class, or standing, as freshman, sophomore, junior, and senior is determined by the number of credits completed:

- Freshman: 0 - 27.5 credits completed
- Sophomore: 28 - 60.5 credits completed
- Junior: 61 - 93.5 credits completed
- Senior: 94+ credits completed

Standing is sometimes listed as a course prerequisite.

**Dean’s List**
A matriculated undergraduate student, full time or part time, merits inclusion on the annual dean’s list by: a) for full time, attaining a GPA of 3.5 or above during the preceding academic year, provided at least 24 credits were earned during that period; b) for part time, attaining a GPA of 3.5 or above over the last two academic years, provided at least 24 credits were earned during that period. Only credits earned at the College of Staten Island will enter the computation. Students who have received a grade of F, WU, or INC during the period under consideration are not eligible.

**Committee on Course and Standing**
The Committee on Course and Standing is chaired by the Vice President for Academic Affairs or a designee; and its membership consists of the Registrar and one member of the faculty from each instructional department. In addition to reviewing student records, the Committee considers student appeals related to admission, readmission, and graduation.

Students can petition the Committee through an appeals counselor in the Division of Student Affairs. The appeals counselors, whose names are available through the Registrar’s Office, will advise the students in the preparation of their petition, which will then be referred to the Committee.
Minimum GPA
Students are expected to maintain a minimum GPA of 2.0 (C) throughout their academic careers at the College. Whenever a student’s GPA falls below 2.0, the student’s record will be reviewed by the Committee on Course and Standing. Students must achieve a GPA of 2.0 in the courses in the core or major requirements; some majors require a higher minimum GPA.

Midterm Warnings
Students with an excessive number of absences and students with grades of D or F in 200- or lower-level courses receive midterm warnings. Students receiving a warning are expected to consult their course instructor; they may also wish to consult their faculty adviser.

At the end of each semester, students must meet the following academic standards:

<table>
<thead>
<tr>
<th>Credits attempted</th>
<th>Minimum Grade Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-12</td>
<td>1.50</td>
</tr>
<tr>
<td>13-24</td>
<td>1.75</td>
</tr>
<tr>
<td>25-above</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Academic Warning
Students with 0 to 24 credits attempted will be placed on academic warning if they meet the academic standards (above) but fail to achieve a 2.00 grade point average.

Academic Probation
Students will be placed on academic probation if their grade point average falls below the minimum grade point average for the number of credits attempted: 0-12 attempted credits, 1.50 grade point average; 13-24 attempted credits, 1.75 grade point average; 25 credits-above, 2.00 grade point average.

Students on academic probation who meet the College’s academic standards at the end of the probation semester will be removed from academic probation.

Students on academic probation who do not meet the academic standards will be placed on academic probation.

Academic Dismissal
Students who do not meet the academic standards outlined above at the end of the probation semester will be dismissed from the College.

Readmission After Academic Dismissal
Students dismissed from the College for failure to meet the standards set forth in this policy may apply for readmission after a separation from the College of at least one fall or spring semester. Students who apply for readmission after this separation period must have their application reviewed by the Committee on Course and Standing. Students wishing to apply for readmission should obtain information from the Counseling Center, room 109, South Administration (1A).

CUNY Basic Skills Tests
Each undergraduate student must successfully complete the City University of New York Basic Skills Tests in reading, writing, and mathematics. All students, including transfer students, must take the tests before they may register for the first time as matriculated students.

Students are exempted from taking the CUNY/ACT Basic Skills Tests in reading and writing if their verbal score on the SAT is 480 or higher; if their verbal score on the ACT is 20 or higher; or if their score on the New York State Regents Examination in English is 75 or higher. Students are exempted from the CUNY Mathematics Assessment Test if their mathematics score on the SAT is 480 or higher; if their mathematics score on the ACT is 20 or higher; or if their score on the New York State Regents Examination in Mathematics is 75 or higher. However, all students must take Parts III and IV of the CUNY Mathematics Assessment Tests for placement into appropriate mathematics courses.

Transfer students who have completed forty-five or more credits at another institution are exempted from all three tests.

Students who fail one or more of the tests must remedy the deficiency within one year. The tests are administered several times during the year, and students may take a test up to four times per academic year. Students who do not score a satisfactory grade on a skills test are encouraged to take the appropriate Immersion Program workshop before they begin their first semester.

Students may not enroll in college-level English or mathematics courses until the appropriate test has been passed. A passing score on the CUNY/ACT reading skills test is a prerequisite to all courses at the 200 level or higher.

No associate’s or bachelor’s degree will be awarded unless the tests have been passed.

Students who do not score a satisfactory grade on a skills test are required to take the appropriate remedial course in reading, writing, or mathematics.
C/ARST
Students who fail the CUNY/ACT Reading Skills Test (C/ARST) on entrance are required to take the appropriate 0-level reading course in their first semester.

C/AWST
Students who score 6 on the CUNY/ACT Writing Sample Test (C/AWST) on entrance are required to take the appropriate 0-level writing course within their first 12 equated credits. Students who score 5 or below on the C/AWST on entrance are required to take the appropriate 0-level writing course within their first 8 equated credits.

CMAT
Students who have not passed the CUNY Mathematics Assessment Test (CMAT) are required to take the appropriate 0-level mathematics course.

   Students admitted to both baccalaureate degree and associate degree programs are expected to complete the remedial courses that qualify them to enter college-level writing and mathematics courses in one year, which may include, in addition to two semesters, a pre-freshman and a post-freshman summer immersion course and a winter intersession workshop.
   
   See the section on Attendance Policies for information on the special attendance policies that apply to 0-level courses.

Placement Examinations
Placement examinations are offered by the Department of Biology and the Department of Modern Languages Modern Languages. These examinations determine placement at the appropriate course level. Students entering the Health Sciences programs in which BIO 150 Human Anatomy and Physiology I is pre-major requirement must take the Biology Department Placement Examination. Students are referred to the Testing Office for information.

CUNY Proficiency Examination
Effective Fall 1999 all new first-time freshmen admitted to a degree program are required to pass the CUNY Proficiency Examination to graduate from associate degree programs, transfer into a senior college, and advance from the lower division to the upper division of a senior college. In addition, effective Fall 2000 all transfer students entering degree programs are required to pass the CUNY Proficiency Examination.

   Exemptions are granted to students holding bachelor’s or other advanced degrees from an accredited institution. Exemptions may be granted for accommodations to comply with Section 504 of the Rehabilitation Act.
   
   The University will administer the Proficiency Examination at the college several times each year. For information concerning the examination, students should consult the Testing Office, room 1A-104.

Graduation
Application for Graduation
Students must file for graduation by the date published in the College academic calendar in the Schedule of Classes. There is no fee for this application. Application cards for graduation may be obtained at the Registrar’s Office. Bachelor’s degree candidates who have completed a second major or a minor and wish it to appear on their transcript should list the second major or minor on their application for graduation.

Requirements for Graduation
Bachelor's degree programs require a minimum of 120 credits with a minimum grade point average of 2.0 (C). Associate’s degree programs require a minimum of 60 credits with a minimum grade point average of 2.0 (C). All degree programs require at least a 2.0 grade point average in the core or major course requirements to qualify for the degree. Some majors require a grade point average above 2.0. Please consult the specific degree program. The successful completion of the College Preparatory Initiative (CPI) and all general education and core or major requirements is required for graduation.

Minimum Credits in Residence Requirement
To obtain a degree, associate or baccalaureate, from the College of Staten Island, students must earn a minimum of 30 credits through courses taken at the College. To qualify for a bachelor’s degree from the College, students must also earn at least half (50%) of the credits required for the major through courses taken at the College. To obtain a One-Year Certificate from the College of Staten Island, at least half (50%) of the required credits must be earned in courses taken at the College.

En-Route Associate’s Degree
The associate’s degree will be awarded to matriculated students who have neither applied for nor been awarded the A.A., A.S., or A.A.S. degree but who have completed all of the degree requirements including at least 30 credits earned in residence. Students who meet these requirements will be notified of their eligibility for the degree and given the opportunity to decline.
Graduation with Honors
Undergraduates who meet the qualifications will receive the associate's or bachelor's degree summa cum laude, magna cum laude, or cum laude as follows:
Cumulative GPA of at least 3.90: summa cum laude
Cumulative GPA of at least 3.75: magna cum laude
Cumulative GPA of at least 3.50: cum laude.

Students who have completed all the requirements for the bachelor's degree may graduate with honors in their major provided they meet the requirements of the department as explained in the section on Degree Requirements.

Second Degree Requirements
To receive a second baccalaureate degree or a second associate degree from the College of Staten Island, students must complete a minimum of 30 credits in addition to the number of credits required for the first degree.

The “Grandfather” Clause
Requirements in this Catalog were approved effective September 1, 2000. The “Grandfather” clause is designed for students who matriculated in a degree program prior to that date. This provides that students may meet degree requirements in effect the year of their matriculation in a particular program, provided also that they have maintained continuous enrollment in that program. Students not in continuous enrollment are subject to any new requirements in effect the year of reentry, and students changing their major or curriculum are subject to the requirements in effect the year of the change, with the exception of those students who hold the associate in arts or associate in science degree and are entering a baccalaureate program; they are not subject to the general education requirements.

This policy is under review and may be revised for the 2001-2002 academic year.

Attendance Policies
Instructors are required to keep an official record of class attendance. Students are expected to attend all sessions. A student who is absent for more than 15 percent of the class hours in the semester will be assigned a grade of WU (withdrew unofficially), subject to the discretion of the instructor.

Special attendance policies apply to all remedial courses in reading, writing, mathematics, and in English as a Second Language, as follows:
1. for courses meeting four hours per week, seven hours of absences will be allowed; students with an eighth hour of absence will be considered excessively absent and will receive a WU grade, unless excused by the instructor;
2. for courses meeting three hours per week, four hours of absences will be allowed; students with a fifth hour of absence will be considered excessively absent and will receive a WU grade, unless excused by the instructor.

Withdrawal from College and Leave of Absence
Students who leave the College before the end of a term must file an official withdrawal request. Failure to do so will result in WU grades for all courses in progress, and the result will be a negative impact on the grade point average. Students intending to withdraw from the College must see a counselor and complete the required forms. There is no fee. Registration materials for the semester following withdrawal will be sent automatically. There is no formal leave of absence from the College for undergraduates.

Readmission
Undergraduate students who do not register for a semester and then decide to return must file an application for readmission to qualify for a priority registration appointment. Generally, readmission is routine. Students requesting a change in curriculum or major may be subject to a review of qualifications. To qualify for early registration, application for readmission must be filed by the deadline specified in the academic calendar published in the Schedule of Classes. Students who do not apply for readmission by the deadline may be readmitted and register during the walk-in registration dates published in the Schedule of Classes. Students who have been academically dismissed by the College will be readmitted only upon successful appeal to the Committee on Course and Standing.

Repeating Courses
Remedial courses: Students in baccalaureate degree and associate’s degree programs may repeat a given remedial course only once.

Passing Grade: Students who receive a passing grade in a course (D or better) sometimes wish to repeat the course in the expectation of improving the grade. If a course is repeated, both grades will remain on the student's transcript and both grades will be computed in the student's grade point average, but the student will receive credit only once for the course. For example: a student takes HST 100 for three credits and receives a D; then repeats the course and receives a B. The transcript will list HST 100 with the grade of D for the first time and with a grade of B for the second. The student will receive a total of three credits for HST 100, not six, but the three credits of D and the three credits of B will be calculated in the student’s grade point average.
Failing Grade: If a student receives a grade of F or WU or FIN in a course, retakes the course and receives a grade of C or better, neither grade will be computed into the grade point average, subject to the following limitations:

a) The course in which the failing grade was received must have been originally taken after September 1, 1984 and repeated after September 1, 1990.

b) No more than 16 credits of failing grades may be recalculated in the above manner.

c) The 16 credit limit applies cumulatively to courses taken at all CUNY colleges.

d) If two or more failing grades have been received for the same course and a grade of C or better is subsequently earned, all the failing grades may be recalculated, subject to the 16 credit limit.

e) The repeated course must be taken at the same college as the initially failed course.

f) The failing grades remain on the academic record.

g) The regulation applies to undergraduates only.

Auditing a Course

A student may audit a course by registering for the course and presenting a written statement of intent to audit the course, signed by the instructor, to the Registrar within the first three weeks of class. The Registrar will record a final grade of AUD, effective at the end of the semester. Once the declaration to audit has been made, the student may no longer choose to receive credit for the course. The regular tuition and fee schedule applies to audited courses.

Undergraduate Students in Graduate Courses

Undergraduate students with 90 or more credits and a 3.0 GPA may be granted permission to register for a graduate course for undergraduate credit. Permission is required from the course instructor and the coordinator of the graduate program offering the course; and must be noted on the registration form.

Permission to Take Courses at Other Colleges

Students wishing to take a course at another college must receive permission in advance if the course is to be credited toward a degree at the College of Staten Island. Permission to take courses at other colleges is granted only to currently enrolled matriculated students. Applications for permission, which require the approval of the department chairperson and the Registrar, are available in the Registrar's Office. Tuition for courses taken on permission at other CUNY colleges must be paid at the College of Staten Island during the regular registration period. The Bursar's receipt for this registration, together with the approved permit form, will enable students to register at another CUNY college. Tuition and fees for a course taken on permit at a non-CUNY school must be paid directly to the host school. Courses taken on permit will be transferred to CSI with the grade assigned by the host college.

Students on permit must request that a transcript be sent from the host college to the Registrar at the College of Staten Island. A student who registers for permit courses but who is unable to complete the course registration at the host college should officially withdraw from the permit course(s) promptly.

Current matriculated students may arrange independent study and internships in most of the fields of study in the College's curriculum. To arrange for such courses, students must take the initiative in approaching faculty sponsors and in defining the project.

Independent study and internship forms are available in the Registrar's Office.

Independent Study undergraduate courses are numbered 591-594 and Internships are numbered 595-598. Both are awarded one to four credits.

The following definitions and policies apply:

Independent Study (numbered 591-594 in the discipline)

Independent Study is defined as an individual library or laboratory research or creative arts project under the direct supervision of a full-time faculty member. All Independent Study courses will be designated as liberal arts and sciences courses.

Internships (numbered 595-598 in the discipline)

Internships are experiences in a work situation that integrate an academic area of study with work experience. Courses designated Internships are individual, non-classroom, extended learning projects. They require an on-site supervisor as well as a full-time faculty member as project sponsor. Internships require a daily log of activities, an assigned reading list or preparation of a relevant bibliography, and a final paper that summarizes the way in which goals were achieved and demonstrates the relationship of academic material to the work done during the internship.

Internship courses are considered non-liberal arts and sciences. Internship students may not receive credit for paid employment unless they demonstrate the relationship of an appropriate body of academic material to the work required in their employment. The policy on individual Internship projects does not govern the regularly established professional internships (e.g., medical technology, communications).
Policies on Independent Study and Internships

1. Credit for Independent Study is awarded for study or research outside normal course offerings; credit for Internships is awarded for work experience related to an academic program, not for performing a job.

2. Students must have at least one introductory course or equivalent experience in an area as a prerequisite to Independent Study and Internships. Independent Study students are required to spend at least three hours of work per week per credit. Internship students are expected to spend at least two hours per week per credit at the on-site location and at least one additional hour per week per credit in reading, study, and preparation.

3. No more than four credits will be granted for an Independent Study or Internship. Credit will be granted only once for the same or a similar work situation or placement. No more than 9 credits of Independent Study and Internship course work will be accepted toward the 60+ credits required for the associate's degree; no more than 15 credits of Independent Study and Internship course work will be accepted toward the 120+ credits for the baccalaureate degree. The 9 and 15 credit limits are the maximum for the combined number of Independent Study and Internship credits. Enrollment in more than four credits of course work in Independent Study and an Internship in any given semester is not encouraged; permission will be granted only in unusual circumstances.

4. Students interested in Independent Study or an Internship must make arrangements with a full-time faculty member to sponsor the project. Internship students also require an on-site supervisor to evaluate their project. The individuals involved will sign a contract stipulating the expectations for completion of the course, evaluation criteria, and awarding of credit.

5. Arrangements for Independent Study and Internships must be made during the semester before the student wishes to enroll in these courses and must be approved by the faculty sponsor, on-site supervisor (where applicable), and the chairperson of the department or coordinator of the program.

6. For Internships, at least one on-site visit must be made by the faculty sponsor during the semester. At this time a joint conference with all participants in the project will be held for evaluation. For all Independent Study and Internship students a meeting and an evaluation of progress with the faculty sponsor is expected at least bimonthly.

7. Independent Study and Internship proposals are kept on file in the Registrar's Office.

8. Independent Study and Internship courses may not be used to satisfy general education requirements for any degree program. Independent Study and Internship courses may be used as electives in fulfillment of core or major requirements only if the application explicitly states that the course may so be used.

Experiential Learning

Matriculated students who have completed 15 credits may receive a maximum of 15 credits for experiential learning. This learning must be at college level; it may match the content of specific courses or not. Credit is awarded by the appropriate department after detailed assessment of the documentation provided by the student to that department. Further information is available for the Office of Recruitment and Admissions, room 406, North Administration building.

Credit by Examination

External Agencies:

The College will grant matriculated students a maximum of 30 credits on the basis of, among others, the following: Advanced Placement Courses (AP), Regents College Examinations, American College Testing Proficiency (ACT-PEP), and College Level Examination Programs (CLEP).

The College grants credit for designated CLEP General Examinations. For CLEP introductory subject exams with separate essay test, the College requires that students take both the multiple-choice objective test and the separate essay test. Award of credit is based on performance on both parts of the subject exam. In order to receive credit, students must pass the subject examinations with a scaled score in at least the 50th percentile and minimally equivalent to a passing grade of C.

Academic departments or programs may authorize the assignment of specific course equivalents for credit-by-examination through outside agencies. Otherwise, such credits will be acceptable only as elective credits. Credits granted by examination through outside agencies will appear on student records appropriately identified by type of exam, subject, number of credits, and P (passing) grade. No credit will be awarded for a subject area examination in which the student has already taken an equivalent college course or completed a higher level, more advanced college course. Based on faculty review and recommendations, the Office of Recruitment and Admissions monitors and coordinates the awarding of credit by examinations taken through outside agencies and the implementation of uniform College policy on credit-by-examination.

Departmental Challenge Examinations

At the discretion of academic departments or programs, students may take departmental challenge examinations to demonstrate college-level competency in courses that have not been taken at CSI (or at any other college), and for which no credit has already been received.
Integrity is fundamental to the academic enterprise. It is violated by such acts as borrowing or purchasing term papers, essays, reports, and other written assignments; using concealed notes or crib sheets during examinations; copying the work of others and submitting it as one’s own; and misappropriating the knowledge of others. The sources from which one derives one’s idea, statements, terms, and data must be fully and specifically acknowledged in the appropriate form; failure to do so, intentionally or unintentionally, constitutes plagiarism.

Violations of academic integrity may result in failure in a course and in disciplinary actions with penalties such as suspension or dismissal from the college.

The City University subscribes to the American Association of University Professors 1940 Statement of Principles on Academic Freedom, and the College of Staten Island respects academic freedom for faculty and students as well as freedom in their personal lives for all individuals in the campus community.
Degree and Certification Programs
One-Year Certificate Programs
Medical Assistant*
*New admissions to this program have been suspended. A certificate program is offered by the Office of Continuing Education and Professional Development.

Associate In Arts (A.A.)
Liberal Arts and Sciences

Associate in Science (A.S.)
Architectural Studies
Engineering Science
Liberal Arts and Sciences

Associate in Applied Science (A.A.S.)
Business
Civil Engineering Technology*
*New admissions to this program have been suspended.
Computer Technology
Electrical Engineering Technology
Medical Laboratory Technology
Nursing

Bachelor of Arts (B.A.) and Bachelor of Science (B.S.)
Accounting (B.S.)
African-American Studies (B.A.)
American Studies (B.A.)
Art (B.A.) and (B.S.)
Art/Photography Concentration
Biochemistry (B.S.)
Biology (B.S.)
Bioinformatics Option
Business (B.S.)
Business/Finance Concentration
Business/International Business Concentration
Business/Management Concentration
Business/Marketing Concentration
Chemistry (B.S.)
Cinema Studies (B.A.)
Communications (B.S.)
Computer Science (B.S.)
Computer Science-Mathematics (B.S.)
Dramatic Arts (B.S.)
Economics (B.A.) and (B.S.)
Economics/Business Specialization (B.S.)
Economics/Finance Specialization (B.S.)
Education (Education students major in an academic discipline)
Engineering Science (B.S.)
English (B.A.)
English/Dramatic Literature Concentration
History (B.A.)
Information Systems (B.S.)

International Studies (B.A.)
Mathematics (B.S.)
Degrees

Medical Technology (B.S.)
Music (B.A.) and (B.S.)
  Music/Electrical Technology Concentration (B.S.)
Nursing (B.S.)
Philosophy (B.A.)
Philosophy/Political Science (B.A.)
Physical Therapy (B.S./M.S.)
Physician Assistant (B.S.)
Physics (B.S.)
Political Science (B.A.)
Psychology (B.A.)
Science, Letters, and Society (B.A.)
Social Work (B.A.)
Sociology-Anthropology (B.A.)
Spanish (B.A.)
Women’s Studies (B.A.)

Graduate Degrees and Professional Certificate Program
(See Graduate Catalog for details.)

Adult Health Nursing (M.S.)
Biology (M.S.)
Cinema Studies (M.A.)
Computer Science (M.S.)
English (M.A.)
Environmental Science (M.A.)
Elementary Education (M.S.Ed.)
Secondary Education (M.S.Ed.)
Special Education (M.S.Ed.)
Education Supervision and Administration (Sixth-Year Professional Certificate)
History (M.A.)
Liberal Studies (M.A.)
Physical Therapy (B.S./M.S.)
Computer Science (Ph.D.) offered with the CUNY Graduate Center
Learning Processes (Ph.D.) offered as a subprogram of the Psychology program of the CUNY Graduate Center
Neuroscience (Ph.D.) offered as a subprogram of the Biology program of the CUNY Graduate Center
Physics (Ph.D.) offered with the CUNY Graduate Center
Polymer Chemistry (Ph.D.) offered jointly with Brooklyn College and the CUNY Graduate Center
This chapter provides detailed information on college preparation, testing, and orientation; requirements applicable to all degree programs—general education, liberal arts and sciences, core/major, minor, and honors— and information about the course numbering system at CSI.

**College Preparatory Initiative (CPI)**
The College Preparatory Initiative (CPI) is a collaborative effort between CUNY and the New York City Board of Education designed to strengthen the academic preparation of high school students.

Bachelor’s degree students and associate’s degree students entering CSI are expected to have a minimum of 16 CPI units, including four units of English, three units of mathematics, two units of laboratory science, four units of social sciences, two units of foreign language, and one unit of fine arts.

**CUNY Basic Skills Tests**
**ENGLISH:** Each student must successfully complete the City University of New York/American College Testing Reading Skills Test (C/ARST). Each student must successfully complete the City University of New York/American College Testing Writing Sample Test (C/AWST).

**MATHEMATICS:** Each student must successfully complete the City University of New York Mathematics Assessment Test (CMAT), which tests proficiency in basic mathematics skills.

(See section on Testing in the chapter on Academic Policies and Procedures.)

Students admitted to both baccalaureate and associate degree programs are expected to complete the remedial courses that qualify them to enter college-level writing and mathematics courses in one year, which may include, in addition to two semesters, a pre-freshman and a post-freshman summer immersion course and a winter intersession workshop.

**New Student Orientation Requirement**
Students who enter the College with fewer than six credits are required to complete the orientation requirement. Students are expected to complete this requirement during their first semester or prior to the completion of 12 equated credits.

To satisfy the requirement, students may choose between two options:

(A) Successful completion of a one-credit freshman orientation course:
- SPD 101 Issues in College Life (2 hours; 1 credit)
- SKO 100 Freshman Orientation (2 hours; 1 credit)
  (open only to SEEK students)

(B) Complete the five components of the non-credit College Life Unit Experiences (CLUE) program, which include:
- Attendance at a general orientation session on such topics as the purposes of higher education, an overview of College policies and services, an appreciation of diversity. Students should attend the orientation session prior to the beginning of classes.
- and
- Attendance at four CLUE certified events: two Personal Growth Experiences and two Co-curricular Experiences. Personal Growth topics include study skills, career development, self-development, substance abuse, and pluralism. Co-curricular Experiences include events offered in conjunction with the scholarly, cultural, and civic programs presented regularly at the College.

With some exceptions, baccalaureate degree programs require the successful completion of 120 credits and associate’s degree programs require the successful completion of 60 credits. Exceptions are the following programs: Bachelor of Science (B.S.): Computer Science, Engineering Science, Physician Assistant; Associate in Applied Science (A.A.S.): Civil Engineering Technology, Computer Technology, Electrical Engineering Technology, Medical Laboratory Technology, Nursing; Associate in Science (A.S.): Architectural Studies.

Students in American colleges and universities are required to take courses in what is called general education. These courses provide a broad and comprehensive introduction to knowledge as it is organized by academic disciplines. General education provides students with the skills and knowledge expected of educated persons:
- to read challenging texts in English and to write clearly and expressively;
- to experience at least one laboratory science as well as mathematics;
- to explore one or more social sciences and to comprehend their different perspectives on individuals and societies;
- to have an introduction to the systematic study of literature and the arts;
- to gain competence in at least one foreign language and knowledge of its cultural contexts;
- to understand the historical development of United States institutions and relationships among western and non-western cultures.

General education also serves as an introduction to more specialized kinds of knowledge. Students finish general education courses with the skills and vocabulary that enable them to complete successfully courses in their majors in both associate’s and bachelor’s degree programs.
Students develop college-level writing skills in courses that are chosen across the curriculum. Quality writing skills are learned in courses that include a significant writing component in the laboratory sciences, social sciences, literature, and languages.

**General Education Requirements**

The general education requirements at CSI are arranged in the following categories: Required Courses; Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Foreign Language; and Pluralism and Diversity.

The general education courses comprise 21 to 47 credits of the total credits required for associate's and bachelor's degrees. Some of the courses are to be taken within the student’s first 36 credits; all general education courses should be taken within the student’s first 60 credits.

To receive an Associate in Arts, a Bachelor of Arts, or a Bachelor of Science degree at the College of Staten Island, students must complete the general education requirements as indicated below, including four required courses that should be completed within the first 36 credits. These required courses are: ENG 111, ENG 151, COR 100, and PED 190. In addition, each associate’s and bachelor’s degree offered by the College has a set of requirements providing for courses outside the student’s major field of study. These course offerings are grouped in the categories listed above; the category each course satisfies is identified in the course descriptions by the designation in parenthesis. Whenever possible, all the general education courses should be completed within the first 60 credits.

With the exception of the Pluralism and Diversity requirement, courses used to meet the general education requirements may not count toward core or major requirements.

For the Honors College and for the Associate in Science and Associate in Applied Science degree programs, the general education requirements vary. Please see the descriptions for the following programs: Associate in Science (A.S.): Architectural Studies, Engineering Science, Liberal Arts and Sciences; Associate in Applied Science (A.A.S.): Business, Computer Technology, Civil Engineering Technology, Electrical Engineering Technology, Medical Laboratory Technology, and Nursing.

**Required Courses: 12 credits**

- ENG 111 Communications Workshop
  - 4 hours; 3 credits
- ENG 151 College Writing
  - 4 hours; 4 credits

Students who enter the Baccalaureate Program as freshmen are enrolled in baccalaureate sections of ENG 111 and ENG 151.

- COR 100 United States: Issues, Ideas, and Institutions
  - 4 hours; 4 credits
- PED 190 Fitness for Life
  - 2 hours; 1 credit

**Scientific Analysis: 11 credits**

A. Science and Technology: 8 credits

Courses fulfilling this requirement are in the disciplines of astronomy, biology, chemistry, electrical technology, geology, integrated science, and physics. One group of courses is designated as appropriate for students who do not intend to continue with advanced courses; another group is for students who do intend to continue.

Two semesters of laboratory science at the 100 level chosen from among the courses listed below, all of which have MTH 020 or its equivalent through placement as a prerequisite. Where appropriate, these courses will have experiments that incorporate the use of computers. They subscribe to the principle of writing across the curriculum and to the use of word processing in laboratory reports. Courses satisfying this requirement are marked (science) at the end of the course descriptions.

B. Mathematics: 3 credits

Courses fulfilling this requirement are broadly divided into four categories and choices should be based on the student’s intended field of study. In selecting a course appropriate to a specific major, refer to the section on Mathematics for information on placement tests, course descriptions and prerequisites. Courses numbered at 100 or higher that fulfill this requirement and are marked (math) at the end of the course description.

**Social Scientific Analysis: 7 - 8 credits**

Courses fulfilling this requirement are in the disciplines of African-American studies, American studies, anthropology, communications, economics, geography, history, philosophy, political science, psychology, sociology, and women's studies.

Two courses to be selected from those offered in the social sciences, at least one of which must be at the 200 level. The 200-level courses have a significant writing component and subscribe to the principle of writing-across-the-curriculum. Courses satisfying this requirement are marked (social science) at the end of the course description.
The West and the World: 4 credits
A 200-level course to be selected from the list below. These courses have ENG 111 and COR 100 as prerequisites and have a significant writing component and subscribe to the principle of writing-across-the-curriculum. Courses satisfying this requirement are marked (West and World) at the end of the course description.

Textual, Aesthetic, and Linguistic Analysis: 6 - 8 credits
Two courses, one from the list of offerings in literature and one from the list of offerings in the arts or communications at the 100 and 200 level, with ENG 111 and, in some cases, ENG 151 as prerequisite for the 200-level course. Courses included in this category are of a general, fundamental nature. The 200-level courses have a significant writing component and subscribe to the principle of writing-across-the-curriculum. Courses satisfying this requirement are marked (literature) or (art & com.) at the end of the course description.

Pluralism and Diversity: 0-4 credits
One course at the 200 level or above, which subscribes to the principle of writing-across-the-curriculum, to be selected either from those courses marked with an asterisk on the lists for Social Scientific Analysis, The West and the World, Textual, Aesthetic, and Linguistic Analysis, or from among those listed under Pluralism and Diversity. Courses satisfying this requirement are marked (P&D) at the end of the course description.

Foreign Language: 0-12 credits
Demonstration of proficiency through the intermediate level, 213. Students may complete this requirement by achieving a passing grade on the proficiency examination; or by taking three or fewer four-credit courses through level 213, depending on the results of their placement examination. Courses satisfying this requirement are marked (foreign lang.) at the end of the course description. (Not required for B.S. degree program in Information Systems.)

Scientific Analysis: 11 credits
Same as listed above for the A.A., B.A., and other B.S. degrees

Social Scientific Analysis: 3 - 4 credits
One course at the 100 or 200 level from the lists of those offered in the social sciences, with ENG 111 as prerequisite for the 200-level course. The 200-level courses have a significant writing component and subscribe to the principle of writing-across-the-curriculum. Courses satisfying this requirement are marked (social science) at the end of the course description.

The West and the World: 4 credits
Same requirement as shown above for the A.A., B.A., and other B.S. degrees.

Textual, Aesthetic, and Linguistic Analysis: 3 - 4 credits
One course at the 100 or 200 level from the lists of those offered in the arts or communications, with ENG 111 as prerequisite for the 200-level course.

Pluralism and Diversity: 0-4 credits
Same requirement as shown above for the A.A., B.A., and other B.S. degrees.

Courses Meeting the General Education Requirements
With the exception of courses used to fulfill the Pluralism and Diversity requirement, courses used to fulfill the general education requirements may not be used to fulfill core or major requirements. Courses that are marked with an asterisk (*) may also fulfill the Pluralism and Diversity requirement.

Scientific Analysis Courses
Science and Technology: courses are identified as (science) at the end of the course descriptions. Courses designed for students seeking an introduction to the sciences whose curriculum does not require the study of science beyond the introductory level; these courses are not suitable as prerequisites for further study in the sciences:
BIO 102 Human Body
BIO 106/107 Principles of Biology I/Laboratory
BIO 108/109 Principles of Biology II/Laboratory
CHM 106/107 Chemistry for Today I/Laboratory
CHM 108/109 Chemistry for Today II/Laboratory
Courses that provide the foundation for further study in the sciences:
- AST 100/101 Contemporary Theories of the Solar System/Planetary Laboratory
- AST 102/103 Contemporary Theories of the Universe/Galactic Laboratory
- AST 105 Observational Astronomy
- BIO 100/101 General Biology I/Laboratory
- BIO 180/181 General Biology II/Laboratory
- CHM 141/121 General Chemistry I/Laboratory
- CHM 142/127 General Chemistry II/Laboratory
- GEO 100/101 Physical Geology/Laboratory
- GEO 102/103 Historical Geology/Laboratory
- PHY 120/121 General Physics I/Laboratory
- PHY 160/161 General Physics II/Laboratory

Courses designed as introductory science sequences for students in particular programs; these courses are intended to be taken only by students in the programs for which they have been designed:
- CHM 110/111 Principles of Chemistry I/Laboratory
- CHM 116/117 Principles of Chemistry II/Laboratory (for Nursing and Physician Assistant students)
- PHY 110/111 College Physics I/Laboratory
- PHY 150/151 College Physics II/Laboratory
- PHY 153 Waves, Optics, and Modern Physics (for Engineering Technology students)
- PHY 114 Introduction to Physics (for Nursing students)
- PHY 116 Physics I
- PHY 156 Physics II (for health science and life science students)

Courses design to introduce students to the application of science in technology:
- ELT 102 Introduction to Electrical and Electronic Technology
- ELT 124/121 Principles of Electricity Fundamentals/Laboratory
- ELT 240/241 Principles of Digital Electronics/Laboratory
- SCI 106 Power, Pollution, and Energy

(Math) Mathematics: courses are identified as (math) at the end of the course descriptions. One course numbered 100 or higher with 3 credits or more:

100-level courses that satisfy this requirement:
- MTH 102 Mathematics for Liberal Arts Students
- MTH 109 Mathematics and the Environment
- MTH 113 Introduction to Probability with Statistics and Computer Applications
- MTH 121 Finite Mathematics
- MTH 123 College Algebra and Trigonometry
- MTH 130 Pre-Calculus Mathematics

200-level courses that satisfy this requirement include:
- MTH 230 Calculus I with Pre-Calculus
- MTH 231 Analytic Geometry and Calculus I

Students should consult the Department of Mathematics to determine appropriate placement in this sequence of courses for further study of mathematics. Please note that some degree programs have specific requirements in mathematics.

(Social Science) Social Scientific Analysis Courses

Courses are identified as (social science) at the end of the course descriptions. Courses that are marked with an asterisk (*) also fulfill
the Pluralism and Diversity Requirement and are identified \( \textbf{(P&D)} \) at the end of the course descriptions.

### 100-level courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AFA 160</td>
<td>African-American History 1619 to the Present</td>
</tr>
<tr>
<td>AMS 101</td>
<td>America: An Introduction</td>
</tr>
<tr>
<td>ANT 100</td>
<td>Introduction to Anthropology</td>
</tr>
<tr>
<td>ECO 101</td>
<td>Introduction to Economics</td>
</tr>
<tr>
<td>GEG 100</td>
<td>Introduction to Geography</td>
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<tr>
<td>HST 100</td>
<td>Past and Present</td>
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<tr>
<td>HST 116</td>
<td>Freshman Seminar in History</td>
</tr>
<tr>
<td>PHL 101</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHL 130</td>
<td>Introduction to Ethics</td>
</tr>
<tr>
<td>POL 100</td>
<td>American Government and Politics</td>
</tr>
<tr>
<td>POL 103</td>
<td>Understanding the Political World: An Introduction to Political Science</td>
</tr>
<tr>
<td>PSY 100</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>SOC 100</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>WMS 100/</td>
<td>Women's History and Feminist Theory</td>
</tr>
</tbody>
</table>

### 200-level courses with ENG 111 as a prerequisite (see course description for other prerequisites, which may include COR 100):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFA 211*</td>
<td>American Culture in Black and White</td>
</tr>
<tr>
<td>AMS 211</td>
<td>American Culture in Black and White</td>
</tr>
<tr>
<td>AMS 262*</td>
<td>African-American History: 1619-1865</td>
</tr>
<tr>
<td>AMS 263*</td>
<td>African-American History: 1865-Present</td>
</tr>
<tr>
<td>AMS 265*</td>
<td>History of the Caribbean</td>
</tr>
<tr>
<td>AMS 269*</td>
<td>Blacks in Urban America 1900-Present</td>
</tr>
<tr>
<td>AMS 210/</td>
<td>AMERICAN CULTURE IN BLACK AND WHITE</td>
</tr>
<tr>
<td>AMS 214</td>
<td>America in the World</td>
</tr>
<tr>
<td>AMS 221</td>
<td>The American Dream</td>
</tr>
<tr>
<td>AMS 222</td>
<td>The City in American Culture</td>
</tr>
<tr>
<td>AMS 224</td>
<td>Religion in America</td>
</tr>
<tr>
<td>AMS 231</td>
<td>American Myths and Realities</td>
</tr>
<tr>
<td>AMS 251/</td>
<td>Twentieth-Century America</td>
</tr>
<tr>
<td>AMS 240</td>
<td>American Myths and Realities</td>
</tr>
<tr>
<td>HST 220</td>
<td>Medieval Thought and Civilization</td>
</tr>
<tr>
<td>HST 224</td>
<td>Jewish History</td>
</tr>
<tr>
<td>HST 225</td>
<td>History of Christianity</td>
</tr>
<tr>
<td>HST 228</td>
<td>Renaissance-Reformation Europe</td>
</tr>
<tr>
<td>HST 230</td>
<td>Early Modern England</td>
</tr>
<tr>
<td>HST 235*</td>
<td>The Modern Middle East</td>
</tr>
<tr>
<td>HST 236*</td>
<td>Asian-American History</td>
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<tr>
<td>HST 239*</td>
<td>History of the City</td>
</tr>
<tr>
<td>HST 245</td>
<td>U.S. History, 1865-1865</td>
</tr>
<tr>
<td>HST 248*</td>
<td>N.Y.C.: History and Problems</td>
</tr>
<tr>
<td>HST 249*</td>
<td>Italian-American History</td>
</tr>
<tr>
<td>HST 257*</td>
<td>The History of American Immigration</td>
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<tr>
<td>HST 259*</td>
<td>History of the U.S. City</td>
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<tr>
<td>HST 260*</td>
<td>Modern British History: 1700-1900</td>
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<tr>
<td>HST 262</td>
<td>History of Modern Germany</td>
</tr>
<tr>
<td>HST 266</td>
<td>History of Modern Russia</td>
</tr>
<tr>
<td>HST 267</td>
<td>History of Italy</td>
</tr>
<tr>
<td>HST 268*</td>
<td>Twentieth-Century Europe</td>
</tr>
<tr>
<td>HST 269**</td>
<td>History of American Women</td>
</tr>
<tr>
<td>HST 270*</td>
<td>History of Modern Germany</td>
</tr>
<tr>
<td>HST 271</td>
<td>History of Modern Italy</td>
</tr>
<tr>
<td>HST 272</td>
<td>Modern Germany</td>
</tr>
<tr>
<td>HST 277</td>
<td>Europe: 1815-1914</td>
</tr>
<tr>
<td>HST 278</td>
<td>Twentieth-Century Europe</td>
</tr>
<tr>
<td>HST 279</td>
<td>History of Education in the U.S.</td>
</tr>
<tr>
<td>HST 280</td>
<td>History of Modern Britain</td>
</tr>
<tr>
<td>HST 281*</td>
<td>Modern British History</td>
</tr>
<tr>
<td>PHL 213</td>
<td>Existentialism</td>
</tr>
<tr>
<td>PHL 216</td>
<td>Ideas of the World, 600 B.C. - 1600 A.D.</td>
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<tr>
<td>PHL 217</td>
<td>Ideas of the World, 1600 to the Present</td>
</tr>
<tr>
<td>PHL 220</td>
<td>Experience and Knowledge</td>
</tr>
<tr>
<td>PHL 221</td>
<td>Logic and Scientific Method</td>
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<tr>
<td>PHL 222</td>
<td>Philosophical Thinking</td>
</tr>
<tr>
<td>PHL 223</td>
<td>Life and Death</td>
</tr>
<tr>
<td>PHL 227</td>
<td>The Tragic Dilemma</td>
</tr>
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<td>PHL 230</td>
<td>Philosophy of Religion</td>
</tr>
<tr>
<td>PHL 236</td>
<td>Comparative Religion</td>
</tr>
<tr>
<td>POL 201*</td>
<td>Early Political Theory</td>
</tr>
<tr>
<td>POL 202/</td>
<td>Modern Political Theory</td>
</tr>
<tr>
<td>POL 204/</td>
<td>American Political and Legal Thought</td>
</tr>
<tr>
<td>POL 211</td>
<td>The American Presidency</td>
</tr>
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### (social science)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MGT 223</td>
<td>Public Administration</td>
</tr>
<tr>
<td>POL 231</td>
<td>City Hall and Albany</td>
</tr>
<tr>
<td>POL 233</td>
<td>CUNY Internship Program in New York: Government and Politics I</td>
</tr>
<tr>
<td>POL 234</td>
<td>CUNY Internship Program in New York: Government and Politics II</td>
</tr>
<tr>
<td>POL 235</td>
<td>The American Political System</td>
</tr>
<tr>
<td>SLS 235</td>
<td></td>
</tr>
<tr>
<td>POL 241</td>
<td>Western European Politics: United Kingdom, France, Italy, Germany</td>
</tr>
<tr>
<td>POL 244</td>
<td>Soviet People and Their World</td>
</tr>
<tr>
<td>POL 246</td>
<td>Nazism and the Holocaust</td>
</tr>
<tr>
<td>POL 252</td>
<td>Middle East Politics</td>
</tr>
<tr>
<td>POL 256</td>
<td>The Contemporary Far Eastern Political Scene</td>
</tr>
<tr>
<td>PSY 202</td>
<td>Psychopathology</td>
</tr>
<tr>
<td>PSY 226</td>
<td>Theories of Personality</td>
</tr>
<tr>
<td>PSY 242</td>
<td>Developmental Psychology</td>
</tr>
<tr>
<td>SLS 225</td>
<td></td>
</tr>
<tr>
<td>SOC 225</td>
<td>Social Thought</td>
</tr>
<tr>
<td>SLS 230</td>
<td>American Society</td>
</tr>
<tr>
<td>SLS 245</td>
<td>Contemporary Social Issues</td>
</tr>
</tbody>
</table>

### (west & world)

#### The West and the World Courses

These courses have ENG 111 as a prerequisite (see course descriptions for other prerequisites, which may include COR 100):

Courses are identified as (West and World) at the end of the course descriptions. Courses that are marked with an asterisk (*) also fulfill the Pluralism and Diversity Requirement and are identified (P&D) at the end of the course descriptions.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFA 260</td>
<td></td>
</tr>
<tr>
<td>HST 207</td>
<td>History of Africa</td>
</tr>
<tr>
<td>ANT 205*</td>
<td>Native American Societies</td>
</tr>
<tr>
<td>ECO 250</td>
<td>International Economics</td>
</tr>
<tr>
<td>ECO 256*</td>
<td>Analysis of Underdeveloped Areas</td>
</tr>
<tr>
<td>GEG 252</td>
<td></td>
</tr>
<tr>
<td>ECO 252</td>
<td>Economic Geography</td>
</tr>
<tr>
<td>GEG 264*</td>
<td></td>
</tr>
<tr>
<td>POL 264</td>
<td>Political Geography</td>
</tr>
<tr>
<td>GEG 266*</td>
<td></td>
</tr>
<tr>
<td>PHL 266</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>HST 203*</td>
<td>World Since 1914</td>
</tr>
<tr>
<td>HST 206*</td>
<td>Modern China</td>
</tr>
<tr>
<td>HST 209*</td>
<td>Modern Japan</td>
</tr>
</tbody>
</table>

### (literature)

#### Textual, Aesthetic, and Linguistic Analysis Courses

These courses have ENG 111, and in some cases ENG 151, as prerequisite.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFA 221*</td>
<td>African-American Literature</td>
</tr>
<tr>
<td>ENH 221</td>
<td></td>
</tr>
<tr>
<td>AFA 225</td>
<td>Contemporary Third World Literature</td>
</tr>
<tr>
<td>AMS 243</td>
<td>American Humor</td>
</tr>
<tr>
<td>DRA 215*</td>
<td></td>
</tr>
<tr>
<td>ENH 212</td>
<td>Modes of Drama</td>
</tr>
<tr>
<td>DRA 260</td>
<td>History of Theatre I</td>
</tr>
<tr>
<td>DRA 261</td>
<td>History of Theatre II</td>
</tr>
<tr>
<td>ENH 201</td>
<td>English Literature to 1800</td>
</tr>
<tr>
<td>ENH 202</td>
<td>English Literature since 1800</td>
</tr>
<tr>
<td>ENH 203</td>
<td>Literary History of the US to 1855</td>
</tr>
<tr>
<td>ENH 204</td>
<td>Literary History of the US since 1855</td>
</tr>
<tr>
<td>ENH 205</td>
<td>Classics of European Literature</td>
</tr>
<tr>
<td>ENH 206</td>
<td>Classics of Modern World Literature</td>
</tr>
<tr>
<td>ENH 207*</td>
<td></td>
</tr>
<tr>
<td>ENH 208</td>
<td>Contemporary Literature</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>ENH 210</td>
<td>Modes of Fiction</td>
</tr>
<tr>
<td>ENH 211</td>
<td>Modes of Poetry</td>
</tr>
<tr>
<td>ENH 213</td>
<td>Nonfiction</td>
</tr>
<tr>
<td>ENH 214</td>
<td>Trends in Literature and Film</td>
</tr>
<tr>
<td>ENH 215</td>
<td>Literature and Humanities</td>
</tr>
<tr>
<td>ENH 216</td>
<td>The Bible and Later Literature</td>
</tr>
<tr>
<td>ENH 217</td>
<td>Introduction to Shakespeare</td>
</tr>
<tr>
<td>ENH 222*/</td>
<td></td>
</tr>
<tr>
<td>WMS 222</td>
<td>Women and Literature</td>
</tr>
</tbody>
</table>

Any 300- or 400-level course in foreign literature (FRN, ITL, SPN) or equivalent courses in other languages if offered. Some of these courses require a reading knowledge of the language; others allow students without knowledge of the language to read the works in English translation. Foreign language courses at the 300- or 400-level are included since many students place directly into these upper-level courses and need not pass through the prerequisite language courses.

### Arts and Communications: 100-level
Courses are identified as (arts & com.,) at the end of the course descriptions:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 100</td>
<td>Introduction to the Visual Arts</td>
</tr>
<tr>
<td>ART 103</td>
<td>History of Art to the Renaissance</td>
</tr>
<tr>
<td>ART 104</td>
<td>History of Art After the Renaissance</td>
</tr>
<tr>
<td>ART 120</td>
<td>Introductory Drawing</td>
</tr>
<tr>
<td>ART 130</td>
<td>Introductory Painting</td>
</tr>
<tr>
<td>ART 150</td>
<td>Introductory Sculpture</td>
</tr>
<tr>
<td>AMS 150/</td>
<td></td>
</tr>
<tr>
<td>DAN 150</td>
<td>Dance History: Twentieth-Century Survey</td>
</tr>
</tbody>
</table>

### Arts and Communications: 200-level
Courses are identified as (arts & com.,) at the end of the course descriptions:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS 209/</td>
<td></td>
</tr>
<tr>
<td>ART 209</td>
<td>Art and Society in America</td>
</tr>
<tr>
<td>AMS 230/</td>
<td></td>
</tr>
<tr>
<td>CIN 230</td>
<td>American Film and American Myth</td>
</tr>
<tr>
<td>AMS 236/</td>
<td></td>
</tr>
<tr>
<td>MUS 236</td>
<td>Music in American Life</td>
</tr>
<tr>
<td>AMS 237/</td>
<td></td>
</tr>
<tr>
<td>MUS 237</td>
<td>American Musical Theater</td>
</tr>
<tr>
<td>AMS 241</td>
<td>Popular Culture and Mass Society</td>
</tr>
<tr>
<td>AMS 252</td>
<td>American Art</td>
</tr>
<tr>
<td>ART 203</td>
<td>Art of the Ancient World</td>
</tr>
<tr>
<td>ART 207</td>
<td>Nineteenth-Century Art</td>
</tr>
<tr>
<td>ART 208</td>
<td>Twentieth-Century Art</td>
</tr>
</tbody>
</table>

### Pluralism and Diversity Courses
One course to be selected either from those marked with an asterisk (*) in the lists above or from among the following. These courses can be selected so as to fulfill one of the other requirements as well.
Courses are identified (P&D) at the end of the course descriptions:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFA 247/</td>
<td></td>
</tr>
<tr>
<td>HST 266</td>
<td>Peoples and Cultures of Africa</td>
</tr>
<tr>
<td>AFA 253/</td>
<td></td>
</tr>
<tr>
<td>POL 253</td>
<td>African Politics</td>
</tr>
<tr>
<td>AFA 323/</td>
<td></td>
</tr>
<tr>
<td>ENL 392</td>
<td>The Black Writer in the Modern World</td>
</tr>
<tr>
<td>AFA 361/</td>
<td></td>
</tr>
<tr>
<td>HST 361</td>
<td>The Heritage of Marcus Garvey and W.E.B. DuBois</td>
</tr>
</tbody>
</table>

(art & com.)
(P&D)

(art & com.)
(P&D)
### Degree Requirements

<table>
<thead>
<tr>
<th>Core/Major Requirement</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENL 366 Walt Whitman</td>
<td>HST 251 History of the U.S. City</td>
</tr>
<tr>
<td>ENL 384/</td>
<td>HST 386/</td>
</tr>
<tr>
<td>WMS 384 Major Woman Author I</td>
<td>WMS 386 The Recovery of Women’s Past</td>
</tr>
<tr>
<td>ENL 385/</td>
<td>PHL 344 Eastern Philosophy</td>
</tr>
<tr>
<td>WMS 385 Major Woman Author II</td>
<td>POL 338 Civil Rights and Liberties</td>
</tr>
<tr>
<td>ENL 386/</td>
<td>POL 342 Comparative Politics of Developing Countries</td>
</tr>
<tr>
<td>WMS 387 Major Woman Author III</td>
<td>POL 349 Comparative Human Rights</td>
</tr>
<tr>
<td>ENL 390/</td>
<td>POL 353 China: Politics and Foreign Relations</td>
</tr>
<tr>
<td>WMS 390 Studies in Women in Literature and the Arts</td>
<td>PSY 213 Cross-Cultural Psychology</td>
</tr>
<tr>
<td>ENL 391/</td>
<td>SOC 260 Class, Status, and Power</td>
</tr>
<tr>
<td>WMS 391 Woman as Hero</td>
<td>SOC 330/</td>
</tr>
<tr>
<td>ENL 396/</td>
<td>WMS 330/</td>
</tr>
<tr>
<td>LNG 396 Studies in Global Literature I</td>
<td>ANT 331 Women and Work</td>
</tr>
<tr>
<td>ENL 397/</td>
<td>SOC 340 Ethnicity and Immigration</td>
</tr>
<tr>
<td>LNG 397 Studies in Global Literature II</td>
<td>SOC 350 Psychosocial Aspects of Disability</td>
</tr>
<tr>
<td>ENL 398 Cultural Variety in the Literature of the United States</td>
<td>SPN 325 The Civilization of Pre-Columbian Spanish</td>
</tr>
<tr>
<td>HST 258/</td>
<td>America</td>
</tr>
<tr>
<td>SLS 240 World Civilization I</td>
<td>SPN 330 The Civilization of Spanish America</td>
</tr>
<tr>
<td>HST 239/</td>
<td>SPN 350 Introduction to Spanish-American Literature</td>
</tr>
<tr>
<td>SLS 241 World Civilization II</td>
<td>SPN 480 Literature of the Hispanic Caribbean</td>
</tr>
</tbody>
</table>

### Foreign Language Courses

Demonstration of proficiency is required through the intermediate level, 213.

Courses are identified (foreign lang.) at the end of the course descriptions.

<table>
<thead>
<tr>
<th>Foreign Language</th>
<th>Core/Major Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 113</td>
<td>American Sign Language I</td>
</tr>
<tr>
<td>ASL 114</td>
<td>American Sign Language II</td>
</tr>
<tr>
<td>ASL 213</td>
<td>American Sign Language III</td>
</tr>
<tr>
<td>ASL 215</td>
<td>American Sign Language IV</td>
</tr>
<tr>
<td>FRN 113</td>
<td>Basic French I</td>
</tr>
<tr>
<td>FRN 114</td>
<td>Basic French II</td>
</tr>
<tr>
<td>FRN 213</td>
<td>Continuing French I</td>
</tr>
<tr>
<td>FRN 215</td>
<td>Continuing French II</td>
</tr>
<tr>
<td>ITL 113</td>
<td>Basic Italian I</td>
</tr>
<tr>
<td>ITL 114</td>
<td>Basic Italian II</td>
</tr>
<tr>
<td>ITL 213</td>
<td>Continuing Italian I</td>
</tr>
<tr>
<td>ITL 215</td>
<td>Continuing Italian II</td>
</tr>
<tr>
<td>SPN 113</td>
<td>Basic Spanish I</td>
</tr>
<tr>
<td>SPN 114</td>
<td>Basic Spanish II</td>
</tr>
<tr>
<td>SPN 213</td>
<td>Continuing Spanish I</td>
</tr>
<tr>
<td>SPN 215</td>
<td>Continuing Spanish II</td>
</tr>
</tbody>
</table>

### Core/Major Requirement

Programs leading to a degree (with the exception of the A.A. and A.S. degrees in Liberal Arts and Sciences) require a concentrated study of a particular subject. This requirement is called the core requirement for associate's degrees and the major requirement for bachelor's degrees. The core and major requirements for each degree are listed under the degree.

### GPA

All students are required to achieve at least a 2.0 grade point average in their core or major requirements in order to earn an undergraduate degree at the college. Some programs require a higher GPA. Some cores and majors require courses that must be taken during the freshman and sophomore years to provide the background necessary for the required core or major courses. These courses are identified as pre-major and listed under the degree description.

Courses used to fulfill pre-major requirements may also be used to fulfill general education requirements but may not be used to fulfill major requirements.

Courses used to fulfill core or major requirements may also be used to fulfill the pluralism and diversity requirement but may not be used to fulfill other general education requirements.

### Electives

Each associate's and bachelor's degree program requires a specified total number of credits. Credits not counted toward general education, pre-major, or core/major requirements are electives. Students may freely choose their elective courses from among the courses offered in the College. However, students should keep in mind the liberal arts and sciences requirement; in some programs it may be necessary to choose as electives only those courses that are designated as liberal arts and sciences courses in order to accumulate the required number of liberal arts and sciences credits to qualify for the degree. Several programs have particular courses or groups of courses that are recommended as electives. Students should consult their adviser when choosing elective courses.
Courses are classified as liberal arts and sciences or as non-liberal arts and sciences. For undergraduate degrees, the New York State Department of Education requires that a portion of the credit hours in the degree program must be in the liberal arts and sciences. These requirements are:

1) Associate in Arts (A.A.) and Bachelor of Arts (B.A.), three-quarters of the credits shall be in the liberal arts and sciences;
2) Associate in Science (A.S.) and Bachelor of Science (B.S.), one-half of the credits shall be in the liberal arts and sciences;
3) Associate in Applied Science (A.A.S.), one-third of the credits shall be in the liberal arts and sciences.

CSI courses are classified as follows:

**Liberal Arts and Sciences Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFA</td>
<td>African-American Studies (except AFA 122, 203)</td>
</tr>
<tr>
<td>AMS</td>
<td>American Studies</td>
</tr>
<tr>
<td>ANT</td>
<td>Anthropology</td>
</tr>
<tr>
<td>ART</td>
<td>Art History (ART 100, 103, 104, 105, 203, 207, 208, 209, 210, 300, 301, 303, 304, 308, 440, 441)</td>
</tr>
<tr>
<td>AST</td>
<td>Astronomy</td>
</tr>
<tr>
<td>BIO</td>
<td>Biology (except BIO 316)</td>
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<tr>
<td>CHM</td>
<td>Chemistry</td>
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<tr>
<td>CIN</td>
<td>Cinema Studies (CIN 100, 210, 220, 301, 302, 303, 304, 401, 402, 403, 404, 405, 406, 407, 408)</td>
</tr>
<tr>
<td>COM</td>
<td>Communications (COM 100, 200, 201, 203, 211, 214, 220, 225, 230, 241, 277, 312, 370, 371, 374, 400, 412, 438, 445, 465, 475, 480, 490)</td>
</tr>
<tr>
<td>COR</td>
<td>General Education (261)</td>
</tr>
<tr>
<td>DAN</td>
<td>Dance (only DAN 150)</td>
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<tr>
<td>DRA</td>
<td>Dramatic Arts (DRA 100, 101, 260, 261, all DRA/ENG, DRA/ENH, DRA/ENL, DRA/FRN, and DRA/SPN courses)</td>
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<tr>
<td>ECO</td>
<td>Economics</td>
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<tr>
<td>EDC</td>
<td>Early Childhood Education (EDC 215, 216)</td>
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<tr>
<td>EDD</td>
<td>Education (EDD 252)</td>
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<tr>
<td>EDE</td>
<td>Elementary Education (EDE 200, 260)</td>
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<tr>
<td>EDS</td>
<td>Secondary Education (EDS 200)</td>
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<tr>
<td>ENG</td>
<td>English</td>
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<td>ENH</td>
<td>English</td>
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<td>ENL</td>
<td>English (except ENL 352)</td>
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<tr>
<td>ENS</td>
<td>Engineering Science (ENS 250, 309, 310, 316, 350, 356, 383, 384, 450)</td>
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<tr>
<td>FNC/</td>
<td>Finance/Economics (FNC/ECO 213, 214, 240, 315, 345, 360, and 370)</td>
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<td>FRA</td>
<td>French</td>
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<td>GEG</td>
<td>Geography</td>
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<td>GEO</td>
<td>Geology</td>
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<td>Honors College/Honors Seminar</td>
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<td>HST</td>
<td>History</td>
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<td>FBU</td>
<td>Freshman Workshop in Business</td>
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<td>FHU</td>
<td>Freshman Workshop in Humanities</td>
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<td>FSC</td>
<td>Freshman Workshop in Science/Technology</td>
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<td>FSS</td>
<td>Freshman Workshop in Social Science</td>
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<td>INS</td>
<td>Integrated Science</td>
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<td>INT</td>
<td>International Studies</td>
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<td>ITL</td>
<td>Italian</td>
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<td>Language</td>
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<tr>
<td>MTH</td>
<td>Mathematics</td>
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<tr>
<td>MUS</td>
<td>Music (MUS 108, 110, 120, 211, 212, 223, 224, 225, 226, 237, 241, 242, 243, 244, 258, 322, 326, 338, 360, 420, 422, 424, 430, 440, 441, 450, 460, 470)</td>
</tr>
<tr>
<td>PCA</td>
<td>Performing and Creative Arts</td>
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<tr>
<td>PHL</td>
<td>Philosophy</td>
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<td>PHY</td>
<td>Physics</td>
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<tr>
<td>POL</td>
<td>Political Science (except POL 335, 394)</td>
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<tr>
<td>PSY</td>
<td>Psychology (except PSY 103, 211, 318, 340, 368)</td>
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<tr>
<td>SCI</td>
<td>Science (only SCI 106)</td>
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<tr>
<td>SLS</td>
<td>Science, Letters and Society</td>
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<tr>
<td>SOC</td>
<td>Sociology</td>
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<td>SPN</td>
<td>Spanish</td>
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<tr>
<td>WMS</td>
<td>Women's Studies</td>
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**Non-Liberal Arts and Sciences Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACC</td>
<td>Accounting</td>
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<tr>
<td>AFA</td>
<td>African-American Studies (only AFA 122, 230)</td>
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<tr>
<td>ARC</td>
<td>Architecture</td>
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<tr>
<td>BIO</td>
<td>Biology (only BIO 316)</td>
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<tr>
<td>BUS</td>
<td>Business</td>
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<tr>
<td>CIN</td>
<td>Cinema Studies (CIN 111, 112, 113, 211, 311, and 411)</td>
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<tr>
<td>CET</td>
<td>Civil Engineering Technology</td>
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<tr>
<td>COM</td>
<td>Communications (COM 210, 240, 249, 250, 251, 260, 261, 270, 271, 290)</td>
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<tr>
<td>CSC</td>
<td>Computer Science</td>
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<tr>
<td>DAN</td>
<td>Dance (except DAN 150)</td>
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<tr>
<td>EDC</td>
<td>Early Childhood Education (except EDC 215, 216)</td>
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<td>EDD</td>
<td>Education - General (except EDD 400)</td>
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<td>EDE</td>
<td>Elementary Education (except EDD 200, 260)</td>
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<tr>
<td>EDP</td>
<td>Special Education</td>
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<tr>
<td>EDS</td>
<td>Secondary Education (except EDS 200)</td>
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<tr>
<td>EFT</td>
<td>Electrical Engineering Technology</td>
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<td>Degree Requirements</td>
<td>56</td>
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<tr>
<td><strong>ENT</strong></td>
<td>Engineering Technology</td>
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<tr>
<td><strong>NRS</strong></td>
<td>Nursing</td>
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<tr>
<td><strong>PMT</strong></td>
<td>Physician Assistant</td>
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<tr>
<td><strong>FNC</strong></td>
<td>Finance (only FNC 220, 350)</td>
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<tr>
<td><strong>PED</strong></td>
<td>Fitness for Life</td>
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<tr>
<td><strong>HED</strong></td>
<td>Health Education</td>
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<td><strong>PHO</strong></td>
<td>Photography</td>
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<td><strong>LGS</strong></td>
<td>Legal Studies</td>
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<tr>
<td><strong>PHT</strong></td>
<td>Physical Therapy</td>
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<tr>
<td><strong>MGT</strong></td>
<td>Management (except MGT/POL 223, MGT/ECO 230, MGT/ECO 261, MGT/POL 323, MGT/POL 339)</td>
</tr>
<tr>
<td><strong>POL</strong></td>
<td>Political Science (only POL 335, 394)</td>
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<tr>
<td><strong>PSY</strong></td>
<td>Psychology (only PSY 211, 318, 340, 368)</td>
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<tr>
<td><strong>MDT</strong></td>
<td>Medical Technology</td>
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<tr>
<td><strong>PSK</strong></td>
<td>SEEK Orientation</td>
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<tr>
<td><strong>HMA</strong></td>
<td>Medical Assistant</td>
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<tr>
<td><strong>SPD</strong></td>
<td>Student Services</td>
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<tr>
<td><strong>MUS</strong></td>
<td>Music (MUS 115, 116, 144, 145, 150, 151, 215, 216, 246, 247, 250, 252, 253, 352, 353, 431, 433, 436)</td>
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<tr>
<td><strong>SWK</strong></td>
<td>Social Work</td>
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</tbody>
</table>

Internships and field study courses are non-liberal arts and sciences.

**Double Majors/Double Degrees**

For students who wish to major in more than one field of study, complete a double major, or to earn two degrees (double degrees), the following policies apply:

To major in more than one field of study, students must complete all of the core or major requirements for each of the fields. If the general education requirements of the two fields differ, the student must complete the more restrictive and demanding of the two. If the total credits required differ, the student must complete the larger number. To have the second core or major recorded on the final transcript the student must apply for both fields when filing for graduation. Upon satisfactory completion of the requirements, both fields of study will be recorded on the final transcript.

To receive a second degree, it is necessary to complete the requirements of the second field of study and to complete at least 30 credits more than the number of credits required to complete the first degree.

**Minor Requirements**

In addition to completing the requirements of a major for a bachelor's degree, students may choose to minor in a discipline related to or complementary to their major field of study. Minors may be completed in almost all areas of study offered by the College. Requirements for completing a particular minor may be found in the section describing programs and courses in that field. Students are encouraged to consider taking a minor to guide their choice of elective courses into a coherent package and to enhance their career opportunities.

To have a minor recorded on the student's final transcript, the student must apply for the minor when filing for graduation.

**Honors Requirements**

**Departmental Honors**

Students may graduate with honors in their field of study in most bachelor's degree majors. To receive honors, the student must have at least a 3.5 grade point average in courses taken in the major and/or pass a comprehensive examination in the subject. The student must also complete an honors thesis or project. This last requirement is the heart of the honors program, for each student must work closely with a faculty member to define the project, carry out the research and investigation, and write the final report or prepare the final project. Students may receive credit through independent study for their work on an honors project. The projects must be accepted by the department. Students who successfully complete these requirements will receive the notation on their transcript that they have graduated with honors in their field of study. For specific requirements, see the section on Honors Requirements under the bachelor's degree program description.

**Graduation with Honors**

Undergraduates who meet the qualifications will receive the associate's or bachelor's degree summa cum laude, magna cum laude, or cum laude as follows:
- Cumulative GPA of at least 3.90: summa cum laude
- Cumulative GPA of at least 3.75: magna cum laude
- Cumulative GPA of at least 3.50: cum laude.

**Course Numbering**

**ALPHA Designation**

The section on Programs and Course Descriptions lists the requirements and courses for the degree programs in alphabetical order by the ALPHA designation for the courses in the discipline, from ACC for Accounting to WMS for Women's Studies. The description of core or major requirements is followed by the course descriptions in numerical order from 00X to 400-level courses.
500-Level Courses

Topics courses, independent study, and individual internships are designated at the 500-level with the alpha symbol for the discipline. 500-level courses, by their very nature, have no registered description and are not listed under course descriptions for the disciplines. Topics courses may be taught for a maximum of three semesters and may not be used to fulfill requirements. The designations are topics courses: 500-590 (1 - 4 credits); independent study courses, 591-594 (1 - 4 credits); internships, 595-598 (1 - 4 credits).
Accounting
(Bachelor of Science, Minor)
Department of Business
Chair, Professor Laura Nowak, Business Building (3N), room 219
The program offers preparation for careers in accounting, managerial accounting, and for advanced study toward the CPA.

Accounting (B.S.)
General Education Requirements for the B.S.
ENGL 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 21-27 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
       Chosen from: MTH 121, MTH 123, MTH 130, MTH 230, MTH 231, MTH 235
2. Social Scientific Analysis: (3-4 credits)
   Including: ECO 101 Introduction to Economics
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (3-4 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   c. Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
   See section on general education requirements for approved course lists and complete details.

Pre-Major Requirements: 35-38 credits
Business Courses
   MGT 110 Organization Theory and Management 3 credits
   MKT 111 Marketing 3 credits
   ECO 240 Managerial Finance I 3 credits
Economics Courses
   ECO 210 Price Theory 4 credits
   ECO 212 Income and Employment Theory 4 credits
Quantitative and Computer Courses
   ACC 114 Introduction to Accounting I 4 credits
   ACC 121 Introduction to Accounting II 4 credits
   BUS 150 Essential Software Tools for Business 3 credits
or
   CSC 102 Computing for Today 4 credits
or
   CSC 126 Introduction to Computer Science 4 credits
   MGT/ECO 230 Introduction to Economic and Managerial Statistics 4 credits
One mathematics course following the course taken for Group A chosen from:
   MTH 130 Pre-Calculus Mathematics
   MTH 221 Applied Finite Mathematics and Business Calculus
   MTH 230 Calculus I with Pre-Calculus
   MTH 231 Analytic Geometry and Calculus I
   MTH 232 Analytic Geometry and Calculus II
   MTH 236 Accelerated Calculus II 3-5 credits

Major Requirements: 40 credits
Accounting 40 credits
   ACC 215 Intermediate Accounting I 4 credits
   ACC 225 Intermediate Accounting II 4 credits
   ACC 241 Federal Income Taxation I 3 credits
   ACC 310 Cost Accounting I 3 credits
   BUS 160 Law of Business Contracts I 3 credits
   BUS 260 Law of Business Contracts II 3 credits
   FNC/ECO 345 Managerial Finance II 4 credits
   Plus 16 additional credits in related subjects chosen with the written approval of the student’s adviser.

Certified Public Accountancy
   Accounting majors who wish to apply for admission to the State examination for public accountancy must complete all courses specified under the accounting concentration and must include the following among the 16 credits of related subjects:
   ACC 414 Advanced Accounting 4 credits
   ACC 422 Standards and Procedures of Financial Audits 4 credits
Managerial Accounting
   Accounting majors who wish to take the examination for Certified Managerial Accountant are advised to complete ACC 330, Managerial Accounting (3 credits), as part of the 16 credits of related courses under the accounting major.

Electives: 2 - 5 credits
Total Credits Required: 120

Honors
   To graduate with Honors in Accounting a student must have a 3.5 grade point average in business courses and must have a 3.25 grade point average overall. An honors thesis or project supervised by a member of the business faculty must be completed.

Minor
   At least 18 credits of courses including:
   ACC 114 Introduction to Accounting I 4 credits
   ACC 121 Introduction to Accounting II 4 credits
   ACC 215 Intermediate Accounting I 4 credits
   Two courses in accounting at the 200 or 300 level 6 credits
Courses

ACC 109  Medical Accounting
2 hours; 2 credits
Procedures in general bookkeeping for the medical office including banking and billing, income tax reports, employee payroll deductions and taxes. Overview of currently available computer software.
Pre- or corequisite: BUS 270

ACC 114  Introduction to Accounting I
4 hours; 4 credits
Introduction to the concepts and principles of accounting. Data accumulation technique. Emphasis on preparation and interpretation of financial statements. Areas of concentration include the accounting cycle, accounting for sole proprietorship, and introduction to partnership and corporate accounting.
Prerequisite: MTH 020 or an appropriate score on the Mathematics Assessment Test

ACC 121  Introduction to Accounting II
4 hours; 4 credits
A continuation of ACC 114. Partnership, corporations, and an introduction to cost accounting. Other topics discussed are current and long-term liabilities and statements of cash flow.
Prerequisite: ACC 114

ACC 215  Intermediate Accounting I
4 hours; 4 credits
Intense coverage of accounting principles, valuation, and accounting for current assets, plant assets, acquisitions, disposals, depreciation and depletion, intangible assets, current and long-term liabilities, and concepts of present and future value. Emphasis is placed on pronouncements of the Financial Accounting Standards Board and Accounting Principles Board.
Prerequisite: ACC 121
Pre- or corequisite: BUS 150 or CSC 102 or CSC 126

ACC 225  Intermediate Accounting II
4 hours; 4 credits
In depth examination of long-term liabilities, stockholders' equity, and income determination. Topics include bonds, stock issuance, retained earnings, leases, pensions, deferred taxes, and analysis of the statement of cash flow.
Prerequisite: ACC 215

ACC 235  Government and Not-for-Profit Accounting
3 hours; 3 credits
Thorough discussion and analysis of accounting for state and local governments and other non-for-profit institutions such as universities, hospitals, and voluntary health and welfare organizations. Topics discussed will include budgetary accounting, fund accounting, account groups, and financial statements.
Prerequisite: ACC 215

ACC 241  Federal Income Taxation I
3 hours; 3 credits
A comprehensive study of federal income tax principles and concepts as they apply to individuals. Tax treatment of the individual is stressed initially with emphasis on rates and exemptions, concepts of gross income, recognition and realization of income and capital gain and loss concepts. Additional topics include exclusions, deductions and credits, analysis of property transactions, federal tax research, preparation of individual federal income tax returns, and computer tax returns.
Prerequisite: ACC 121

ACC 250  Accounting Information Systems
4 credits; 4 hours
This course introduces the concept of computer information systems in accounting. The course has a two pronged approach. First, the general accounting cycles (general ledger, A/R, A/P, etc.), in an accounting information system are introduced. Second, the accounting cycles are then related to the use of computer information technology. Concepts such as flow charting, data flow diagrams, security and control are stressed.
Prerequisites: ACC 121 and one of the following: BUS 150, CSC 102, or CSC 108/116/118, or CSC 126

ACC 251  Federal Income Taxation II
3 hours; 3 credits
A broad study of the federal income tax pertaining to corporations and partnerships. A comprehensive study of tax accounting principles as applied to corporations and partnerships, corporate organization and reorganizations, corporate liquidations, corporate distributions, and special classes of corporations. Includes such areas as special deductions and computation of the normal tax, surtax, and tax on net long term capital gains.
Prerequisite: ACC 241

ACC 300  International Accounting
4 hours; 4 credits
An overall view of the significant areas of transnational accounting which are relevant to accounting practices, procedures and requirements of enterprises engaged in international operations. These areas include: foreign currency translation, accounting for inflation, financial reporting and disclosure, analyzing foreign financial statements, transfer pricing and international taxation. (Offered only at the American University of Rome.)
Prerequisites: ACC 114 and ACC 121

ACC 310  Cost Accounting I
3 hours; 3 credits
Principles of cost accounting applicable to job order and process cost systems. Additional topics include cost-volume-profit relationships, standard costing, variable costing, and budgets.
Prerequisite: ACC 121

ACC 315  Analysis of Financial Statements
3 hours; 3 credits
The tools and techniques needed to explore the balance sheet, income statement, and the statement of cash flow. Heavy emphasis is on the use of ratios to evaluate the statements.
Prerequisite: ACC 225
African-American Studies (B.A.)

General Education Requirements for the B.A.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis: Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 28-47 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
      Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
6. Foreign Language: (0-12 credits)
See section on general education requirements for approved course lists and complete details.

Major Requirements: 31 credits
Students majoring in African-American Studies must complete:
1. AFA/HST 160 African-American History 1619 to Present
   3 credits
2. Five courses at the 200 level including at least one in each of the following categories:
   Africa: AFA 247, 253, 260
   Caribbean: AFA 223, 225, 265
   United States: AFA 202, 204, 221, 229, 262, 263, 267, 269, 323, 361, 365
   20 credits
3. Two courses at the 300 level or above, one of which may be an independent study course
   8 credits

Electives: 48 credits
Total Credits Required: 120

Minor
Sixteen credits at the 200 level or above including one course on each of the following: Africa, the Caribbean, the United States.

Courses
AFA 122 Black Dance Workshop
(Also DAN 122)
4 hours; 3 credits
Based on traditions of the peoples of Africa and the Caribbean, this course develops the technical language of black dance, emphasizing the cultural interaction of native tradition and Western influence; the retelling of legends and tales through dance while weaving intricate designs and rhythms disguised in unrecognizable symbolism.
AFA 160  African-American History 1619 to the Present
(Also HST 160)
3 hours; 3 credits
From the forced migration of the first Africans in the 17th century to the contemporary struggles for equality; emphasis on such topics as slavery, abolition, Reconstruction, the origins of Jim Crow, urban migrations, the struggle for civil rights, non-violence and the new militancy. (social science)

AFA 202  African-American Drama
(Also DRA 202)
4 hours; 4 credits
A study of the emergence of the black theatre in the United States and an examination of the theatre as a manifestation of the black genius.

AFA 203  Workshop in Black Theatre
4 hours; 4 credits
A workshop expressly designed to explore experimental improvisational techniques and methods by utilizing a wide range of movements, sources, and materials. The workshop is concerned with the development of individual awareness and creativity through the active and personal discovery of movement and is open to all students interested in the potentials of ethnic dance for attaining freedom of movement.

AFA 204  Ethnomusicology of African-Americans
4 hours; 4 credits
History of African-American music with emphasis on its relation to religion and culture. Examination and analysis of the musical styles of spirituals, gospel hymns, blues, and jazz in their cultural setting.

AFA 205  African-American Musical Theatre
(Also DRA 205)
4 hours; 4 credits
A study of the musical theatre of African-Americans from its early beginnings in African culture to genius manifested in the nineteenth century, its influence on early vaudeville, its unique contribution to American musical theatre, and the present day popularity of its style. Current productions will be attended by the class and studied in detail when available.

AFA 211  American Culture in Black and White
(Also AMS 211)
4 hours; 4 credits
Mutual perceptions of blacks and whites in nineteenth- and twentieth-century America; how these perceptions were born, and how they have changed. (social science) (P&D)
Prerequisites: ENG 111, COR 100

AFA 221  African-American Literature
(Also ENH 221)
4 hours; 4 credits
A sociological examination of African-American literature as it has developed from the dynamic interaction between black and white communities and movements within the black community. Works by African-American authors will be analyzed with respect to the dominant social forces of their times and the ideas about the historically persistent polemics of assimilation, separation, or cultural pluralism; and their relevance for Americans of African descent in their struggle for equality. (literture) (P&D)
Prerequisite: ENG 151

AFA 223  Comparative Black Literature
4 hours; 4 credits
The works of African, African-American, and Caribbean writers are examined. The poetry and fiction of modern African writers are considered with particular reference to the African personality, presence africaine, and negritude, the vision and image of Africa. Prerequisite: ENG 111

AFA 225  Contemporary Third-World Literature
4 hours; 4 credits
A study of the literature of the world of the politically and economically oppressed and exploited. The course will deal with such themes as oppression and protest, violence; the crisis of identity; music, language, and rhythm; humorous distance; ritual and magic; and conceptualization and abstraction. (literature)
Prerequisite: ENG 111

AFA 247  Peoples and Cultures of Africa
(Also HST 266)
4 hours; 4 credits
A descriptive survey of the peoples and cultures of the African continent. Emphasis is on those features and/or qualities of the African pattern of life that are common to the African people as a whole. (P&D)
Prerequisites: ENG 111, plus any college-level history course or COR 100

AFA 253  African Politics
(Also POL 253)
4 hours; 4 credits
An examination of the colonial and post-colonial problems of Africa, and the developmental process in general. Other topics to be discussed include the socio-political and historical-philosophical appeal of communism to Africa; ideology, strategy, and the communist model of development; and the idea of revolution as an agent of rapid transformation versus the Euro-American model of evolutionary change. (P&D)

AFA 260  History of Africa
(Also HST 207)
4 hours; 4 credits
Nineteenth-century African history, the story of European imperialism, and the emergence of modern, independent Africa and its problems. (West and the World) (P&D)
Prerequisites: ENG 111 and COR 100 or any college-level history course

AFA 262  African-American History: 1619-1865
(Also HST 262)
4 hours; 4 credits
A study of the African-American experience in the Western hemisphere. Emphasis on the slave trade, slave life, slave revolts, and the struggle for freedom. (social science) (P&D)
Prerequisites: ENG 111, COR 100
AFA 263  African-American History: 1865 to the Present  
(Also HST 263)  
4 hours; 4 credits  
Continuing role of African-Americans in the building of their own nations. Emphasis on freedom movements as shown in literature, in civil rights movements, in nationalist and other political organizations. (social science) (P&D)  
Prerequisites: ENG 111, COR 100

AFA 265  History of the Caribbean  
(Also HST 265)  
4 hours; 4 credits  
Precolonial and colonial history of the Caribbean; an examination of the policies of the metropolitan powers, and the emergence of anticolonialist movements. (social science) (P&D)  
Prerequisites: ENG 111, COR 100

AFA 267  The Black Experience  
4 hours; 4 credits  
A workshop designed especially for teachers, students, and professionals working in the black community. The course will cover a wide range of topics in literature, music, dance, drama, economics, history, and anthropology.

AFA 269  Blacks in Urban America 1900--Present  
(Also HST 269)  
4 hours; 4 credits  
An examination of various aspects of black life in major American cities. Particular emphasis will be placed on the causes of the migration; ecological development of black communities; urban violence; blacks' participation in conventional and radical politics; blacks in the labor force; and the impact of urbanization on the black family. (social science) (P&D)  
Prerequisites: ENG 111, plus any college-level history course or COR 100

AFA 323  The Black Writer in the Modern World  
(Also ENL 392)  
4 hours; 4 credits  
An intensive study of various recent and contemporary Black authors, writing in all the literary genres, and their grappling with traditional and changing environments. (P&D)  
Prerequisite: An ENH 200-level course

AFA 361  The Heritage of Marcus Garvey and W.E.B. DuBois  
(Also HST 361)  
4 hours; 4 credits  
Marcus Garvey, the man and the idealist, his influence on African-American consciousness; W.E.B. DuBois, the man and the thinker, his influence on African-American consciousness and Pan-Americanism. (P&D)  
Prerequisites: any 200-level history course and ENG 151

American Sign Language Courses  
Department of Modern Languages  
Chair: Associate Professor Kathryn Talarico, Modern Languages/English building (2S), room 109

ASL 113  American Sign Language I  
4 class hours; 2 laboratory hours; 5 credits  
An introduction to the fundamentals of American Sign Language (ASL) with particular attention to the grammar of the language and the culture of American deaf persons. Two additional language laboratory hours per week are required. (foreign lang.)

ASL 114  American Sign Language II  
4 Class hours; 2 laboratory hours; 5 credits  
A continuation of American Sign Language I emphasizing vocabulary development and increased fluency in the language's structure; regional and stylistic variations in ASL. Advanced work in deaf culture, folklore and literature. Two additional language laboratory hours per week are required. (foreign lang.)  
Prerequisite: Successful completion of ASL 113 or equivalent

ASL 213  American Sign Language III  
4 class hours; 2 laboratory hours; 5 credits  
A continuation of American Sign Language II emphasizing stylistic variations; a command of the various registers available in the language; and expanded use of classifiers. Advanced work in deaf culture, folklore and literature. Two additional language laboratory hours per week are required. (foreign lang.)  
Prerequisite: Successful completion of ASL 114 or equivalent

ASL 215  American Sign Language IV  
4 class hours; 2 laboratory hours; 5 credits  
A continuation of American Sign Language III preparing students to enter interpreter education programs. An analysis of the discourse of native signers emphasizing language variation as it correlates with varying life experiences of deaf people. Two additional language laboratory hours per week are required. (foreign lang.)  
Prerequisite: Successful completion of ASL 213 or equivalent

American Studies  
(Bachelor of Arts, Minor)  
Interdisciplinary Program  
Coordinator: Assistant Professor Catherine Lavender, History/PEP Building (2N), room 203  
American Studies is the interdisciplinary study of American cultures, both past and present. American Studies courses examine the arts, literature, history, and popular culture of the United States and, more generally, North America. American Studies provides a strong foundation and essential skills for those preparing for careers in law, government, public history, archival management, education, social service, journalism, publishing, and communications. Individual courses in American Studies are recommended as cultural background for students in any major.  

American Studies (B.A.)  
General Education Requirements for the B.A.  
ENG 111, ENG 151, COR 100, PED 190: 12 credits  
Whenever possible, these four courses should be completed within the first 36 credits.  
Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic
Analysis; Pluralism and Diversity requirements: 28-47 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
6. Foreign Language: (0-12 credits)
See section on general education requirements for approved course lists and complete details.

Pre-Major Requirements: 3 credits
AMS 101 America: An Introduction 3 credits

Major Requirements: 32 credits
American literature (8 credits):
ENH 203 Literary History of the United States to 1855 4 credits
ENH 204 Literary History of the United States since 1855 4 credits
American history (8 credits):
HST 244 United States History: 1607-1865 4 credits
HST 245 United States History: 1865-present 4 credits
American Studies (16 credits):
16 credits beyond AMS 101, including at least two courses at the 300-level or above.

Electives: 47 credits
Total Credits Required: 120

Minor
AMS 101 America: An Introduction 3 credits
American literature (8 credits):
ENH 203 Literary History of the United States to 1855 4 credits
ENH 204 Literary History of the United States since 1855 4 credits
American history (8 credits):
HST 244 United States History: 1607-1865 4 credits
HST 245 United States History: 1865-present 4 credits
American Studies (4 credits)

Courses
AMS 101 America: An Introduction
3 hours; 3 credits
Classic interpretations of American culture through a broad interdisciplinary survey of the men and women, ideas and events that have contributed to the American experience. The abiding ideas, values, and myths that have shaped the nation's arts, actions, and beliefs, drawing from painting, architecture, film, music, history and literature. From 17th-century witchcraft to 20th-century witch hunts, from General Washington to General Hospital, from the assembly line to assembler language, from Revere to Rambo. (social science)

AMS 150 Dance History: Twentieth-Century Survey
(Also DAN 150)
4 hours; 3 credits
Concentrating on the “pioneers of modern dance” -- Duncan, Denishawn, Graham, Humphrey, Weidman and others -- as well as on the experimental and avant-garde, using lectures, demonstrations, video, and film to illustrate examples of outstanding choreography. The course includes the dance of India and black dance coordinated with professional concerts and student reports. Includes “Happenings in Today’s World of Dance.” No dance background required. (art & com.)

AMS 209 Art and Society in America
(Also ART 209)
4 hours; 4 credits
Three hundred years of American art, studied as an expression of American life. Works of art are viewed in terms of style and as guides to the complexities of American history and culture. (art & com.)
Prerequisites: ENG 111, COR 100, and ART 100 or ART 103 or ART 104 or AMS 101

AMS 210 American Philosophy
(Also PHL 210)
4 hours; 4 credits
A study of philosophy in America. Topics of inquiry will be selected from such movements and figures as the following: Puritanism, empiricism, idealism and pragmatism; Jonathan Edwards, Ralph Waldo Emerson, Josiah Royce, Charles S. Peirce, William James, John Dewey, George Santayana, and Alfred North Whitehead. (social science)
Prerequisites: ENG 111, COR 100

AMS 211 American Culture in Black and White
(Also AFA 211)
4 hours; 4 credits
Mutual perceptions of black and whites in nineteenth- and twentieth-century America; how these perceptions were born, and how they have changed. (social science) (P&D)
Prerequisites: ENG 111, COR 100

AMS 212 Twentieth-Century America
4 hours; 4 credits
An examination of selected works that are landmarks in the development of twentieth-century American culture. Authors will include Hemingway, Faulkner, Ellison, Wright, Miller, Mailer, and Beattie, Harrington, Friedan, and Galbraith. (social science)
Prerequisites: ENG 111, COR 100

AMS 214 America in the World
4 hours; 4 credits
Cross-cultural perspectives on American values, arts and events. What foreign observers have thought about the United States. How
AMS 221 The American Dream
4 hours; 4 credits
The hopes, the frustrations, and, particularly, the dreams of American society as observed by foreign and native commentators in the past and present. This course will attempt to assess not only the idealization of the American dream but also disillusionment with it as expressed by such writers as Franklin, Tocqueville, Emerson, Whitman, Henry Adams, and Norman Mailer. (social science)
Prerequisites: ENG 111, COR 100

AMS 222 The City in American Culture
4 hours; 4 credits
Impressions and analyses (literary, social, historical, cinematic, and photographic) of the varied cultures, institutions, and environments which are the substance of American urban life. A course that poses few facile solutions to the urban crisis but knows which questions are to be asked and which myths must be demolished if cities are ever to become humane and pleasurable organisms rather than death and profit-bound ones. (social science)
Prerequisites: ENG 111, COR 100

AMS 224 Religion in America
(Also HST 246)
4 hours; 4 credits
Addresses the development of religion -- Protestant, Catholic, Jewish, and others -- in the context of American social, cultural, and intellectual history. (social science)
Prerequisites: ENG 111, COR 100

AMS 230 American Film and American Myth
(Also GIN 230)
4 hours; 4 credits
The American film and its relationship to American myth, society, and culture. Topics to be included are: the American West, the gangster, rural and urban life, the nature of war, race and class, comic views of America. (art & com.)
Prerequisite: ENG 111

AMS 231 American Myths and Realities
4 hours; 4 credits
American society, chiefly in the nineteenth and twentieth centuries, and its problems, including democracy in an industrial order, the city, class stratification, and racial conflict, as seen by such representative realistic writers as Henry James, Dreiser, Vehlen, William Dean Howells, and W.E.B. DuBois. (social science)
Prerequisites: ENG 111, COR 100

AMS 236 Music in American Life
(Also MUS 236)
4 hours; 4 credits
The music-making and listening habits of the American people, examining the musical activities, the musicians, and the social setting. The course focuses on the history and significance of rock as an American and international phenomenon, exploring issues of gender, race, and the multicultural musical traditions that have enriched American popular music. This course develops the ability to understand music as an expression of cultural values, and does not require instrumental training or the ability to read music. This course does not meet requirements for the major or the minor in music. (art & com.)
Prerequisite: ENG 111

AMS 237 American Musical Theater
(Also MUS 237)
3 hours; 3 credits
A survey of American musical theater and its development from the second half of the nineteenth century to our own times, considered in the context of a changing America. Sousa, Herbert, Friml, Cohan, Kern, Gershwin, Bernstein, Arlen, Weill, Thomson, and Copland are some of the composers whose works will be covered. (art & com.)
Prerequisites: ENG 111; for music majors, MUS 120 or permission of the instructor

AMS 239 American Civil War
(Also POL 239)
4 hours; 4 credits
The course focuses on the civil and military aspects of the Civil War, including the events and issues leading up to the war, the struggle over the expansion of slavery, the Union’s and the Confederacy’s military strategies, and analysis of key battles. The course will examine the presidency of Lincoln and will explore major constitutional issues, such as the right of secession and the problems of maintaining civil liberties during a civil war.
Prerequisites: ENG 111, COR 100

AMS 241 Popular Culture and Mass Society
4 hours; 4 credits
Popular entertainment as the expression of American cultural values: television, radio, music, and sports; westerns, detective stories, and soap operas. Functional analysis of entertainment as the myth and ritual of mass society. The problems of aesthetic standards in a culture dominated by commercialized taste. Relationships between popular entertainment and political values. Readings from Durkheim, Ellul, McLuhan, Nye, and Browne. (art & com.)
Prerequisite: ENG 111

AMS 243 American Humor
4 hours; 4 credits
Humor in America shares some characteristics found in all cultures, past and present, and sometimes has seemed peculiarly “native.” This course traces the variety and development of American humor from colonial days to the present through literature, drama, art, cartoons, and film. Humor will be examined as psychological phenomenon, as philosophical outlook, and as intellectual history. (literature)
Prerequisite: ENG 111
AMS 251  American Ideas
(Also HST 240)
4 hours; 4 credits
A major idea in American intellectual history will be examined from the perspective of two or more disciplines. This course will demonstrate the interdisciplinary method and philosophy of American Studies. Puritanism, transcendentalism, the idea of freedom, social Darwinism, Freudianism and socialism are possible topics. (social science)
Prerequisites: ENG 111 and COR 100 or AMS 101 or any history course.

AMS 252  American Arts
4 hours; 4 credits
A major artistic theme will be traced through two or more of the American arts. This course will demonstrate the interdisciplinary method and philosophy of American Studies. Realism and romanticism, functionalism and formalism, naturalism and the genteel tradition, and organic form are possible topics. (art & com.)
Prerequisites: ENG 111 and COR 100

AMS 308  American Art Since 1945
(Also ART 308)
4 hours; 4 credits
The course will examine the development of American painting and sculpture since the end of World War II. In addition to providing an historical and critical perspective for understanding the variety of styles that emerged in this period, as well as related social and political issues, the course will attempt to provide an opportunity for students to meet with some of the artists, dealers, and curators who have contributed to recent developments.
Prerequisite: ART 100 or ART 103 or ART 104 or permission of the instructor

AMS 311  The American Cultural Experience
4 hours; 4 credits
A senior seminar for American Studies majors who will do independent research on a common theme of the American experience and meet to discuss and analyze their findings. Examples of such topics are Puritan religion, the frontier, slavery, reform, feminism, big business, radicalism, literary naturalism, imperialism, and popular culture.
Prerequisite: A 200-level American Studies course.

Anthropology

(See Sociology-Anthropology for Bachelor of Arts degree.)
Department of Psychology, Sociology, Anthropology, and Social Work
Chair: Professor Judith Balfe, PSAS Building (4S), room 223

Courses

ANT 100  Introduction to Anthropology
3 hours; 3 credits
An overview of human physical and social evolution, and the range of diversity in contemporary human societies. The development of language and communication; tribal and peasant societies in the modern world; ethnicity, race and gender; migration and urbanization. (social science)

ANT 201  Cultural Anthropology
4 hours; 4 credits
Case studies of specific societies -- tribal, peasant, and urban -- to illustrate the variety of anthropological approaches to understanding social relations. Discussion of contemporary social issues in comparative perspective. (social science) (P&D)
Prerequisites: ENG 111, COR 100, and either ANT 100 or SOC 100

ANT 202  Physical Anthropology
4 hours; 4 credits
The evolution of non-human primates and human populations, with special focus on physical variation and its sources among contemporary human groups. The emergence of human forms of social organization and symbolic communication. (social science)
Prerequisites: ENG 111, COR 100, and either ANT 100 or SOC 100

ANT 205  Native American Societies
4 hours; 4 credits
Origins of Native North American societies and their transformation following contact with Europeans. Special emphasis on the diverse ways native people have coped with, adapted to, and resisted continually changing circumstances from colonial times to the present. (P&D) (west & world)
Prerequisites: ENG 111, COR 100, and either ANT 100 or SOC 100

ANT 225  Multi-Cultural Literacy
(Also COM 225)
4 hours; 4 credits
This course will explore the nature of culture as it is defined by various disciplines and affected by class, race, gender, and ethnicity. Readings will include texts in anthropology, sociology, literary theory, media studies, and women’s studies. (social science) (P&D) (art & com.)
Prerequisites: ENG 151, COR 100, and either ANT 100, COM 100, HST 100, POL 100, SOC 100, or WMS 100

ANT 331  Women and Work
(Also SOC 330, WMS 330)
4 hours; 4 credits
The social and cultural constraints affecting women’s participation and attainments in the world of work. Conflicts between work role expectations and gender role expectations (e.g., femininity, nurturance, maternity). The effects of class background and race/ethnicity on women’s occupations, professions, and incomes. (P&D)
Prerequisites: Any 100-level Sociology or Anthropology course and any 200-level Sociology or Anthropology course or permission of the instructor.

ANT 345  Early Civilizations
4 hours; 4 credits
Case studies in the rise of civilization, in light of anthropological theory, using examples from Mesopotamia, Egypt, India, China, Central and South America. The social and cultural changes associated with the rise of cities and empires, slavery, the emergence of writing and monumental architecture.
Prerequisites: ANT or SOC 100 and any of the following: ANT 201, SOC 200, SLS 240, or permission of the instructor.
ANT 350  Foraging Societies
4 hours; 4 credits
Studies of small bands of hunters and gatherers in which basic human biological evolution and cultural development has taken place over three million years. Their social organization; gender and family relations; the tensions and alliances of gift-based economies; religions without leaders and politics without chiefs. The contemporary situation of such societies. (P&D)
Prerequisites: ANT or SOC 100 and ANT 201 or permission of the instructor.

ANT 365  Political Anthropology
4 hours; 4 credits
The central topic in political anthropology is the emergence of the state and urban society from tribal societies. This course will examine different explanations for the emergence of states and show the importance of this problem to anthropology as a whole. Prerequisites: Any 100-level Sociology or Anthropology course and any 200-level Sociology or Anthropology course or permission of the instructor.

ANT 370  Urban Anthropology
4 hours; 4 credits
The social and cultural organization of urban life examined from two perspectives: detailed and comparative studies of households, neighborhoods, homeless shelters and other urban institutions, and the transformations in the third world involving mass migrations and industrial relocation. Prerequisites: Any 100-level Sociology or Anthropology course and any 200-level Sociology or Anthropology course or permission of the instructor.

ANT 390  Human Evolution
4 hours; 4 credits
The evolution of Homo sapiens. Close reference to the actual fossil record and archaeological sites as grounds for inferences that can be drawn concerning the social life of prehistoric peoples and the development of language and culture. Prerequisites: ANT 202 or BIO 108 or BIO 180, or permission of the instructor.

ANT 450  Anthropology of Philosophy and Religion
4 hours; 4 credits
The intellectual confrontation with nature and the attempt to reduce nature to a knowable and controllable form. A survey of philosophical and religious systems as efforts by people to define their place in the world. Special topics will include witchcraft, magic, ritual, and esoteric religious systems. Prerequisite: Any 100-level Sociology or Anthropology course and any 200-level Sociology or Anthropology course or permission of the instructor.

ANT 460  Personality and Culture
4 hours; 4 credits
Examination of the different ways of understanding “human nature” in specific social contexts. Topics will include the development of anthropological theories of personality and culture, and Western and non-Western concepts of personhood and mental health. (P&D)
Prerequisites: ANT 201 and any of the following: PSY 212, PSY 226, PSY 236, PSY 242, SOC 200, SOC 201, SOC 226, SOC 292, or permission of the instructor.

Architectural Studies
Department of Performing and Creative Arts
Program Coordinator: Associate Professor Frank Galati,
Engineering Technologies Building (5N), 213
The Associate in Science degree program in Architectural Studies provides a fundamental and broad educational background as preparation for continuation of study toward the B.S. degree in architecture. The curriculum provides seamless articulation with the B.S. degree program in architecture at the City College of New York. It offers as well, preparation for entry level work as an architect assistant.

Architectural Studies (A.S.)
Retention standards:
Students must maintain a minimum GPA of 2.5 upon completion of 32 credits, which include the following courses: ARC 111, ARC 200, ENG 111, MTH 123.

General Education Requirements for the A.S.
ENG 111, ENG 151, PED 190: 8 credits
Whenever possible these three courses should be completed within the first 36 credits.
1. Scientific Analysis
   a. Science and Technology (4 credits)
      PHY 110  College Physics I
      PHY 111  College Physics Laboratory I
   or
      PHY 116  Physics I
   b. Mathematics (4 credits)
      MTH 123*  College Algebra and Trigonometry
2. Social Scientific Analysis (3 credits)
   PHL 103  Introduction to Philosophy
3. Textual, Aesthetic, and Linguistic Analysis (2 credits)
   ART 120  Introductory Drawing
4. Pluralism and Diversity (8 credits)
   HST 258  World Civilization I
   HST 259  World Civilization II

Core Requirements: 31 credits
ARC 111  Architectural Graphics Workshop 2 credits
ENT 110  Engineering Graphics 2 credits
ENT 101  Introduction to Measurement and Instrumentation 2 credits
ARC 112  The Built Environment of New York City 2 credits
ARC 200  Environmental Concepts I 4 credits
ARC 212  History, Theory, and Technology of the Built Environment 2 credits
ARC 300  Environmental Concepts II 4 credits
ARC 400  Environmental Concepts II 4 credits
CET 230  Statics 2 credits
CET 360  Strength of Materials  3 credits
MTH 223*  Technical Calculus  4 credits
*MTH 123 or any regular mathematics sequence of no less than 8 credits ending with the calculus mathematics courses of either MTH 223 or MTH 230 or MTH 231 or equivalent or higher.

Guided Electives:
SLS 301    Humanities: Ancient Culture  4 credits
SLS 302    Humanities II: Medieval/Early Modern Culture  4 credits

Total Credits Required: 68
All courses designated ARC, ENT, CET are non-liberal arts and sciences.

Courses
ARC 111  Architectural Graphics Workshop
4 hours; 2 credits
Students will be introduced to and will learn to use fundamental verbal and graphic skills necessary for recording and transmitting ideas about architecture and the urban environment. Short exercises using verbal and graphic techniques learned in the workshop will introduce the student to basic concepts in design and presentation. The student will develop skills in diagramming, sketching, drafting, and perspective drawing, and will make models for interpreting such conceptual images as activity patterns, circulation systems, and built form.

ARC 112  The Built Environment of New York City
2 hours; 2 credits
Exploring the conditions and factors that have led to the development of New York City and its world renowned architecture and open spaces. Field trips, papers, and investigation of the creation of New York City.

ARC 200  Environmental Concepts I
8 hours; 4 credits
The course will focus on the analysis, description, and design of the student’s personal physical surroundings such as room, house, and school. Students will develop communication skills such as architectural drawing, sketching, diagramming, model making, and photography and will analyze and discuss environmental design problems. The student will become familiar with problem-solving methods and a variety of design concepts and will propose design solutions. The presentation of these ideas will be verbal as well as graphic, using techniques learned in class.
Prerequisite: ARC 111

ARC 212  History, Theory and Technology of the Built Environment
2 hours; 2 credits
Survey of architecture, building traditions, and technologies from the Medieval Period through the Renaissance, and culminating in the twentieth century with the development of modern architecture.
Prerequisite: ENG 111 or permission of the instructors

ARC 300  Environmental Concepts II
8 hours; 4 credits
Students will analyze, describe, and design the physical settings of family and small group activities, such as an office, an apartment, a day-care center, and related open spaces and landscaping. They will learn to develop written and diagrammatic programs of user requirements and space needs for the activities in such settings. Physical design solutions meeting the criteria developed will be proposed and presented. Such presentations will make use of both previously developed communication skills and additional skills including the use of presentation models. Problem solving methods and technology used for buildings, open space, and landscape will be further developed.
Prerequisite: ARC 200

ARC 400  Environmental Concepts III
8 hours; 4 credits
Students will analyze, describe, and design the physical settings for neighborhood and city-wide activities such as community facilities and transportation networks. Problem identification and the development and presentation of physical design solutions for buildings, open space, landscape, and urban design aspects of these problems will be studied.
Prerequisite: ARC 300

Art
(Bachelor of Arts, Bachelor of Science, Photography Concentration, Minor)
Department of Performing and Creative Arts
Chair: Associate Professor Robert Hulton-Baker, The Center for the Arts, room 203
The art program is designed for students interested in both studio art and art history. The department is located in the Center for the Arts with outstanding studio and workshop spaces.

Art (B.A. or B.S.)
General Education Requirements for the B.A. and B.S.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 28-47 credits
Whenever possible, these courses should be completed within the first 60 credits.

1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
5. Pluralism and Diversity Requirement: (0-4 credits)
6. Foreign Language: (0-12 credits)
See section on general education requirements for approved course lists and complete details.

Pre-Major Requirements: 12 credits
Students planning to major in art must complete the following pre-major courses, some of which may also satisfy general education requirements:

- ART 103 History of Art to the Renaissance 3 credits
- ART 104 History of Art Since the Renaissance 3 credits
- ART 120 Introductory Drawing 2 credits
- ART 130 Introductory Painting 2 credits
- ART 150 Introductory Sculpture 2 credits
- ART 275 Studio Art Theory and Practice 3 credits
- ART 375 Intermediate Studio Art Theory and Practice 3 credits

Major Requirements: 34 credits
At least eight credits of art history courses beyond the 100 level. (ART 203, 207, 208, 210, 300, 301, 303, 304, 308, 440, 441)
At least six credits of studio art courses beyond the 100 level. (ART 220, 230, 245, 250, 275, 280, 285, 320, 330, 345, 350, 375, 380, 445) An additional 20 credits from art history or studio art courses beyond the 100 level.

Electives: 33 credits
Total Credits Required: 120

Liberal arts and Sciences Requirement
All studio art courses are non-liberal arts and sciences.

Art (B.A. or B.S.)/Photography Concentration
This concentration allows students interested in photography to receive the bachelor's degree in art with a concentration in courses dealing with photographic technique, theory, and history.

General Education Requirements listed above for B.A. or B.S.

Pre-Major Requirements: 13 credits
Students planning to major in art with the photography concentration must complete the following pre-major courses, some of which may also satisfy general education requirements.

- ART 103 History of Art to the Renaissance 3 credits
- ART 104 History of Art Since the Renaissance 3 credits
- PHO 120 Basic Photography 3 credits
- ART 120 Introductory Drawing
- ART 130 Introductory Painting
- ART 150 Introductory Sculpture

Major Requirements: 34 credits
At least eight credits of art history courses beyond the 100 level including ART 303 History of Photography. The remaining course may be chosen from ART 203, 207, 208, 210, 300, 304, 305, and 308.

At least nine credits of photography courses beyond the 100 level chosen from PHO 220, 230, 240, 250, 320, 360, including at least one course at the 300 or 400 level.

The remaining 17 credits may be chosen from courses in art and photography beyond the 100 level.

Electives: 33 credits
Total Credits Required: 120

Liberal arts and Sciences Requirement
All studio art and photography courses are non-liberal arts and sciences.

Honors
To graduate with Honors in Art a student must have a 3.5 grade point average in art courses and must complete a body of independent work approved by one or more full-time art faculty advisers. The work should be presented in an exhibition if possible.

Art history students may undertake the writing of a research paper with the approval and supervision of a faculty adviser.

Minor
Prerequisite Courses: 6 credits

- ART 103 History of Art to the Renaissance 3 credits
- ART 104 History of Art Since the Renaissance 3 credits

Requirements: 12 credits
At least 12 credits chosen from ART 203, 207, 208, 209, 210, 300, 301, 304, 305, 308.

Courses
(See Photography for photography course descriptions.)

ART 100 Introduction to the Visual Arts
3 hours; 3 credits
A selective examination of the materials and forms of painting, sculpture, architecture, and cinema designed to provide students with a critical and historical framework for evaluating visual experience. The course will combine slide lectures and films with a number of museum and gallery visits. (art & com.)

ART 103 History of Art to the Renaissance
3 hours; 3 credits
This survey course will trace the development of painting, sculpture, and architecture from their beginnings in the Stone Age to the Early Renaissance. Emphasis will be placed on the relationship between the historical setting and the works themselves. A general introduction to the history of the visual arts. (art & com.)
ART 104 History of Art After the Renaissance
3 hours; 3 credits
A continuation of ART 103, this survey course traces further developments in the visual arts from the Renaissance to the works of the twentieth-century masters. (art & com.)

ART 106 Art in Rome
3 hours; 3 credits
A course designed to familiarize students with the vast artistic patrimony of Rome. Visits to archaeological sites, churches, palaces, museums and galleries. The course is for the non-art major. It is conducted almost entirely on site. (Offered only at the American University of Rome.)

ART 120 Introductory Drawing
4 hours; 2 credits
Drawing as an essential tool of vision; fundamentals of anatomy, perspective, and life drawing; some work in landscape and still life; contour drawing in pencil and charcoal. (art & com.)

ART 125 Portrait Drawing I
4 hours; 2 credits
Basic study of the human head and facial expressions with particular attention to the problems of portraiture. For beginning students.

ART 130 Introductory Painting
4 hours; 2 credits
Familiarization with materials and equipment; simple representational problems working to achieve three-dimensional form in space. (art & com.)

ART 150 Introductory Sculpture
4 hours; 2 credits
An examination of the relationship between two-dimensional design and three-dimensional structures. Ideas will be realized through work in a series of media. Flat simple drawings will be converted into digital images on the computer; these will be turned into oaktag models, and finally reproduced in metal. Students will be required to build a minimum of two finished steel sculptures and two color digital images. (art & com.)

ART 203 Art of the Ancient World
4 hours; 4 credits
An examination of the art and architecture of predynastic Egypt, the Near East, the Aegean, mainland Greece, and Republican and Imperial Rome. While the course is, of necessity, a survey, particular emphasis will be placed on the evolution of the classical tradition. (art & com.) Prerequisites: ART 100 or ART 103 or ART 104 or permission of the instructor and ENG 111

ART 208 Twentieth-Century Art
4 hours; 4 credits
An analysis of the principal developments in art from the end of the nineteenth century through the 1970s. In addition to painting, sculpture, and architecture, the course will consider the contributions of photography and cinema to the formation of the modernist aesthetic. (art & com.) Prerequisites: ART 100 or ART 103 or ART 104 or permission of the instructor, and ENG 111

ART 209 Art and Society in America
(Also AMS 209)
4 hours; 4 credits
Three hundred years of American art, studied as an expression of American life. Works of art are viewed in terms of style and also as guides to the complexities of American history and culture. (art & com.) Prerequisites: ENG 111, and ART 100 or ART 103 or ART 104 or AMS 101

ART 210 The Architect and Society
4 hours; 4 credits
A selective review of the practice of architecture from antiquity to the present. The course will analyze changing formal and aesthetic concepts in the light of contemporaneous social and economic factors. (art & com.) Prerequisites: ENG 111, and ART 100 or ART 103 or ART 104 or permission of the instructor

ART 220 Intermediate Drawing
4 hours; 3 credits
Concentrated study of the figure, complex problems in perspective and composition, detailed rendering in light and shade, and work in ink with brush and pen. Prerequisite: ART 120

ART 225 Portrait Drawing II
4 hours; 3 credits
Basic study of the human head and facial expressions with particular attention to the problems of portraiture. For intermediate students. Prerequisite: ART 125

ART 230 Intermediate Painting
4 hours; 3 credits
Representation of complex textures, problems of color, composition from figurative to abstract, and expression in the medium. Prerequisite: ART 130

ART 240 Women and the Fine Arts
(Also WMS 270)
4 hours; 4 credits
This course examines the two-fold relationship of women to the fine arts; their role as subjects and as artists. Topics such as the portrayal of women as goddess, mother and housewife, and as artist will be undertaken with a view to the social and historical input and implications of this imagery. The circumstances of
women artists from the Renaissance to the present will also be considered.
Prerequisites: ENG 111, and WMS 100 or ART 100 or 103 or 104 or the permission of the instructor

ART 245 Printmaking
4 hours; 3 credits
Instruction and practice in the fundamentals of the intaglio process; its relationship to the design and meaning of the print.
Prerequisite: ART 150

ART 275 Studio Art Theory and Practice
4 hours; 3 credits
The aim of this course is to open a thorough understanding of two-dimensional organization in painting and drawing and, by extension, of three-dimensional concepts in sculpture. The study will involve a design analysis of selected paintings from the 15th and 16th centuries. Students are expected to produce drawings and paintings based on these explorations.
Prerequisite: ART 120

ART 300 Medieval and Renaissance Art
4 hours; 3 credits
An attempt to differentiate and define the major stylistic developments in medieval and Renaissance art and architecture and to locate them within the broader context of contemporaneous European culture.
Prerequisites: ENG 111, and ART 100 or 103 or 104 or permission of the instructor

ART 301 Baroque Art
4 hours; 4 credits
An analysis of the Baroque style which developed in Italy at the beginning of the seventeenth century and spread throughout Europe. Particular emphasis will be placed on the intellectual, religious, and socioeconomic factors that affected such important questions as the role of patronage.
Prerequisites: ENG 111, and ART 100 or 103 or 104 or permission of the instructor

ART 302 Garden Architecture in Italy
3 hours; 3 credits
An examination of the evolution of Italian garden architecture from the late Republican period to Neoclassicism with special emphasis placed on literary sources and with extensive site visits.
(Offered only in the Study Abroad program at the Scuola Lorenzo di Medici in Florence.)
Prerequisite: ART 100 or ART 103 or ART 104

ART 303 History of Photography
4 hours; 4 credits
A critical study of the history of photography from its beginning in the early nineteenth century through contemporary developments. Topics to be covered include the aesthetic relation of form and content, portraiture, the documentary and abstract approaches, and color photography. The primary emphasis will be on photography as an art, but emphasis will be given to the development of photographic equipment, materials, and techniques as they influence the art. Students will utilize slides and books to study the work of major artists. No previous study of photography is necessary.
Prerequisites: ENG 111, and ART 100 or 103 or 104 or permission of the instructor

ART 304 History of Printmaking
4 hours; 4 credits
The history of printmaking from its origins in the fifteenth century to the present. While the main emphasis will be placed on the relation of printmaking to contemporaneous activity in paintings, an effort will be made to define the individual character of such techniques as wood-block printing, engraving, etching, mezzotint, aquatint, lithography, and screenprinting. The course will encourage connoisseurship by combining slide lectures with visits to museums and graphics studios.
Prerequisites: ART 100 or 103 or 104 or permission of the instructor

ART 305 Museum and Gallery Training
4 hours; 4 credits
Students interested in studio art or art history are given an opportunity to combine theory and practical experience by working with an adviser at the College and in selected museums and private galleries in New York City. Since serious commitment is essential, prospective students will be interviewed by the adviser before registration. Hours will be arranged. This course may be repeated once for credit, with permission of the instructor.
Prerequisites: ENG 111, and ART 100 or 103 or 104 or permission of the instructor

ART 308 American Art Since 1945
(Also AMS 308)
4 hours; 4 credits
The course will examine the development of American painting and sculpture since World War II. In addition to providing an historical and critical perspective for understanding the variety of styles that emerged in this period, as well as related social and political issues, the course will attempt to provide an opportunity for students to meet with some of the artists, dealers, and curators who have contributed to recent developments.
Prerequisite: ART 100 or ART 103 or ART 104 or permission of the instructor

ART 310 Aspects of Renaissance Art
3 hours; 3 credits
This course examines the development of European art and architecture from 1400 to 1520, stressing the Italian contribution and focusing particularly on style, iconography, and patronage.
(Offered only at the American University of Rome.)
Prerequisites: ENG 111, and ART 100 or 103 or 104 or permission of the instructor

ART 311 Baroque Art and Architecture
3 hours; 3 credits
An analysis of the Baroque style which developed in Italy at the beginning of the seventeenth century and spread throughout
Europe. Particular emphasis will be placed on discussion of the varying intellectual, religious, and socio-economic factors that affected such important issues as patronage. The role played by the city of Rome will be given particular consideration. (Offered only at the American University of Rome.)

Prerequisite: ART 100 or 103 or 104 or permission of the instructor

ART 320 Advanced Drawing
4 hours; 3 credits
Individual studio projects and advanced figure compositions in all drawing media. This course may be repeated for credit.
Prerequisite: ART 220

ART 325 Portrait Drawing III
4 hours; 3 credits
Basic study of the human head and facial expressions with particular attention to the problems of portraiture. For advanced students. This course may be repeated for credit.
Prerequisite: ART 225

ART 330 Advanced Painting
4 hours; 3 credits
Individual studio projects with emphasis on development of personal direction. This course may be repeated for credit.
Prerequisite: ART 230

ART 340 Design Workshop I
4 hours; 3 credits
Introduces the student to the basic conceptual and executional skills necessary in the field of graphic design. Areas to be covered will include two-dimensional space, color relationships, space relationships, and three-dimensional construction.

ART 341 Design Workshop II
4 hours; 3 credits
More advanced two- and three-dimensional problem-solving with emphasis on the technical skills necessary for reproduction. Areas to be covered will include design problems and applications, typography, and methods of reproduction.
Prerequisite: ART 340

ART 345 Intermediate Printmaking
4 hours; 3 credits
Development of technical and expressive skills through selected areas of study in one or more of the graphic processes.
Prerequisite: ART 245

ART 350 Advanced Sculpture
4 hours; 3 credits
A continuation of ART 250 based upon a project approved by both student and instructor. Students will have the opportunity to work with an arc welder and plasma cutter, and to work in heavier steel. This course may be repeated for credit.
Prerequisite: ART 250

ART 375 Intermediate Studio Art Theory and Practice
4 hours; 3 credits
A continuation of the study of two-dimensional systems and concepts. The central focus will be an understanding of the development and structure of Cubism and fragmented patterns. Studies will be made in both black and white and in color. Students are expected to produce drawings and paintings that transpose realist paintings into Cubist manner.
Prerequisite: ART 275

ART 440 Contemporary Art Theory I
4 hours; 4 credits
A seminar for advanced students in the arts. Part I will review the historical developments which led to the establishment of the New York School.
Prerequisite: Permission of the instructor.

ART 441 Contemporary Art Theory II
4 hours; 4 credits
The seminar will continue with an attempt to correlate individual student research on recent movements with the shifts in aesthetic theory from the 1930s to the present.
Prerequisite: ART 440 or permission of the instructor.

ART 445 Advanced Printmaking
4 hours; 3 credits
Individual projects in one or more of the printmaking processes. Emphasis on the development of individual style with a mature level of expression and the compiling of a portfolio of prints. This course may be repeated for credit.
Prerequisite: ART 345

ART 475 Advanced Studio Art Theory and Practice
4 hours; 3 credits
This course will probe the inter-relationship of realist and abstract painting. Realism and abstraction will be compared and explored for the elements they share as well as for their differences. From a simple still life the student will develop studies that result in two distinct series of paintings, one abstract, the other realist. This course may be repeated for credit.
Prerequisite: ART 375

Astronomy Courses
Department of Engineering Science and Physics
Program Coordinator and Director of the Astrophysical Observatory: Associate Professor Irving Robbins, Engineering Sciences/Computer Science Building (1N), room 251
Astrophysical Observatory: 16-foot dome Observatory, equipped with a computerized 16” f/10 Meade Schmidt-Cassegrain Telescope and linked via ETHERNET to the astrophysical laboratory located in a neighboring building. The telescope is fully computer controlled, has over 64,000 celestial objects in its memory, and is equipped with Charge Coupled Device (CCD) digital cameras.

AST 100 Contemporary Theories of the Solar System
3 hours; 3 credits
The nature of the sun, moon, planets, comets, meteors and meteorites; early and modern history of the earth; the origin of the solar system; evolution of life on earth and in the cosmos. Field
trips and/or day and evening astronomical observation sessions will be required. Students may not receive credit for both INS 100 and AST 100. (science)
Prerequisite: Successful completion of the CUNY Mathematics Assessment Test or MTH 020
Corequisite: AST 101

AST 101 Planetary Laboratory
2 laboratory hours; 1 credit
Experiments on the properties of light and telescopes, the celestial sphere and time, eclipses, planetary orbits, meteors, sunspots, lunar geography, and observation work. (science)
Corequisite: AST 100

AST 102 Contemporary Theories of the Universe
3 hours; 3 credits
A presentation of the galaxy, atomic structure, star populations, nuclear energy, stellar evolution, galactic structure, and the universe. Field trips and/or day and evening astronomical observation sessions will be required. (science)
Prerequisite: Successful completion of the CUNY Mathematics Assessment Test or MTH 020
Corequisite: AST 103

AST 103 Galactic Laboratory
2 laboratory hours; 1 credit
Experiments on atomic properties of matter, stellar atmosphere, variable and nova stars, galaxy classification, stellar clusters, and observation work. (science)
Corequisite: AST 102

AST 105 Observational Astronomy
3 hours; 2 laboratory hours; 4 credits
Topics covered are aligning and using computerized telescopes; celestial coordinate systems, time keeping, observations of the planets, moon, sun, asteroidal motions, and variable stars; astrophotography with CCD imaging cameras; photometric techniques. Day and evening astronomical observation sessions will be required beyond regularly scheduled hours. (science)
Prerequisites: Successful completion of the CUNY Mathematics Assessment Test or MTH 020, AST 100 or AST 102 or permission of the instructor

AST 396 Introduction to Astrophysics
3 hours; 3 credits
Calculus-based treatments of celestial mechanics of the solar system, the earth-moon system, comparative planetology of the terrestrial and Jovian planets, electromagnetic radiations and their detectors, stellar structure and evolution, galaxies, and cosmology. Field trips and/or day and evening astronomical observation sessions will be required.
Prerequisites: PHY 160; MTH 232 or MTH 236

Biochemistry
(Bachelor of Science, Minor)
Department of Biology
Chair: Associate Professor John Olsen, Biological/Chemical Sciences Building (6S), room 235
A degree in Biochemistry prepares students interested in working in the fast growing biotechnology field, in the chemical and pharmaceutical industries, in research, product development, marketing and sales, and in such related fields as teaching. For students who wish to pursue graduate study in the sciences or enter professional schools (medicine, dentistry, optometry, pharmacy), a B.S. degree in Biochemistry is viewed quite favorably by admissions committees.

Biochemistry (B.S.)

General Education Requirements for the B.S.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis: Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 21-27 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (3-4 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (3-4 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   c. Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
See section on general education requirements for approved course lists and complete details.

Pre-Major Requirements: 34 credits
Students planning to major in biochemistry must complete the following requirements. These courses may also be used to satisfy general education requirements. A detailed guide to course choices for Biochemistry and Chemistry majors is available from the Department of Chemistry:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 141</td>
<td>General Chemistry I</td>
<td>3</td>
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<tr>
<td>CHM 121</td>
<td>General Chemistry I Laboratory</td>
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<tr>
<td>CHM 142</td>
<td>General Chemistry II</td>
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<td>CHM 127</td>
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<td>BIO 100</td>
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<td>BIO 180</td>
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<td>BIO 181</td>
<td>General Biology II Laboratory</td>
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<tr>
<td>PHY 120</td>
<td>General Physics I</td>
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<tr>
<td>PHY 121</td>
<td>General Physics I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHY 160</td>
<td>General Physics II</td>
<td>3</td>
</tr>
</tbody>
</table>
Electives: 17 credits
All biochemistry majors are encouraged to take Independent Study (CHM 591-4 or BIO 591-4) as an elective.

Total Credits Required: 120

Honors
A student may be eligible for admission to the honors program in Biochemistry if he or she enters the senior year with a 3.5 grade point average. With the concurrence of a faculty supervisor, the student must submit (by September 1) a one-page summary of his proposed research project. The chairperson of the department and the faculty supervisor will appoint a three-member committee to evaluate the proposal (by September 15). Progress of the research will be monitored as follows:

(1) the student will meet with his or her committee by November 1 of the first semester;
(2) the student will submit a five-page progress report by January 15;
(3) the committee will recommend for or against continuation in the program by February 1;
(4) the student will submit a thesis, following the style of major journals, by May 1;
(5) the student will present an oral defense of the thesis to the committee, by the end of the final exam period.

The deadline dates noted above are based on a June graduation date, but corresponding guidelines may be designed for January graduation. In either case, it is expected that completion of the honors program will require at least one year of student research.

Minor
Prerequisite Courses:
CHM 141, 121, 142, 127 8 credits
BIO 100, 101, 180, 181 8 credits

Requirements
CHM 240 Analytical Chemistry 4 credits

Biochemistry Courses
Courses in biochemistry are listed under biology and chemistry.

Biology
(Bachelor of Science, Bioinformatics, Secondary Education Preparation, Master of Science - see Graduate Catalog for information on graduate programs)
Department of Biology
Chair: Professor Jacqueline LeBlanc, Biological/Chemical Sciences Building (6S), room 143

Study of the biological sciences is a major requirement not only for students who wish to specialize in such fields as plant or animal research, but also for students who plan to enter various health professions, such as medicine, nursing, dentistry, medical technology, physician assistant or physical therapy. The department offers a varied and balanced program for biology and health profession majors, and three options in the B.S. degree program in Biology: biology major, biology/secondary education, and bioinformatics.

Biology (B.S.)

General Education Requirements for the B.S.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic
Analysis: Pluralism and Diversity requirements: 21-27 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (3-4 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (3-4 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   c. Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
See section on general education requirements for approved course lists and complete details.

Pre-Major Requirements: 15-19 credits
A. All four of the following courses:
   BIO 100 General Biology I 3 credits
   BIO 101 General Biology I Laboratory 1 credit
   BIO 180 General Biology II 3 credits
   BIO 181 General Biology II Laboratory 1 credit
B. One of the following three units:
   MTH 230 Calculus I with Pre-Calculus 6 credits
   or
   MTH 229 Calculus Computer Laboratory 1 credit
   MTH 231 Analytical Geometry and Calculus I 3 credits
   or
   MTH 229 Calculus Computer Laboratory 1 credit
   MTH 235 Accelerated Calculus I 5 credits
   MTH 229 Calculus Computer Laboratory 1 credit
C. One of the following two courses:
   MTH 214 Applied Statistics Using Computers 3 credits
   BIO 272 Biometrics 4 credits

Option I - Biology Major Requirements: 59 credits
A minimum grade of C is required for a biology course to be used to satisfy a prerequisite for a biology course required for the major requirements for the B.S. in Biology.
A. Required courses
   BIO 205 General Physiology 4 credits
   BIO 312 Genetics 4 credits
   BIO 352 Cell Biology 4 credits
   BIO 360 Ecology 4 credits
B. One of the following courses:
   BIO 370 Biochemistry
   BIO 372 Cell Biochemistry
   BIO 213 Comparative Vertebrate Anatomy
   BIO 215 Invertebrate Zoology and Paleontology
   BIO 228 Botany
C. One advanced six-hour laboratory course from the following:
   BIO 450 Experimental Methods in Animal Physiology
   BIO 452 Experimental Methods in Behavioral Biology
   BIO 454 Advanced Methods in Cell Biology
   BIO 456 Experimental Methods in Ecology
   BIO 458 Experimental Methods in Cell Biochemistry
   BIO 460 Experimental Methods in Advanced Genetics
D. Three courses selected from the following: 12 credits
   Courses not selected in groups B or C and these additional courses:
   BIO 222 Field Biology
   BIO 240 Biology of Disease
   BIO 314 General Microbiology
   BIO 318 Histology
   BIO 322 Evolution
   BIO 324 Developmental Biology
   BIO 332 Advanced Physiology
   BIO 338 Behavioral Biology
   BIO 365 Principles of Neurobiology
   MTH 415 Mathematical Biology
   BIO 420 Comparative Endocrinology
   BIO 428 Plant Physiology
   BIO 434 Comparative Physiology
   BIO 442 Immunology
E. Required related science courses:
   PHY 116 Physics I
   PHY 156 Physics II
   or (with appropriate mathematics background)
   PHY 120 General Physics I
   PHY 121 General Physics I Laboratory
   PHY 160 General Physics II
   PHY 161 General Physics II Laboratory 8 credits
   CHM 141 General Chemistry I 3 credits
   CHM 121 General Chemistry I Lab 1 credit
   CHM 142 General Chemistry II 3 credits
   CHM 250 Organic Chemistry I 4 credits
   CHM 256 Organic Chemistry II 4 credits

Electives: 14-24 credits
Total Credits Required: 120

Honors
The honors program in Biology is available to eligible seniors with a 3.5 grade point average or better. The program requires a minimum of one year to complete. The student may receive up to eight credits for independent study (BIO 594) while completing the honors program. However, students do not automatically gain entrance into the honors program by registering for independent study.

To be accepted into the honors program, the student must first obtain approval from a full-time member of the department to carry out an honors research project. This faculty member will then serve as the student’s adviser. Thereafter, the student will prepare and present a detailed written preliminary proposal of the honors research project for approval to a three-member departmental committee, consisting of the faculty adviser and two
other faculty members. The committee will evaluate the proposal. After an oral presentation by the student and upon the recommendation of the committee, the student will be accepted into the program. The student will meet with his or her committee mid-way through the first semester for evaluation of the project. In addition, the student will submit a written progress report to the committee at the end of the first semester. On the basis of this report, the committee will decide whether the student should proceed further. If the student does not continue in the honors program, he or she may still acquire the credits for independent study.

When the research is completed, the student is required to write up the research in the form of a thesis which will be evaluated at early and final stages by the committee. The thesis format must adhere to that used by leading biological journals, or as outlined in the AIBS style manual. The ultimate decision on thesis format lies with the committee.

Because it will take at least one year to complete the honors program in biology, it is suggested that the student begin work during the summer immediately following the junior year.

**Minor**

Prerequisite courses:

- BIO 100 and 101 General Biology I and laboratory 4 credits
- BIO 180 and 181 General Biology II and laboratory 4 credits

**Requirements:**

Four biology courses at the 200 level or above, at least two of which must have laboratory components. 14-16 credits

**Option II - Biology/Adolescence Education 7-12: 55 credits**

Programs leading to teacher certification in New York State are undergoing revision to comply with new State regulations. Please contact the Department of Education (3S-208) to obtain updated program requirements.

General Education Requirements: same as for Option I as shown above.

Pre-Major Requirements: 15-19 credits, same as for Option I as shown above.

**Major Requirements: 55 credits**

A minimum grade of C is required for a biology course to be used to satisfy a prerequisite for a biology course required for the major requirements for the B.S. in Biology/Secondary Education.

**A. Required Courses**

- BIO 205 General Physiology 4 credits
- BIO 312 Genetics 4 credits
- BIO 352 Cell Biology 4 credits
- BIO 360 Ecology 4 credits

**B. One of the following courses:** 4 credits

- BIO 370 Biochemistry
- BIO 372 Cell Biochemistry
- BIO 213 Comparative Vertebrate Anatomy

**C. One advanced six-hour laboratory course from the following:** 3 credits

- BIO 450 Experimental Methods in Animal Physiology
- BIO 452 Experimental Methods in Behavioral Biology
- BIO 454 Advanced Methods in Cell Biology
- BIO 456 Experimental Methods in Ecology
- BIO 458 Experimental Methods in Cell Biochemistry
- BIO 460 Experimental Methods in Advanced Genetics

**D. Three electives from the following:** 12 credits

Courses not selected in groups B or C and these additional courses:

- BIO 222 Field Biology
- BIO 240 Biology of Disease
- BIO 314 General Microbiology
- BIO 318 Histology
- BIO 322 Evolution
- BIO 324 Developmental Biology
- BIO 332 Advanced Physiology
- BIO 338 Behavioral Biology
- BIO 365 Principles of Neurobiology
- MTH/
  - BIO 415 Mathematical Biology
  - BIO 420 Comparative Endocrinology
  - BIO 434 Comparative Physiology
  - BIO 442 Immunology

**E. Required Related Science Courses:**

- PHY 116 Physics I
- PHY 156 Physics II or (with appropriate mathematics background)
  - PHY 120 General Physics I
  - PHY 121 General Physics I Laboratory
  - PHY 160 General Physics II
  - PHY 161 General Physics II Laboratory 8 credits
  - CHM 141 General Chemistry I
  - CHM 121 General Chemistry I Lab 3 credits
  - CHM 142 General Chemistry II 3 credits
  - CHM 127 General Chemistry II Lab 1 credit
  - CHM 250 Organic Chemistry I 4 credits

**Electives: 18-28 (Secondary Education course sequence)**

**Total Credits Required: 120**

**Option III - Biology/Bioinformatics: 73-74 credits**

General Education Requirements: same as for Option I as shown above.

**Pre-Major Requirements: 16-19 credits**

**A. All four of the following courses:**

- BIO 100 General Biology I 3 credits
- BIO 101 General Biology I Laboratory 1 credit
- BIO 180 General Biology II 3 credits
Biology

BIO 181 General Biology II Laboratory 1 credit

B. One of the following three units:

MTH 230 Calculus I with Pre-Calculus 6 credits
MTH 229 Calculus Computer Laboratory 1 credit
or
MTH 231 Analytical Geometry and Calculus I 3 credits
MTH 229 Calculus Computer Laboratory 1 credit
or
MTH 235 Accelerated Calculus I 5 credits
MTH 229 Calculus Computer Laboratory 1 credit

C. BIO 272 Biometrics 4 credits

Major Requirements: 73-74 credits

A minimum grade of C is required for a biology course to be used to satisfy a prerequisite for a biology course required for the major requirements for the B.S. in Biology/Bioinformatics.

A. Required Courses

BIO 205 General Physiology 4 credits
BIO 312 Genetics 4 credits
BIO 352 Cell Biology 4 credits
BIO 360 Ecology 4 credits

B. All of the following courses: 4 credits

BIO/
CHM 370 Biochemistry I 4 credits
CHM 376 Biochemistry II 4 credits
BIO 326 Introduction to Bioinformatics 3 credits
MTH/
BIO 415 Mathematical Biology 4 credits

C. One advanced six-hour laboratory course from the following: 3 credits

BIO 450 Experimental Methods in Animal Physiology
BIO 452 Experimental Methods in Behavioral Biology
BIO 454 Advanced Methods in Cell Biology
BIO 456 Experimental Methods in Ecology
BIO 458 Experimental Methods in Cell Biochemistry
BIO 460 Experimental Methods in Advanced Genetics

D. One elective from the following: 3 credits

Courses not selected in group C and these additional courses:

BIO 213 Comparative Vertebrate Anatomy
BIO 215 Invertebrate Zoology and Paleontology
BIO 228 Botany
BIO 240 Biology of Disease
BIO 314 General Microbiology
BIO 318 Histology
BIO 322 Evolution
BIO 324 Developmental Biology
BIO 332 Advanced Physiology
BIO 338 Behavioral Biology
BIO 365 Principles of Neurobiology
BIO 372 Cell Biochemistry
BIO 428 Plant Physiology
BIO 442 Immunology

E. Required related science courses:

CSC 220 Computers and Programming 4 credits
CSC 228 Discrete Mathematical Structures 4 credits
CSC 326 Information Structures 4 credits
PHY 116 Physics I
PHY 156 Physics II
or
PHY 120 General Physics I
PHY 121 General Physics I Laboratory
PHY 160 General Physics II
PHY 161 General Physics II Laboratory
CHM 141 General Chemistry I 3 credits
CHM 121 General Chemistry I Lab 1 credit
CHM 142 General Chemistry II 3 credits
CHM 127 General Chemistry II Lab 1 credit
CHM 250 Organic Chemistry I 4 credits
CHM 256 Organic Chemistry II 4 credits

Electives: 0-9 credits (Computer Science course*)

Total Credits Required: 120

A student who has educational background or work experience that may be equivalent to the stated pre- or corequisite for a biology course should contact the Chairperson of the Biology Department. If it is determined that a student has the appropriate background, a course requisite waiver will be issued.

*Students in the Bioinformatics option must receive approval from the coordinator of the program or the department chairperson before enrolling in the elective computer science course.

For all three Biology B.S. degree program options, with permission of the program coordinator, BIO 150 and BIO 160 Anatomy and Physiology I and II may be substituted for BIO 100 and BIO 101 General Biology I and Laboratory; but BIO 150 and BIO 160 may not be used to satisfy the Scientific Analysis requirement in general education.

Courses

BIO 100 General Biology I
3 hours; 3 credits

Fundamental biological principles of cell metabolism, energy transformations, and plant and animal functions including support, digestion, respiration, circulation, excretion, and integration, and selected current topics.

For science, medical technology, appropriate preprofessional majors, and other interested students in consultation with an adviser. (science)

Prerequisite: Successful completion of the CUNY Mathematics Assessment Test or MTH 020
Corequisite: BIO 101

BIO 101 General Biology I Laboratory
3 laboratory hours; 1 credit

Direct student involvement in the experimental demonstration of basic biological principles in plants and animals and the dissection of the fetal pig, with experiments oriented towards the understanding of the human body.
BIO 102 Human Body
3 class hours; 1 recitation hour; 2 laboratory hours; 4 credits
Introduction to the human body, including its structure and function, and the effects of the environment on it. Fundamental biological principles and concepts and their applications to relevant concerns such as drug addiction, food additives, physical fitness, and the population explosion. Not credited toward biology major. (science)
Prerequisite: Successful completion of the CUNY Mathematics Placement Test or MTH 020
This course may not be used to satisfy major requirements for the B.S. in Biology.

BIO 105 Molecular Foundations of Cell Function
1 lecture hour; 1 recitation hour; 1 credit; the course meets four hours per week for one-half semester
This course offers an introductory survey of molecular biology, cellular metabolism, and cellular mechanisms. It is designed to run concurrently with BIO 150 Human Anatomy and Physiology I, and to provide the necessary background for the study of human anatomy and physiology.
Prerequisite: BIO 102 with a minimum grade of C or a satisfactory score on the Biology Placement Test.
Corequisite: BIO 150
Note: Students planning to enter the programs in Nursing, Physical Therapy, Physician Assistant, or the Nuclear Medicine option in Medical Technology are assigned this course by the Department of Biology on the basis of scores attained on the Biology Placement Test.

BIO 106 Principles of Biology I
3 hours; 3 credits
Introduction to the non-science major. Structure and function of the body and the effects of the environment on it. Fundamental biological principles and concepts and their applications to relevant concerns such as drug addiction, food additives, physical fitness, and the population explosion. Not credited toward biology major. (science)
Prerequisite: Successful completion of the CUNY Mathematics Placement Test or MTH 020
Corequisite: BIO 107

BIO 107 Principles of Biology I Laboratory
2 laboratory hours; 1 credit
Laboratory experiences illustrating principles and topics discussed in BIO 106. (science)
Corequisite: BIO 106

BIO 108 Principles of Biology II
3 hours; 3 credits
Introduction to the non-science major (continuation of BIO 106). The role of biology in the world around us and the effects of the modern world on living things including ecology, pollution, and the extinction of species. Diseases and their treatment through drugs and genetic engineering. Science and the role of the citizen. Not credited toward biology major. (science)
Prerequisites: BIO 106, 107
Corequisite: BIO 109

BIO 109 Principles of Biology II Laboratory
2 laboratory hours; 1 credit
Laboratory experiences illustrating principles and topics discussed in BIO 108. (science)
Corequisite: BIO 108

BIO 146 Nutrition
3 hours; 3 credits
This course presents fundamental principles, concepts, and applications of normal nutrition. Stress will also be placed on the relation of good nutrition to good health. Emphasis will be placed on the common restrictive diets generally used in medical office practice.
Open to non-Medical Assistant students as an elective. May not be used to satisfy major requirements for the B.S. in Biology.
Prerequisites: BIO 102; or BIO 100/101; or BIO 106/107; or BIO 150

BIO 150 Human Anatomy and Physiology I
3 class hours; 3 laboratory hours; 4 credits
The first half of a comprehensive two-semester course in human biology. Integrated lecture and laboratory sessions deal with the structure and function of cells, tissues, and the following systems: integumentary, musculoskeletal, blood-cardiovascular, immune, and respiratory.
Prerequisite: BIO 102 with a minimum grade of C or a satisfactory score on the Biology Placement Test.
Pre- or corequisite: BIO 105 or a satisfactory score on the Biology Placement Test
Pre- or corequisite: BIO 105 or a satisfactory score on the Biology Placement Test

Note: Students who have previously registered two or more times for BIO 150 will be permitted to register again only on a space available basis, as determined at the close of registration.
Students must receive a grade of C or better in BIO 150 and BIO 105 (when prescribed as a corequisite of BIO 150) to proceed to BIO 160. This is a required course for students planning to enter the programs in Nursing, Physical Therapy, Physician Assistant, or the Nuclear Medicine option in Medical Technology programs.

BIO 150 Human Anatomy and Physiology II
3 class hours; 3 laboratory hours; 4 credits
This course is a continuation of BIO 150. Lecture and laboratory sessions deal with the structure and function of the urinary, digestive, nervous, endocrine, and reproductive systems.
Prerequisites: BIO 105 or a satisfactory score on the Biology Placement Test, and BIO 150

Note: Students must receive a grade of C or better in BIO 150 and in BIO 105 (when prescribed by the Department as a corequisite of BIO 150) to proceed to BIO 160. This is a required course for students planning to enter the programs in Nursing, Physical Therapy, Physician Assistant, or the Nuclear Medicine option in Medical Technology programs.

BIO 160 Human Anatomy and Physiology II
3 class hours; 3 laboratory hours; 4 credits
This course is a continuation of BIO 150. Lecture and laboratory sessions deal with the structure and function of the urinary, digestive, nervous, endocrine, and reproductive systems.
Prerequisites: BIO 105 or a satisfactory score on the Biology Placement Test, and BIO 150

Note: Students must receive a grade of C or better in BIO 150 and in BIO 105 (when prescribed by the Department as a corequisite of BIO 150) to proceed to BIO 160. This is a required course for students planning to enter the programs in Nursing, Physical Therapy, Physician Assistant, or the Nuclear Medicine option in Medical Technology programs.

BIO 180 General Biology II
3 hours; 3 credits
A continuation of BIO 100, including plant and animal diversity, microbes and disease, reproduction, development, patterns of inheritance, the origins of life, evolution, ecology, and selected
topics. For science, medical technology, appropriate preprofessional majors, and other interested students in consultation with an adviser. (science)
Prerequisites: BIO 100 and 101
Corequisite: BIO 181

BIO 181 General Biology II Laboratory
3 laboratory hours; 1 credit
A continuation of BIO 101. A laboratory examination of the material covered in BIO 180. For science, medical technology, appropriate preprofessional majors, and other interested students in consultation with an adviser. (science)
Prerequisites: BIO 100 and 101
Corequisite: BIO 180

BIO 205 General Physiology
3 class hours, 3 laboratory hours; 4 credits
A study of systemic physiology with emphasis on cell physiology, homeostasis, and control mechanisms in vertebrates, particularly mammals. Laboratory exercises include physiographic studies of various systems. Required for biology and medical laboratory technology majors.
Prerequisites: BIO 160 or BIO 180 and 181; CHM 141 and CHM 121

BIO 213 Comparative Vertebrate Anatomy
2 class hours, 4 laboratory hours; 4 credits
A comparative study of the chordates with emphasis on morphology and evolution of various systems. Dissection of the lamprey, dogfish shark, mudpuppy (Necturus) and cat will be supplemented by the study of microscopic and macroscopic preparations.
Prerequisites: BIO 180 and 181

BIO 214 Biological Approach to Human Sexuality
3 hours; 3 credits
The course includes the developmental anatomy of the female and male reproductive systems, basic endocrinology and reproductive cycles; physiology of sexual functions; pregnancy and birth; fertility, stimulation, and control; sexual disorders, venereal disease, and other diseases including cancer; biological origins and variations of behavior. May not be used to satisfy the major requirements for the B.S. in Biology.
Pre- or corequisite: BIO 180 and 181 or BIO 160

BIO 215 Invertebrate Zoology and Paleontology
2 class hours, 4 laboratory hours; 4 credits
The taxonomy, ecology, evolution, paleontology, and phylogeny of the invertebrates, emphasizing the medical, economic, and evolutionary importance of the various groups. An introduction to the use of the zoological literature and the preparation of a scientific paper.
Prerequisites: BIO 180 and 181

BIO 222 Field Biology
2 class hours, 4 laboratory or field hours; 4 credits
This course provides instruction in standard procedures of collecting, preserving, and analyzing specimens and data observed during off-campus field trips. Analysis will include introduction to descriptive statistics, comparisons and indices of species diversity, dispersion, and community similarity. One field study will be made of animal behavior. One weekend field trip is scheduled. Reports using scientific format, labeled specimen collections, and a field notebook are required.
Prerequisites: BIO 180 and 181

BIO 228 Botany
3 class hours, 3 laboratory hours; 4 credits
An introduction to the major structural and functional characteristics of the groups of plants which comprise the plant kingdom: bacteria, algae, fungi, mosses, ferns, gymnosperms, and angiosperms. Interrelationships of evolution, diversity, and ecology are stressed throughout the examination of all major disciplines of plant biology.
Prerequisites: BIO 180 and 181

BIO 232 Social Problems in Biology
3 hours; 3 credits
A course exploring the application of biology to crucial issues in the world today: drugs, pollution, overpopulation, birth control, abortion, the right to die, test-tube babies, genetic engineering, the rebuilding of man, and the conquest of diseases. May not be used to satisfy the major requirements for the B.S. in Biology.
Prerequisites: BIO 102, or 100 and 101, or BIO 106 and 107

BIO 240 The Biology of Disease
3 hours; 3 credits
Biological aspects of the major diseases of humans, including heart disease, cancer, autoimmune diseases such as arthritis and multiple sclerosis; hereditary diseases such as sickle cell anemia and hemophilia; and bacterial and viral diseases such as tuberculosis, colds, and influenza. Principles of immunology, chemotherapy, and genetic engineering are among the major concepts that will be studied. Effects of disease on human history will also be discussed.
Prerequisites: BIO 108 and 109, or BIO 180 and 181, or BIO 160

BIO 242 History of Biology
3 hours; 3 credits
A survey of the historical development of some of the major biological concepts including an examination of the life and times of various biologists and the factors that influenced their work. Original scientific research papers will be read. May not be used to satisfy the major requirements for the B.S. in Biology.
Prerequisites: BIO 180 and 181

BIO 272 Biometrics
4 hours; 4 credits
A course for science majors emphasizing applications of statistics to problems in experimental biology, field biology, and environmental science. It covers descriptive statistics, probability and probability distributions, confidence intervals, hypothesis testing, and design of experiments. The following techniques are included: goodness of fit tests, t-tests, analysis of variance, correlation and regression, time series analysis, and nonparametric methods.
Prerequisites: BIO 160 or BIO 180 and 181; MTH 123 or MTH 130
BIO 312  Genetics
3 class hours, 3 laboratory hours; 4 credits
A study of the mechanics and molecular basis of inheritance. The lectures will cover patterns of inheritance, structure and function of nucleic acids, recombinant DNA, bacterial genetics and population genetics. Laboratory exercises will include studying patterns of inheritance with Drosophila melanogaster and techniques related to recombinant DNA work. Required of biology majors.
Prerequisites: BIO 205 and CHM 142 and CHM 127

BIO 314  General Microbiology
3 class hours, 3 laboratory hours; 4 credits
Topics will include immunology, biotechnology, and the metabolism, genetics, morphology, and growth of microorganisms. Required of medical technology majors.
Prerequisites: BIO 160 or BIO 180, BIO 181, and CHM 141

BIO 316  Clinical Microbiology
2 class hours, 4 laboratory hours; 4 credits
Medical and diagnostic microbiology: a study of host microbe interactions, the principles and applications of the immune response, the epidemiology of infectious disease, and the pathogenesis of the major microbial diseases. In the laboratory the procedures used in laboratory diagnosis are applied. Required of medical technology majors. A non-liberal arts and sciences course, not credited toward the biology major.
Prerequisite: BIO 314

BIO 318  Histology
2 lecture hours, 4 laboratory hours; 4 credits
A study of the microscopic structure of mammalian cells, tissues, and organs with emphasis on functional correlations. Laboratory sessions include technical procedures for fixing, sectioning, staining and mounting tissue specimens, and examination of prepared microscopic slides of human/mammalian tissues and organs.
Prerequisite: BIO 160 or BIO 205

BIO 322  Evolution
4 hours; 4 credits
The topics covered in this course are the principles of the neo-Darwinian theory of evolution; the origin and evolution of the Earth, the continents, the seas and climates; the origin and evolution of life; the roles of genetic variation, natural selection, isolation, and chance in the evolutionary mechanism; species concepts and speculation; and the tempo and mode of evolution; and an introduction to the use of zoological literature.
Prerequisites: BIO 213 or BIO 215 or BIO 228

BIO 324  Developmental Biology
3 class hours, 3 laboratory hours; 4 credits
Early development of representative organisms, including fertilization, cleavage, origin of germ layers, and organ systems; biochemical events during differentiation.
Prerequisites: BIO 180 and 181; CHM 142
Pre- or corequisite: BIO 205

BIO 325  Diagnostic Molecular Biology
3 class hours, 3 laboratory hours; 4 credits
This course will address the theoretical and practical framework for the understanding and application of molecular biology techniques in the clinical laboratory. The course material will cover the principles and applications of recombinant DNA technology including DNA-DNA hybridization, DNA amplification and nonradioactive in situ hybridization (HISH) for the detection and identification of microorganisms associated with infectious diseases.
Prerequisites: BIO 314, CHM 142

BIO 326  Introduction to Bioinformatics
3 hours; 3 credits
Introduction to the use of computers to solve problems in biology and medicine. Specific topics include the construction and analysis of biological data bases, mathematical modeling including simulation, and the use of "packaged" statistical software. Biological topics used as examples will include genetics, medical statistics, drug design, agriculture, and environmental science.
Prerequisites: BIO 312, MTH 230 or MTH 231, MTH 229, CSC 126

BIO 327  Molecular Biology
4 hours; 4 credits
Principles and regulation of gene expression: nucleic acid and chromosome structure/function, transcription, RNA processing, and translation. Emphasis on eukaryotes and experimental analysis (recombinant DNA and other methods) of genomes, gene structure/function, and expression.
Prerequisite: BIO 312 (BIO 370 and BIO 352 are also recommended)

BIO 332  Advanced Physiology
4 hours; 4 credits
An in-depth study of representative physiological mechanisms at the molecular and cellular levels of organization. Course topics include the function of biological macromolecules, bioenergetics and metabolism, cell surface dynamics, functional microanatomy of neurons, neural information transfer and integration, organization of reflexes, hormones and other bioactive chemical messengers, renal regulation of the internal environment.
Prerequisite: BIO 160 or BIO 205

BIO 338  Behavioral Biology
3 class hours, 3 laboratory hours; 4 credits
This course will cover the areas of animal behavior, neurophysiology; sensory physiology, and neuroendocrinology to provide an integrated point of view of the biological basis of behavior.
Prerequisites: BIO 205 and CHM 142

BIO 342  Advanced Human Anatomy
3 class hours, 3 laboratory hours; 4 credits
In depth study of the human body with emphasis on the neuromuscular system. Examines structural interrelationships as a basis for normal functions. Directed laboratory experiences with cadaver dissection and skeletal materials and models.
Prerequisites: BIO 160 and acceptance into the Physical Therapy Program or permission of the Program Coordinator.
BIO 346  General Virology
4 hours; 4 credits
Study of major groups of viruses and includes structural and biochemical characteristics, cell-virus interactions, and viral diseases.
Prerequisites: BIO 205 and CHM 142; also recommended CHM 250 and BIO 312

BIO 350  Microbiology and Cellular Pathology
3 hours; 3 credits
A one semester course that surveys the major groups of microorganisms with emphasis on those involved in human health problems. The principles of immunity and hypersensitivity, microbial control, and the principal microbial diseases are discussed. Not credited toward the biology major.
Prerequisite: BIO 160
Corequisite: BIO 351

BIO 351  Microbiology and Cellular Pathology Laboratory
3 laboratory hours; 1 credit
Laboratory exercises correlated with topics covered in BIO 350.
Prerequisite: BIO 160
Corequisite: BIO 350

BIO 352  Cell Biology
3 class hours, 3 laboratory hours; 4 credits
The eukaryotic cell is treated as a highly compartmentalized functional unit. Emphasis on cell cycle, DNA and chromosomal organization and functions, replication, transcription and translation, also organization and functional interrelationship of surface and internal membrane systems, and cytoskeleton. The lab component deals with selected topics illustrating key cell biology concepts. Required for biology majors.
Prerequisites: BIO 205 and CHM 142
Corequisite: CHM 250

BIO 356  Ecology
3 class hours, 3 laboratory hours; 4 credits
How interactions between organisms, and between organisms and the physical environment bring about adaptations in response to natural selection, and change in species diversity through evolutionary time. Population genetics, growth and demography; competition; predation; and community and ecosystem structure and function are other major areas covered. Principles of ecology will be emphasized in laboratory work and in field studies of various natural habitats. Required for Biology majors.
Prerequisites: BIO 312; also recommended BIO 215 or BIO 228

BIO 365  Principles of Neurobiology
3 class hours; 3 laboratory hours; 4 credits
A study of basic mechanisms regulating activity of nerve cells including mechanisms of memory and brain disorders. Laboratory exercises include electrophysiological recordings of neuronal activity in vitro and biochemical characterization of components of the nervous tissue.
Prerequisites: BIO 180 and BIO 181, or BIO 160
Corequisite: CHM 250

BIO 368  Neuroscience
3 class hours, 3 laboratory hours; 4 credits
Examines the structure and function of the central nervous system and sensory receptors. Includes laboratory sessions on the dissection of the human brain, examination of sections of the spinal cord and brain stem and experiments with functions of the nervous system.
Prerequisites: BIO 332, BIO 342, PHT 200

BIO 370  Biochemistry I
(Also CHM 370)
4 hours; 4 credits
The major constituents of cells: physical and chemical properties of carbohydrates, lipids, proteins, and nucleic acids. Properties of enzymes including specificity and kinetics.
Prerequisite: CHM 256
Pre- or corequisite: PHY 110 and 111, or PHY 116, or PHY 120 and 121

BIO 372  Cell Biochemistry
3 class hours, 3 laboratory hours; 4 credits
Chemical approaches to cell function: bioenergetics, cell replication, control of biosynthetic processes, and metabolism. Use of analytic methods to study the properties of cells and subcellular components.
Prerequisites: BIO 205, CHM 256

BIO 376  Biochemistry II
(Also CHM 376)
4 hours; 4 credits
Intermediary metabolism, metabolism of carbohydrates, lipids, amino acids, and nucleotides. Introduction to bioenergetics and biochemical genetics.
Prerequisite: BIO/CHM 370
Pre- or corequisite: PHY 150 and 151, or PHY 156, or PHY 160 and 161

BIO 378  Radiation Biology
4 hours; 4 credits
The biological effects of chronic and acute exposure to ionizing and non-ionizing radiation. The mechanisms underlying the events occurring during and after the interaction between macromolecules, isolated cells, organs, and entire organisms with irradiation. The effects of radiation at all levels of biological organization, and the biological basis for radiation safety practices are discussed.
Prerequisite: BIO 205
Pre- or corequisite: PHY 150 and 151, or PHY 156, or PHY 160 and 161

BIO 382  Pharmacotherapeutics
3 hours; 3 credits
Pharmacodynamics of medicinal substances with respect to advanced receptor mechanisms and the action-effect sequence of drug activity. Emphasis is on the correlation between drug structure, pharmacologic activity and the effect of drugs. Not credited toward biology major.
Prerequisites: BIO 350 and 351 or BIO 332, CHM 110 and 111 or CHM 141 and CHM 121
BIO 415  Mathematical Biology  
(Also MTH 415)  
4 hours; 4 credits  
This course will address the growing interaction between mathematics and the biological sciences and will provide a practical context for the mathematical description and analysis of biological processes. The emphasis will be on the construction and analysis of models consistent with empirical data. Biological problems in ecology and conservation, epidemiology, cell biology, and neuroscience will be used to illustrate the equations, including especially nonlinear equations. The computer program MATLAB will be used extensively.  
Prerequisites: MTH 230 and MTH 231 or equivalent; MTH 229, and one BIO 300-level course.

BIO 420  Comparative Endocrinology  
3 class hours, 3 laboratory hours; 4 credits  
Role of major endocrine glands (including neuroendocrines) in cell function and metabolic pathways. Emphasis upon phylogeny and comparative physiology of the endocrine system. Pertinent methodology will be treated.  
Prerequisites: BIO 205, CHM 256 and one additional physiology course.

BIO 428  Plant Physiology  
3 class hours; 3 laboratory hours; 4 credits  
Examination of the basic physiological processes common to all vascular plants. Topics covered include cell structure and function, water transport, transpiration, photosynthesis, solute translocation, nutrient uptake, mineral nutrition, phytohormones, plant tropisms, growth, development, and reproduction. Laboratory exercises will include plant cells, water relations, tissue culture, photosynthesis, phytohormones, reproduction, competition, and symbiosis.  
Prerequisite: BIO 205 or BIO 228  
Pre- or corequisite: CHM 250

BIO 432  Clinical Pathology  
3 hours; 3 credits  
Study of the disease process and their clinical manifestations beginning with the cellular and tissue levels leading to the organ level. Surveys medical conditions and their management as they relate to physical therapy practice. Areas include cardiology, orthopedics, autoimmune system, epidemiology.  
Prerequisites: BIO 342, BIO 332  
Corequisite: BIO 318

BIO 434  Comparative Physiology  
4 hours; 4 credits  
The study of the maintenance of internal homeostasis in different animal groups. Emphasis will be placed upon the phylogeny of the processes of regulation and integration.  
Prerequisites: BIO 205 and BIO 213 or BIO 215  
Corequisite: CHM 250

BIO 442  Immunology  
2 lecture hours, 4 laboratory hours; 4 credits  
An introduction to immunology, with attention to the formation and nature of antibodies, the nature of antigens, and problems of antigen-antibody interactions. Such subjects as antibody-mediated hypersensitivity and histocompatibility are also considered.  
Prerequisite: BIO 314 or 350

BIO 450  Experimental Methods in Animal Physiology  
6 laboratory hours; 3 credits  
Procedures and instrumentation used in testing physiological phenomena. Some of the areas explored are muscle contraction, nerve responses, renal function, active transport, and basal metabolism.  
Prerequisites: BIO 205, CHM 250  
Pre- or corequisite: CHM 256

BIO 452  Experimental Methods in Behavioral Biology  
6 laboratory hours; 3 credits  
Emphasis will be placed on the laboratory analysis of factors which influence the behavior of animals.  
Prerequisite: BIO 338

BIO 454  Advanced Methods in Cell Biology  
6 laboratory hours; 3 credits  
Current procedures for the microscopic study of tissues and cells. Advanced histological procedures involving paraffin embedding, sectioning and staining with selected reactions will be used to study normal and experimentally modified tissues. Autoradiography and enzyme histochemistry will also be examined.  
Prerequisites: BIO 352 and CHM 142

BIO 456  Experimental Methods in Ecology  
6 laboratory hours; 3 credits  
Introduction to natural communities. Emphasis on quantitative methods for community and ecosystem analysis. Field trips to be arranged.  
Prerequisites: BIO 360 and either BIO 272 or MTH 113 or MTH 214

BIO 458  Experimental Methods in Cell Biochemistry  
6 laboratory hours; 3 credits  
The course consists of the application of modern analytical methods to the study of the properties of cells and subcellular components. Emphasis will be placed on the mastering of laboratory techniques. Not credited toward biochemistry major.  
Prerequisite: BIO 370 or 372

BIO 460  Experimental Methods in Advanced Genetics  
6 laboratory hours; 3 credits  
Current procedures in basic recombinant DNA techniques will be utilized including DNA isolation, restriction digestion, ligation, and analysis of recombinant products.  
Prerequisite: BIO 312

See Graduate Catalog for graduate courses.
### Business

(Bachelor of Science, Associate in Applied Science, Minor)

Department of Business

Chair: Professor Laura Nowak, Business Building (3N), room 219

The associate's degree program offers specialization in accounting, finance, information systems, international business, management, and marketing.

Graduates may enter directly into the job market or continue study toward the bachelor's degree, and should consult an adviser and plan their programs accordingly.

### Business (A.A.S.)

#### General Education Requirements

**ENG 111, ENG 151, COR 100, PED 190**: 12 credits

Whenever possible, these four courses should be completed within the first 36 credits.

**Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis**: 13 - 15 credits

1. **Scientific Analysis**
   - At least one science course with laboratory (4 credits)
   - Mathematics: MTH 121, MTH 123 or higher (3-4 credits)

2. **ECO 101 Introduction to Economics** (3 credits)

3. One course from Social Scientific Analysis, The West and the World, or Textual, Aesthetic, and Linguistic Analysis (3-4 credits)

See section on general education requirements for approved course lists and complete details.

#### Core requirements: 23-24 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACC 114</td>
<td>4</td>
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<tr>
<td>ACC 121</td>
<td>4</td>
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<tr>
<td>BUS 150</td>
<td>3</td>
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<tr>
<td>BUS 160</td>
<td>3</td>
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<tr>
<td>CSC 102</td>
<td>4</td>
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<tr>
<td>ECO 240</td>
<td>3</td>
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<tr>
<td>MGT 110</td>
<td>3</td>
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<tr>
<td>MKT 111</td>
<td>3</td>
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</table>

Specialization requirements: 7-8 credits selected from the following recommended courses:

#### Accounting:

Any two Accounting courses above the level of ACC 121 Introduction to Accounting II.

#### Finance:

Any two Finance courses at the 200 level or above.

#### Information Systems:

Two courses chosen from among the following: BUS 205 Data Communications and Networks for Business, BUS 352 Introduction to Systems Analysis, CSC 126 Introduction to Computer Science.

### Business (B.S.)

This program offers students a strong general business education together with the opportunity for a concentration in finance, international business, management, or marketing. The B.S. degree programs in business and accounting are appropriate for graduates of associate’s degree programs as well as for new and transfer students.

#### General Education Requirements

**ENG 111, ENG 151, COR 100, PED 190**: 12 credits

Whenever possible, these four courses should be completed within the first 36 credits.

**Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements**: 21-27 credits

Whenever possible, these courses should be completed within the first 60 credits.

1. **Scientific Analysis**: (11 credits)
   - a. Science and Technology: (8 credits)
   - b. Mathematics: (3 credits)

2. **Social Scientific Analysis**: (3-4 credits)
   - Including ECO 101 Introduction to Economics

3. **The West and the World**: (4 credits)

4. **Textual, Aesthetic, and Linguistic Analysis**: (3-4 credits)
   - a. Literature: 200 level
   - b. Arts and Communications: 100 level
   - c. Arts and Communications: 200 level
5. **Pluralism and Diversity Requirement: (0-4 credits)**
   
   See section on general education requirements for approved course lists and complete details.

   **Note:** International Business students must take two semesters of a foreign language. Any student may request exception from the language requirement through examination administered by the Department of Modern Languages.

### Pre-Major Requirements: 36-38 credits

**Business Courses**

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tr>
<td>MGT 110</td>
<td>Organizational Theory and Management</td>
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<tr>
<td>MKT 111</td>
<td>Marketing</td>
<td>3</td>
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<tr>
<td>FNC/ECO 240</td>
<td>Managerial Finance I</td>
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**Economics Courses**

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<tr>
<td>ECO 210</td>
<td>Price Theory</td>
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<tr>
<td>ECO 212</td>
<td>Income and Employment Theory</td>
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**Quantitative and Computer Courses**

<table>
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<th>Course Code</th>
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<tbody>
<tr>
<td>ACC 114</td>
<td>Introduction to Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACC 121</td>
<td>Introduction to Accounting II</td>
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<tr>
<td>BUS 150</td>
<td>Essential Software Tools for Business</td>
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<td>or</td>
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<tr>
<td>CSC 102</td>
<td>Computing for Today</td>
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<td>or</td>
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<tr>
<td>CSC 126</td>
<td>Introduction to Computer Science</td>
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**Mathematics Courses**

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<tr>
<td>MTH 130</td>
<td>Pre-Calculus Mathematics</td>
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<tr>
<td>MTH 221</td>
<td>Applied Finite Mathematics and</td>
<td></td>
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<tr>
<td></td>
<td>Business Calculus</td>
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<tr>
<td>MTH 230</td>
<td>Calculus I with Pre-Calculus</td>
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<td>or</td>
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<tr>
<td>MTH 231</td>
<td>Analytic Geometry and Calculus I</td>
<td></td>
</tr>
<tr>
<td>MTH 232</td>
<td>Analytic Geometry and Calculus II</td>
<td></td>
</tr>
<tr>
<td>MTH 236</td>
<td>Accelerated Calculus II</td>
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</tr>
</tbody>
</table>

### Major Requirements: 25-28 credits

Each student chooses one area of concentration beyond the pre-major requirements. Concentrations are available in finance, international business, management, and marketing.

#### Finance Concentration: 26 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FNC/ECO 214</td>
<td>Money and Banking</td>
<td>4</td>
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<tr>
<td>FNC/ECO 345</td>
<td>Managerial Finance II</td>
<td>4</td>
</tr>
<tr>
<td>FNC 350</td>
<td>Advanced Corporate Finance</td>
<td>4</td>
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<tr>
<td>FNC/ECO 360</td>
<td>Investment Analysis</td>
<td>4</td>
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<tr>
<td>FNC 370</td>
<td>International Finance</td>
<td>4</td>
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<tr>
<td>ACC 241</td>
<td>Federal Income Taxation I</td>
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</table>

#### Economics Courses

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<th>Course Title</th>
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<tbody>
<tr>
<td>ACC 251</td>
<td>Federal Income Taxation II</td>
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<td>or</td>
<td></td>
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<tr>
<td>FNC/ECO 213</td>
<td>Money and Capital Markets</td>
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</table>

Plus three additional credits in business and related courses with the written approval of the student’s adviser.

### International Business Concentration: 27 credits

<table>
<thead>
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<th>Course Title</th>
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<tr>
<td>BUS 200</td>
<td>Introduction to International Business</td>
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<tr>
<td>ECO/ECO 250</td>
<td>International Economics</td>
<td>4</td>
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<tr>
<td>ECO 370</td>
<td>International Finance</td>
<td>4</td>
</tr>
<tr>
<td>POL 260</td>
<td>International Politics</td>
<td>4</td>
</tr>
</tbody>
</table>

Plus 11 additional credits in business and related courses with the written approval of the student’s adviser.

Courses from among the following are highly recommended:

- ACC 300 International Accounting
- Foreign languages
- ECO 256 Analysis of Underdeveloped Areas
- ECO 352 Comparative Economic Systems
- MGT 317 Management of World Resources
- MGT 410 Business Policy
- MGT 425 International Management
- MGT 415 International Marketing
- POL 240 Comparative Government
- POL 342 Comparative Politics of Developing Countries

### Management Concentration: 28 credits

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>MGT 310</td>
<td>Management Process</td>
<td>4</td>
</tr>
<tr>
<td>MGT 320</td>
<td>Management of Organizational Behavior</td>
<td>4</td>
</tr>
<tr>
<td>MGT 410</td>
<td>Business Policy</td>
<td>4</td>
</tr>
<tr>
<td>MGT 416</td>
<td>Decision Making in Business</td>
<td>4</td>
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</tbody>
</table>

Plus 11 additional credits of courses in management or related subjects chosen with the written approval of the student’s adviser.

### Marketing Concentration: 28 credits

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>MKT 211</td>
<td>Advertising</td>
<td>4</td>
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<td>or</td>
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<tr>
<td>MKT 310</td>
<td>Consumer Behavior</td>
<td>4</td>
</tr>
<tr>
<td>MKT 410</td>
<td>Marketing Research</td>
<td>4</td>
</tr>
<tr>
<td>MKT 420</td>
<td>Marketing Management</td>
<td>4</td>
</tr>
<tr>
<td>MGT 410</td>
<td>Business Policy</td>
<td>4</td>
</tr>
<tr>
<td>MGT 416</td>
<td>Decision Making in Business</td>
<td>4</td>
</tr>
</tbody>
</table>

Plus eight additional credits in marketing or related subjects chosen with the written approval of the student’s adviser.

### Electives: 16-18 credits

**Total Credits Required: 120**

### Liberal Arts and Sciences Requirement

Since most business courses are non-liberal arts and sciences, students in this program should pay special attention to this requirement.
Honors
To graduate with Honors in Business a student must have a 3.5 grade point average in business courses and must have a 3.25 grade point average overall. An honors thesis or project supervised by a member of the business faculty must be completed.

Minors
The business minors are available to students in any of the College’s bachelor’s degree majors.

Minor in Finance
At least 18 credits of courses including:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ACC 114</td>
<td>Introduction to Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>MGT 110</td>
<td>Organizational Theory and Management</td>
<td>3</td>
</tr>
<tr>
<td>FNC/ECO 240</td>
<td>Managerial Finance I</td>
<td>3</td>
</tr>
<tr>
<td>FNC/ECO 345</td>
<td>Managerial Finance II</td>
<td>4</td>
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<tr>
<td>One additional finance course</td>
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Minor in Management
At least 18 credits of courses including:

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<td>3</td>
</tr>
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<td>MGT 310</td>
<td>Management Process</td>
<td>4</td>
</tr>
<tr>
<td>MGT 320</td>
<td>Management of Organizational Behavior</td>
<td>4</td>
</tr>
<tr>
<td>One additional course in management at the 200 or 300 level</td>
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<td>3-4</td>
</tr>
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Minor in Marketing
At least 18 credits of courses including:

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<td>Consumer Behavior</td>
<td>4</td>
</tr>
<tr>
<td>One additional course in marketing at the 200 or 300 level</td>
<td></td>
<td>3-4</td>
</tr>
</tbody>
</table>

Accounting courses are listed alphabetically under ACC.

Business Courses

BUS 100 Introduction to Business
3 hours; 3 credits
The role of business is examined in relation to the environment, government, and society with the emphasis on decision making. An investigation is made of the major aspects of business practice including accounting, finance, management, marketing, data processing, and international business. Not open to students who have passed BUS 116.

BUS 135 Introduction to Information Systems
(Also CSC 135)
2 lecture hours; 2 laboratory hours; 3 credits
A hands-on laboratory course in the effective use of technology tools for problem solving. Students will understand how copyright laws apply to software and the need to acknowledge material from outside sources, including on-line material and the work of others.
Co-requisite: CSC 126

BUS 140 Business Communications
3 hours; 3 credits
Composition of effective business correspondence: credit and collection letters, request and response letters, job applications, resumes, and reports. Detailed attention is given to the principles of grammar, spelling, punctuation, and form as they apply to contemporary business writing.

BUS 150 Essential Software Tools for Business
4 hours; 3 credits
This course is a hands-on introduction to the use of microcomputers in business. The emphasis will be on the operating system and practical use of the most popular application software including spreadsheets, word processing, and data base management. Data exchange among different applications and usage of external data bases (e.g., Dow Jones New Retrieval) will also be introduced. In addition, lectures will be covered on relevant subjects. Not open to students who have successfully completed CSC 102.
Prerequisite: An appropriate score on the CUNY Mathematics Assessment Test or MTH 020

BUS 160 Business Law I
3 hours; 3 credits
The study of the law of contracts, agency, personal property, bailments, real property, mortgages, fire and casualty insurance, and accountant’s legal liability. The lecture and case-study methods will be employed.

BUS 200 Introduction to International Business
4 hours; 4 credits
International business is examined in relation to technological, competitive, economic, legal, social and cultural factors. Introduction to the use of the Internet to develop the latest information for course assignments. Major areas of analysis include the evolution of international business, the ongoing development of opportunities in international business, the growth in global e-commerce, and the responses of multinational firms to these opportunities. Introduction to international aspects of the traditional business functions of marketing, finance, management and accounting.
Pre-or co-requisites: ECO 101 and MGT 110 or MKT 111

BUS 205 Data Communications and Networks for Business
4 hours; 4 credits
Fundamentals of data communications, including hardware, basic components of communications, configurations, networks and applications, protocols, and software. Detailed presentation of networks management and networks design fundamentals, including local networks.
Prerequisite: BUS 150 or CSC 102 or CSC 108/116/118 or CSC 126
BUS 210  Government Policy and Multinational Enterprises  
4 hours; 4 credits
This course examines the major issues affecting relations between Multinational Enterprises (MNEs) and home and host governments. Students will be exposed to the processes by which conflicting interests are resolved. The impact of international controls on MNEs by the United Nations (UN), Organization for Economic Cooperation and Development (OECD), and the European Economic Community (EEC) will be examined in detail. (Offered only at the American University of Rome.) Prerequisites: MGT 110 or BUS 100 and POL 100 or POL 240

BUS 211 Principles of Corporate Communication  
(Also COM 211)  
4 hours; 3 credits
A critical survey of artifacts of corporate and public communication, including films, videos, programs and other audio-visual presentations, annual reports, catalogues, brochures, house organs, and other print communications. Corporate publications: their meaning, purpose, audience, and significance. Writing and editing for such publications with special emphasis on audience and purpose and development of a variety of editorial skills: proofreading, reorganizing, rewriting, collaborating, coauthoring. Students who successfully complete COM/ENL 214 may not register for COM 211. Prerequisites: COM 150 and ENG 151

BUS 230 Quantitative Analysis of Business and Economic Problems  
(Also ECO 231)  
3 hours; 3 credits
The application of mathematical techniques to business and economic problems. An introduction to operations research, linear programming, PERT and related materials. Prerequisites: MGT 110 and 230

BUS 238 Ethical Issues in Business and Society  
(Also PHL 238)  
4 hours; 4 credits
Critical examination of economic and social responsibility of business in the U.S. and around the world; exploration of the appropriate scope of ethical involvement from points of view of management and society; the limitations of responsibility and the establishment of ethical criteria for the evaluation of business performance; the role of public policy in shaping corporate responsibility; consideration of ethical issues arising from the changing nature and implementation of computer and information technology. Prerequisites: ENG 111; PHL 101 or PHL 130 or MGT 110 or Sophomore standing

BUS 260 Business Law II  
3 hours; 3 credits
The study of the Law of Sales, commercial paper (negotiable instruments), documents of title, and partnership. The lecture and case-study methods will be employed. Prerequisite: BUS 160

BUS 262 Practical New York Law  
3 hours; 3 credits
A study of court cases and New York statutory law as related to bank accounts, consumer affairs, contracts, crimes, the family, insurance, labor, the landlord-tenant relationship, torts, and wills. Elements of each cause of action are analyzed and contrasted with appropriate defenses.

BUS 310 International Trade  
4 hours; 4 credits
This course presents an integrated treatment of theory, policy and enterprise in international trade and investment. The course is directed toward the acquisition of knowledge and understanding of these subjects. Among the topics to be investigated are: foreign exchange rates, balance of payments, tariff and non-tariff trade barriers. (Offered only at the American University of Rome.) Prerequisite: ECO 250

BUS 334 Decision Support Systems  
4 hours; 4 credits
This course introduces modern approaches to management information systems methodologies and typical realizations. The use of computer systems and the data structures needed to implement small MIS environments and extensive network-based information systems will be covered. Current concepts from artificial intelligence and database management will be used in designing and building effective information systems, ranging in complexity from simple retrieval systems to sophisticated decision support systems. Prerequisites: CSC 126, ECO/MGT 230, BUS 352

BUS 352 Introduction to Systems Analysis  
4 hours; 4 credits
An analysis of business needs to be satisfied by systems solutions. The systems development cycle. Determining systems requirements. Design of input, output, data base, and processes. Controls of data integrity and security. Managing a systems development project. Preliminary systems design. Prerequisites: ACC 114 and one of the following computer courses: BUS 150 or CSC 126 or 102, or permission of the instructor.

BUS 360 Business Law III  
3 hours; 3 credits
The study of the law of corporations, estates, trusts and wills, regulation of employment, and securities regulations (Federal Securities Acts) will be covered in depth. Trade regulation, consumer protection, constitutional law, administrative law, criminal law, intentional torts, negligence, and strict liability will be discussed. The lecture and case-study methods will be employed. Prerequisite: BUS 260

BUS 405 Applied Concepts in Information Systems  
(Also CSC 405)  
3 lecture hours; 3 laboratory hours; 4 credits
The course covers applied concepts in Information Systems. Theory and methodology for the design, development, and implementation of large scale reliable business software projects;
and tools and techniques for managing business software projects will be discussed. Presentations and GUI interfaces will be emphasized. 
Prerequisites: CSC 326 and BUS 352

**BUS 410 Media Administration**  
(Also COM 410)  
4 hours; 4 credits  
A course dealing with the skills and concepts necessary for the competent management of a media production department. Topics include production planning and control, cost analysis procedures, contract and copyright law in relation to the media, and organization theory.  
Prerequisite: COM 150, and COM 261 or COM 270 or CIN 111

**Finance Courses**

**FNC 111 Personal Finance**  
3 hours; 3 credits  
Discussion of the problems involved in handling personal finance: taxes, life insurance, investments and securities, borrowing, savings, annuities, wills, trusts, estate taxes, and budgeting.

**FNC 213 Money and Capital Markets**  
(Also ECO 213)  
4 hours; 4 credits  
The course examines financial markets from the standpoint of investors and users. Markets studied are those for money market instruments, T-bill futures, Ginnie Mae futures, T-bond futures, stocks, stock options, bonds, mortgages, and Eurocurrencies. Federal Reserve operations, U.S. Treasury operations, and international financing are considered with regard to their effects on financial markets.  
Prerequisite: ECO 101

**FNC 214 Money and Banking**  
(Also ECO 214)  
4 hours; 4 credits  
An analytical, institutional, and historical examination of the monetary systems of the United States. Particular attention will be paid to the operation of commercial banks, and to the powers, purposes, and performance of the Federal Reserve System. The influence of the quantity of money on the level of economic activity will be considered.  
Prerequisite: ECO 101 or permission of the instructor

**FNC 220 Credit Management**  
3 hours; 3 credits  
Methods of obtaining credit information and sources; fundamental principles of extension of credit; analysis of financial statements; factors in making credit decisions; collections and collection procedures.  
Prerequisite: ECO/FNC 240 or permission of the instructor

**FNC 240 Managerial Finance I**  
(Also ECO 240)  
3 hours; 3 credits  
Examination of securities markets, analysis of methods of long term financing, financial ratio analysis, budgeting, current asset management, present value concepts, capital budgeting, cost of capital, and dividend policy.  
Prerequisites: MTH 025 or MTH 030 or MTH 121 or MTH 123 or equivalent and ACC 114

**FNC 315 Monetary Theory and Policy**  
(Also ECO 315)  
4 hours; 4 credits  
Theoretical and applied problems of monetary policy. Emphasis is placed on contemporary developments. Current controversies concerning the use of monetary policy, relationship to fiscal policy, and impact on economic activity.  
Prerequisites: ECO 212 and either ECO/FNC 213 or ECO/FNC 214

**FNC 345 Managerial Finance II**  
(Also ECO 345)  
4 hours; 4 credits  
Working capital management, current asset management, sources of short term financing, financial structure and use of leverage, valuation and rates of return, dividend policy and internal financing, mergers and acquisitions, and liquidation; includes computer lab for solving financial management problems.  
Prerequisites: FNC/ECO 240 and MGT/ECO 230

**FNC 350 Advanced Corporate Finance**  
4 hours; 4 credits  
A case-problem approach to business policy including a theoretical and practical study of assets and liabilities, capital management, financial markets, and the legal concepts of corporate finance. Problems in industry structure, mergers, and acquisitions.  
Prerequisite: FNC/ECO 345

**FNC 360 Investment Analysis**  
(Also ECO 360)  
4 hours; 4 credits  
Survey of principles governing the investment of individual and institutional capital funds: the theory and mechanics of investments; general analysis and valuation procedures, including quantitative and qualitative tests for judging security values; valuation of fixed income securities and common stocks. Introduction to the analysis of industrial, public utility, and government securities. Management of an individual investor's portfolio.  
Prerequisite: FNC/ECO 345

**FNC 370 International Finance**  
(Also ECO 370)  
4 hours; 4 credits  
The financial interrelationships between countries. Analysis of balance of payments, fixed and flexible exchange rates, the role of international reserves. Historical trends in payments and exchange; implications of the rise of the multinational corporation; current international policy problems facing the United States, other developed nations and underdeveloped nations, and current institutional changes designed to meet them.  
Prerequisite: FNC/ECO 345
Management Courses

MGT 110  Organizational Theory and Management
3 hours; 3 credits
Theories of organization and management are developed, examined, and applied to business and nonprofit institutions. Evaluation of organizational structure and practice in light of these theories. Studies of leadership, small group behavior, creativity, communication, and the process of social change in the large business organization.
Prerequisites: ENG 111, and MTH 025 or MTH 030 or permission of the Mathematics Department or an appropriate score on the CUNY Math Assessment Test

MGT 223  Public Administration
(Also POL 223)
4 hours; 4 credits
A course examining concepts in the execution of public policy. Relationships of administrative process to the executive, legislative bodies, the public, special interest groups, the clientele, and the courts. Considers personnel administration and administrative law and regulation. (social science)
Prerequisites: ENG 111, COR 100
Pre- or corequisite: POL 100

MGT 230  Introduction to Managerial and Economic Statistics
(Also ECO 230)
4 hours; 4 credits
Development and application of modern statistical methods, including such elements of descriptive statistics and statistical inference as correlation and regression analysis, probability theory, sampling procedures, normal and binomial distributions, estimation, and testing of hypotheses.
Prerequisites: ECO 101; MTH 121 or 123 or equivalent

MGT 261  Labor Relations
(Also ECO 261)
4 hours; 4 credits
History, theories, structure, and objectives of trade unionism. Grievance procedures, collective bargaining, union power, strikes and other weapons, mediation and arbitration. Government regulation of the labor sector. Students will participate in the reenactment of actual arbitration cases.

MGT 310  Management Process
4 hours; 4 credits
Advanced study of organizational structure and practice in light of management theory. Management functions: planning, organizing, and controlling, along with the secondary functions of staffing, personnel management, and external representation will be studied.
Prerequisites: MGT 110, ECO 101, ACC 114

MGT 314  Small Business Management
4 hours; 4 credits
An overview of the entrepreneur: definition, traits, and development; the role of the entrepreneur in our society and importance to the economy; the launching of a new venture; managing an ongoing venture; planning, financing, staffing, and control.
Prerequisites: MGT 110, MKT 111

MGT 317  Management of World Resources
4 hours; 4 credits
A study of the factors affecting the distribution and development of world resources, including government policies and technological change affecting resource use and resource recovery, and the subsequent influence on the development of domestic and foreign commerce and industry throughout the world. Current events are analyzed in terms of economic, geographic, and political factors.
Prerequisite: ECO 101

MGT 320  Management of Organizational Behavior
4 hours; 4 credits
A systematic, analytical approach to understanding, predicting, and controlling human behavior in organizations. Consideration is given to the individual and the organization, groups and the organization, organizational development and leadership.
Prerequisites: MGT 110, PSY 100 or SOC 100, ACC 114, ECO 101

MGT 322  Human Resource Administration
4 hours; 4 credits
The course provides an introduction to the functions of the personnel executive. An historical and theoretical background is provided. Stress is placed upon the technical, analytical, and legal skills necessary in performing the job itself. Specific topics include recruiting and selecting, employee development, reward and penalty systems, job descriptions, records, and industrial relations.
Prerequisites: MGT 110, PSY 100

MGT 323  Public Policy Analysis
(Also POL 323)
4 hours; 4 credits
A study of how government deals with problems in such areas as health, energy, environment, education, crime, and economic stability. In addition to focusing on substantive policies in these fields, the course will examine how problems come to government's attention and analyze various techniques for determining whether a governmental program is successful.
Prerequisite: POL 100

MGT 324  Introduction to Econometrics
(Also ECO 324)
4 hours; 4 credits
This course will examine the relationship between economic theory and statistical measurement. It will deal mainly with the general linear regression and correlation model. A selected number of other statistical tools will also be treated. Emphasis will be on the understanding of the concepts rather than on their mathematical derivation.
Prerequisites: ECO 101 and ECO/MGT 230 or permission of the instructor

MGT 339  Administrative Law
(Also POL 339)
4 hours; 4 credits
Emphasizes the judicial, legislative and executive control of decisions made by bureaucrats. Topics such as the possibility and scope of judicial review of administrative decision making, ripeness for review and exhaustion of administrative remedies;
and the legislative veto. The Administrative Procedure Act's requirements for rulemaking and adjudication will also be analyzed.

Prerequisite: POL/MGT 223 or POL 336 or POL 338

**MGT 410 Business Policy**
4 hours; 4 credits
The course develops a conceptual framework for business planning through case analysis, including the work of theorists, practitioners, and researchers in business policy and strategy planning.

Prerequisites: Completion of the business core requirements, and junior or senior standing, or permission of the instructor

**MGT 416 Decision Making in Business**
4 hours; 4 credits
Analysis of the problems that face business managers. The course involves participation in a simulated, computerized business game dealing with sales forecasting, marketing, production planning, personnel, pricing, and finance.

Prerequisites: MGT 110, MKT 111, ACC 121, FNC 240

**MGT 423 The Collective Bargaining Process**
4 hours; 4 credits

Prerequisite: MGT 261

**MGT 425 International Management**
4 hours; 4 credits
After a review of the international business environment, this course examines the strategic aspects of the international business corporation (MNE). This includes organization, policy making, and long-range planning. To achieve this end the functional aspects of international management are examined which include human resource management, cross-cultural management analysis and contrasts the different managerial approaches and styles that are used throughout the world. Production, marketing and financial aspects as they apply to the international scene are examined in relation to policy making. To achieve these goals the course is a combination of class lectures and discussions examining theory to formulate policy in analyzing current case studies.

Prerequisites: Senior status, ECO 250, BUS 200
Pre- or corequisite: ECO/FNC 370

**MGT 490 Management Seminar**
3 hours; 3 credits
A symposium of speakers on selected topics in the field of business, advertising, and related merchandising activities designed to give students an opportunity to learn from authorities in the field. Students are required to analyze the speakers' discussions and apply the knowledge to their own assignments.

Prerequisite: Senior standing

**Marketing Courses**

**MKT 111 Marketing**
3 hours; 3 credits
Survey of the nature of the United States distributive system, covering the principles, policies, and practices used by manufacturers, wholesalers, and retailers. Emphasis is placed on the planning, development, and efficient use of marketing tools and institutions in the creation and expansion of markets. Current trends and developments in modern marketing practice are analyzed.

Prerequisites: ENG 111, and MTH 025 or MTH 030 or permission of the Mathematics Department or an appropriate score on the CUNY Math Assessment Test

**MKT 211 Advertising**
4 hours; 4 credits
The course examines the principles and applications of advertising in modern business, details the procedures and techniques necessary for advertising campaigns and execution via preparation of a marketing/advertising plan, and stresses marketing/advertising strategy. Evaluation of social and ethical responsibilities of advertising.

Prerequisite: MKT 111

**MKT 213 Retail Store Organization and Operation**
3 hours; 3 credits
Survey of the functions, principles, procedures, organization, and activities involved in retail store operations. Current trends and developments in retailing practices are analyzed.

Prerequisite: MKT 111

**MKT 215 Principles of Selling**
3 hours; 3 credits
Sales strategy and methods; development of the sales plan; coordination of selling effort; budgeting; making the sales presentation; use of sales aids; critique and discussion.

Prerequisite: MKT 111

**MKT 216 Sales Management**
3 hours; 3 credits
A study of the problems of sales management: sales policies; selection and training of salespersons; methods of compensation and sales stimulation; sales administration and budgeting; sales forecasting. Analysis and evaluation of current practices in sales management.

Prerequisite: MKT 111

**MKT 310 Consumer Behavior**
4 hours; 4 credits
The study of consumer behavior from a theoretical and practical standpoint. The course seeks to understand the role of the behavioral sciences (e.g. anthropology, sociology, psychology) in buying behavior and to integrate the theoretical world of the behavioral sciences with the practical world of marketing. Social, interpersonal, and mediating influences are examined and evaluated as a basis for marketing decisions.

Prerequisites: MKT 111; PSY 100 or SOC 100 or permission of the instructor

**MKT 312 Advertising Copy and Production**
4 hours; 4 credits
Creative and procedural techniques involved in planning, preparing and producing advertisements for print and broadcast media. Problems and practice exercises are used to develop a
working technical skill. Hands on production experience in all media.
Prerequisite: MKT 211

**MKT 410  Marketing Research**  
4 hours; 4 credits  
Encompasses survey of research processes, problem formulation, the types of problems for which market research is used, primary and secondary data collection methods, questionnaire design and sampling plans. Analysis and interpretation of data and research report formats. 
Prerequisites: MKT 111 and MGT/ECO 230

**MKT 415  International Marketing**  
4 hours; 4 credits  
An analytical approach to solving international business problems considering the multiple environments of international business. This course requires the student to investigate the relationship of marketing strategy to cultural, economic, legal, political, and technological conditions in various national markets. 
Prerequisites: ECO 250 or BUS 200 and MKT 111

**MKT 420  Marketing Management**  
4 hours; 4 credits  
The course focuses on the major decisions facing marketing management in its attempt to harmonize the objectives and resources of the company with the opportunities found in the marketplace. The course is analytical in nature and draws heavily on the basic disciplines of economics, behavioral science, and mathematics. 
Prerequisites: Completion of business core requirements, MKT 310, senior standing, or permission of instructor

**MKT 490  Marketing Seminar**  
3 hours; 3 credits  
The use of a selected broad-gauge marketing topic as a focal point for the semester's work to bring about an integration of concepts and knowledge from a number of related disciplines. New ways of thinking about problems faced by marketing management are sought. Individual study by each student of a specific topic and preparation of a report giving the results of research. 
Prerequisite: Completion of business core requirements, senior standing, and permission of the instructor

**Chemistry**  
(Bachelor of Science, Minor; see Graduate Catalog for information on graduate programs)

Department of Chemistry  
Chair: Associate Professor John Olsen, Biological/Chemical Sciences Building (6S), room 235

A degree in chemistry or biochemistry is essential to anyone interested in working in the chemical or pharmaceutical industries and in related fields such as teaching and chemical sales. The degree affords the opportunity to participate in pure chemical research, product development, marketing and sales. A student with a B.S. in Chemistry may branch out and become involved in government jobs in geochemistry, toxicology and environmental chemistry. The chemistry major might also elect to work in the more medically oriented fields - pharmacology, biochemistry, bioengineering, medicinal chemistry, or enter the teaching profession. For students who wish to pursue graduate study in the sciences or enter professional schools (medicine, dentistry, optometry, pharmacy), a B.S. degree in Chemistry or Biochemistry is viewed quite favorably by admissions committees.

**Chemistry (B.S.)**

**General Education Requirements for the B.S.**  
ENG 111, ENG 151, COR 100, PED 190: 12 credits  
Whenever possible, these four courses should be completed within the first 56 credits.

**Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 21-27 credits**  
Whenever possible, these courses should be completed within the first 60 credits.

1. **Scientific Analysis:** (11 credits)  
   a. **Science and Technology:** (8 credits)  
   b. **Mathematics:** (3 credits)

2. **Social Scientific Analysis:** (3-4 credits)

3. **The West and the World:** (4 credits)

4. **Textual, Aesthetic, and Linguistic Analysis:** (3-4 credits)  
   a. **Literature:** 200 level  
   b. **Arts and Communications:** 100 level  
   c. **Arts and Communications:** 200 level

5. **Pluralism and Diversity Requirement:** (0-4 credits)  
   See section on general education requirements for approved course lists and complete details.

**Pre-Major Requirements: 26 credits**  
Students planning to major in chemistry must complete the following requirements. A detailed guide to course choices for Biochemistry and Chemistry majors is available from the Department of Chemistry.

- CHM 141 General Chemistry I 3 credits  
- CHM 121 General Chemistry I Laboratory 1 credit  
- CHM 142 General Chemistry II 3 credits  
- CHM 127 General Chemistry II Laboratory 1 credit  
- PHY 120 General Physics I 3 credits  
- PHY 121 General Physics I Laboratory 1 credit  
- PHY 160 General Physics II 3 credits  
- PHY 161 General Physics II Laboratory 1 credit  
- MTH 229 Calculus Computer Laboratory  
- MTH 230 Calculus I and Pre-Calculus or  
- MTH 231 Analytic Geometry and Calculus I and  
- MTH 232 Analytic Geometry and Calculus II or  
- MTH 233 Analytic Geometry and Calculus III or  
- MTH 235 Accelerated Calculus I  
- MTH 236 Accelerated Calculus II (10-13 credits)
Major Requirements: 36 credits

- CHM 240 Quantitative Chemistry 4 credits
- CHM 250 Organic Chemistry I 4 credits
- CHM 256 Organic Chemistry II 4 credits
- CHM 330 Physical Chemistry: Equilibria 4 credits
- CHM 336 Physical Chemistry: Processes 4 credits
- CHM 337 Experimental Methods in Physical Chemistry 4 credits
- Three additional chemistry electives at the 300-level or higher 12 credits

Electives: 29 credits

All Chemistry majors are encouraged to take an Independent Study course (CHM 591-4) as an elective.

Total Credits Required: 120

Transfer students are expected to fulfill their advanced major requirements (300 level and higher) at the College of Staten Island.

Honors

A student may be eligible for admission to the honors program in Chemistry if he or she enters the senior year with a 3.5 grade point average. With the concurrence of a faculty supervisor, the student must submit (by September 1) a one-page summary of a proposed research project. The chairperson of the department and the faculty supervisor will appoint a three-member committee to evaluate and/or modify the proposal (by September 15), then grant or deny admission to the honors program.

While pursuing honors research the student may receive eight credits for Independent Study (CHM 594), four each in the fall and spring semesters. Additionally, it is highly recommended that the student begin work on the project during the summer or spring semester that immediately precedes the senior year. Progress of the research will be monitored as follows: (1) the student will meet with his or her committee by November 1 of the first semester; (2) the student will submit a five-page progress report by January 15; (3) the committee will recommend for or against continuation in the program by February 1; (4) the student will submit a thesis, following the style of major journals, by May 1; (5) the student will present an oral defense of the thesis to the committee, by the end of the final exam period.

The deadline dates noted above are based on a June graduation date, but corresponding guidelines may be designed for January graduation. In either case, it is expected that completion of the honors program will require at least one year of student research.

Minor

Prerequisite Courses:
- CHM 141, 121, 142, 127 8 credits

Requirements:
- CHM 240 Analytical Chemistry or
- CHM 340 Instrumental Analysis 4 credits

Courses

CHM 100 Introduction to Chemistry
3 lecture hours; 1 recitation hour; 3 credits
Course material includes matter and energy, atoms and molecules, the periodic table, nomenclature, equations, mole concept, stoichiometry, solutions.
Prerequisite: MTH 025 or MTH 030
Corequisite: CHM 101

Note: This course is intended for those students who have had no previous chemistry and for those returning to the subject after some years. The courses is designed to prepare students for entry into CHM 141.

CHM 101 Introduction to Chemistry Laboratory
2 hours; 1 credit
A laboratory course emphasizing basic chemical laboratory techniques. The experiments provide illustrations of concepts discussed in CHM 100. Use of computer software for laboratory data analysis and computer-assisted instruction.
Corequisite: CHM 100

CHM 106 Chemistry for Today I
3 hours; 3 credits
Basic chemical concepts including atomic theory, the nature of molecules, chemical formulae and equations, bonding, gas laws, nuclear chemistry, oxidation-reduction, and acids and bases. (science)
Prerequisite: Successful completion of the CUNY Mathematics Assessment Test or MTH 020
Corequisite: CHM 107

CHM 107 Chemistry for Today I Laboratory
2 laboratory hours; 1 credit
Laboratory experiences illustrating principles and topics discussed in CHM 106. (science)
Pre- or corequisite: CHM 106

CHM 108 Chemistry for Today II
3 hours; 3 credits
A continuation of Chemistry 106. Topics will be chosen from among the following: fossil fuels and pollution, man’s effect on the environment, food additives, household chemicals, the chemistry of drugs and the human mind, farm chemistry, and plastics. (science)
Prerequisite: CHM 106
Corequisite: CHM 109

CHM 109 Chemistry for Today II Laboratory
2 laboratory hours; 1 credit
Laboratory experiences illustrating principles and topics discussed in CHM 108. (science)
Pre- or corequisite: CHM 108

CHM 110 Principles of Chemistry I
3 hours; 3 credits
Modern concepts of the atom and chemical bonding, chemical
Chemistry calculations, states of matter, chemistry of water, purification of water, types of solutions, acids and bases, nuclear chemistry, and radioactivity. The concepts necessary for an understanding of our technological society are developed. (science)

Prerequisite: MTH 020 or an appropriate score on the CUNY Mathematics Assessment Test
Corequisite: CHM 111

CHM 111 Principles of Chemistry I Laboratory
2 laboratory hours; 1 credit
Experiments illustrating principles studied in CHM 110. (science)
Prerequisite: Successful completion of the CUNY Mathematics Assessment Test or MTH 020
Corequisite: CHM 110

CHM 116 Principles of Chemistry II
3 hours; 3 credits
Chemistry and biochemistry of carbon compounds. A study of the nomenclature, structure, properties, and reactions of organic and biochemical compounds. A number of special topics are discussed, some of which are the petroleum industry, giant molecules (synthetic and biopolymers), environmental chemistry, drugs, and oral contraceptives. (science)
Prerequisite: CHM 110 and 111 or permission of the instructor
Corequisite: CHM 117

CHM 117 Principles of Chemistry II Laboratory
2 laboratory hours; 1 credit
Laboratory experiments concerned with the synthesis, isolation, and purification and analysis of a variety of organic and biochemical compounds of the types considered in CHM 116. (science)
Prerequisites: CHM 110 and 111 or permission of the instructor
Corequisite: CHM 116

CHM 121 General Chemistry I Laboratory
3 laboratory hours; 1 credit
Experiments reinforce important chemical concepts discussed in lectures, teach modern lab techniques and emphasize present day interpretations of lab measurements. (science)
Pre- or corequisite: CHM 141

CHM 127 General Chemistry II Laboratory
3 laboratory hours; 1 credit
A continuation of CHM 121. Inorganic qualitative analysis. (science)
Pre- or corequisite: CHM 142

CHM 141 General Chemistry I
3 lecture hours, 1 recitation hour; 3 credits
A study of the fundamental principles and laws concerning the structure and behavior of matter. The first semester covers atomic and molecular structure, chemical bonding, reactions, stoichiometry and the gaseous, liquid and solid states of matter. (science)
Pre- or corequisite: MTH 123
Corequisite: CHM 121
Note: Students are advised that satisfactory completion of one year of high school chemistry or a college-level introductory chemistry course is essential preparation for this course.

CHM 142 General Chemistry II
3 lecture hours, 1 recitation hour; 3 credits
A continuation of CHM 141. Solution properties, reaction rates, equilibrium processes, thermochemistry and thermodynamics, electrochemistry, nuclear and organic chemistry. (science)
Prerequisite: CHM 141
Corequisite: CHM 127

CHM 240 Analytical Chemistry
4 class hours; 4 laboratory hours; 4 credits
A study of the quantitative aspects of chemical changes, chemical equilibria, the stoichiometry and energetics of chemical reactions. Theory and laboratory in volumetric, optometric, electrostatic, and kinetic methods of chemical analysis. An introduction to instrumental methods of analysis.
Prerequisites: CHM 142 and 127

CHM 250 Organic Chemistry I
3 class hours, 4 laboratory hours; 4 credits
The structure and properties of organic compounds are examined. Emphasis is given to reactions and synthesis of aliphatic and aromatic molecules. Stereochemistry and organic reaction mechanisms are introduced and thoroughly discussed.
Prerequisites: CHM 142 and 127

CHM 256 Organic Chemistry II
3 class hours, 4 laboratory hours; 4 credits
A continuation of CHM 250 with an emphasis on functional group chemistry and bioorganic chemistry. By the end of the two semester sequence IR and NMR analysis are discussed in detail in conjunction with classical methods of structural determination.
Prerequisite: CHM 250

CHM 330 Physical Chemistry: Equilibria
4 hours; 4 credits
Chemical thermodynamics and its application to phase and chemical equilibria.
Prerequisites: MTH 233 or MTH 236, PHY 160, CHM 240

CHM 336 Physical Chemistry: Processes
4 hours; 4 credits
Kinetic theory and transport processes, introductory quantum and statistical chemistry, atomic and molecular spectroscopy, and chemical kinetics.
Prerequisites: MTH 233 or MTH 236, PHY 160, CHM 240

CHM 337 Experimental Methods in Physical Chemistry
8 hours; 4 credits
Introduction to techniques of physical measurement applied to chemical systems. Vacuum and gas handling techniques, opto-chemical methods, transport and electrochemical processes.
Corequisites: CHM 330 or CHM 336

CHM 340 Instrumental Methods of Chemical Analysis
2 class hours, 4 laboratory hours; 4 credits
Fundamental considerations underlying the theory and design of instrumental methods and procedures of analysis. General treatment of the operating characteristics of instruments. A consideration of ultraviolet-visible, infrared, nuclear magnetic
and electron spin resonance spectroscopy, column and gas chromatography, flame photometry, atomic absorption, polarography, fluorimetry, radiochemical and thermal analysis, electrophoresis, and other analytical methods. Basic instrumentation electronics, including operational amplifiers, triodes, transistors, and transducers.

Prerequisites: CHM 142 and 127, 240 or permission of the instructor

CHM 350  Advanced Organic Chemistry
4 hours; 4 credits
An introduction to the theory of bonding and structure; acids and bases; an introduction to physical organic chemical concepts and the application of these, together with stereochemical concepts, to the study of reaction mechanisms.
Prerequisite: CHM 256
Corequisite: CHM 330 or CHM 336 or permission of the instructor

CHM 370  Biochemistry I
(Also BIO 370)
4 hours; 4 credits
Biochemistry and the living state. Regulation of energy yielding and energy requiring reactions in cells. Molecular components of cells, enzyme mechanisms, bioenergetics, and an introduction to biosynthetic principles.
Prerequisite: CHM 256
Corequisite: CHM 330 or CHM 336 or permission of the instructor

CHM 376  Biochemistry II
(Also BIO 376)
4 hours; 4 credits
Respiration, photosynthesis, membrane structure and transport, biosynthesis of macromolecules, biochemical genetics, and the regulation of metabolic activity in mammals.
Prerequisite: CHM 370
Corequisite: PHY 150 or 160 or permission of the instructor

CHM 377  Experimental Biochemistry
8 laboratory hours; 4 credits
Through a study of a commonly occurring genetic defect, this course introduces students to biochemical concepts and techniques used in current research. Techniques used include protein purification, enzymology, Western blotting, RNA isolation, DNA isolation, PCR-amplification of mutated regions of genes, cloning of PCR products into vectors, culturing of mammalian brain cells, immunocytochemistry, and retrieving and processing of genetic information using various databases and software packages.
Prerequisite: CHM 240 or BIO 312 or BIO 352
Corequisite: CHM 370/BIO 370

CHM 434  Inorganic Chemistry
3 class hours, 3 laboratory hours; 4 credits
The course covers general bonding theories of inorganic compounds, symmetry elements and point groups, acid-base properties, coordination chemistry and reaction mechanisms, organometallic chemistry and an introduction to bioinorganic chemistry.
Pre- or corequisite: CHM 256 or 330 or 336 or permission of instructor

CHM 442  Spectroscopy: Theory and Applications
4 hours; 4 credits
Theory and applications of molecular spectroscopy in gases and condensed phases, including rotation, vibration, electronic, and magnetic resonance techniques. Applications to structural problems in biochemistry and polymer chemistry.
Pre- or corequisite: CHM 330 or 336

CHM 452  Polymer Chemistry
4 hours; 4 credits
Prerequisites: CHM 256, 330, and 336; permission of the instructor

CHM 592  Independent Study for Research
2 credits

CHM 594  Independent Study for Honors Research
4 credits
See Graduate Catalog for graduate courses.

Cinema Studies
(Bachelor of Arts, Minor; Master of Arts - see Graduate Catalog)
Department of Media Culture
Chair: Professor George Custen, Center for the Arts (1P), room 203

Cinema Studies (B.A.)

General Education Requirements for the B.A.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 28-47 credits
Whenever possible, these courses should be completed within the first 60 credits.

1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
      Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
6. Foreign Language: (0-12 credits)

See section on general education requirements for approved course lists and complete details.
Pre-Major Requirements: 6 credits
Students planning to major in cinema studies must complete the following pre-major requirements.
- CIN 100 Introduction to Film
- CIN 111 Basic Video Production

Major Requirements: 32 credits
Students majoring in cinema studies must complete 32 credits of cinema studies courses at the 200 or higher level. These 32 credits must include:
- CIN 210 History and Theory of Film I 4 credits
- CIN 220 History and Theory of Film II 4 credits
- At least 12 additional credits in film history, theory, and aesthetics: CIN 204, 230, 240, 301, 303, 304, 401, 402, 404, 405, 406, 407, 408. 12 credits
- At least six credits in film production: CIN 211, 311, 312. 6 credits

Electives: 41 credits

Total Credits Required: 120

Liberal Arts and Sciences Requirement
Film production courses are non-liberal arts and sciences.

Honors
To graduate with Honors in Cinema Studies a student must have a 3.5 grade point average in cinema studies courses and must complete an honors thesis or project, which may include the production of a film, approved by a faculty adviser.

Minor
Prerequisite Courses: 6 credits
- CIN 100 Introduction to Film 3 credits
- CIN 111 Basic Video Production 3 credits

Minor Requirements: 12 credits
- CIN 210 History and Theory of Film I 4 credits
- At least eight credits chosen from CIN 211, 220, 230, 240, 301, 302, 303, 310, 311, 312, 401, 402, 404, 405, 406, 407, 408. 8 credits

Courses
CIN 100 Introduction to Film
4 hours; 3 credits
An introduction to the art of film and to the methods and terms of film analysis. Topics to be covered include the nature of cinematic time and space; the contribution of directorial style; the effects of cutting, editing, lighting, framing, camera movement, and sound; and the relationship between written script and visual imagery. (art & com.)

CIN 111 Basic Video Production
4 hours; 3 credits
An introductory workshop in the basic techniques of video production. Visual awareness as applied to composition and continuity is developed in a series of practical class projects. This course is a prerequisite for 200- and 300-level work in film/video production.
Prerequisite: CIN 100 or COM 150

CIN 204 Politics and Film
(Also POL 219)
4 hours; 4 credits
An analysis of the political and social perspectives and directing styles of a variety of European and American directors. The course will examine how race, social class, gender, ethnicity, revolution, the city, and national character and culture are represented in these films. (social science) (art & com.)
Prerequisite: ENG 111, COR 100

CIN 210 History and Theory of Film I
4 hours; 4 credits
Growth and development of film technique and theory from the first movies to 1939; viewing and discussion of films by Lumiere, Melies, Griffith, Murnau, Lang, Eisenstein, Pudovkin, Chaplin, von Stroheim, Keaton, Flaherty, Lubitsch, Clair, Cocteau, Vigo, Renoir, and others; readings in the major theoretical works of various critics and philosophers. Required for the Cinema Studies major.
Prerequisites: CIN 100 and ENG 111

CIN 211 Film/Video Cinematography
4 hours; 3 credits
A basic workshop in film/video cinematography. Practical exercises with video and 16mm equipment will focus on techniques of composition, lighting, and camera movement.
Prerequisite: CIN 111

CIN 220 History and Theory of Film II
4 hours; 4 credits
Growth and development of film technique and theory from 1940 to the present day; viewing and discussion of films by Welles, Ford, Hawks, Hitchcock, Riefenstahl, Rossellini, DeSica, Antonioni, Buñuel, Bresson, Bergman, Truffaut, Godard, Resnais, Wiseman, and others; readings in the major theoretical works of various critics and philosophers. Required for the Cinema Studies major.
Prerequisites: CIN 100 and ENG 111

CIN 230 American Film and American Myth
(Also AMS 230)
4 hours; 4 credits
The American film and its relationship to American myth, society, and culture. Topics to be included are: the American West, the gangster, rural and urban life, the nature of war, race and class, comic views of America. (art & com.)
Prerequisite: ENG 111

CIN 240 Third World Cinema
4 hours; 4 credits
A survey of cinema from and about the third world that emphasizes the effort to construct a national identity within a post colonial multi-national context. Considered and analyzed will be films from Africa, Latin America, the Middle East, and Asia. Films directed by Glauber Rocha, Satyajit Ray, Toms Alea, Tracy Moffatt, among others, will be examined. (P&D)
Prerequisite: CIN 100

CIN 274 Introduction to Screen Writing
(Also ENL 274)
4 hours; 4 credits
Writing for television and film. Class discussions of students' work
and the problems of creating in this field. Selected readings.

Prerequisite: ENG 151

**CIN 290** Internship in Media Production
(Also COM 290)
1-4 credits
An internship work and learning experience with a public or private agency whose activity is film, video, television, or radio production.
Prerequisite: A 100-level course in cinema studies, or the equivalent and permission of the faculty sponsor

**CIN 301** Literature into Film
4 hours; 4 credits
An examination of the aesthetic and practical problems in translating fiction into film. Students will read novels and plays and view the films made from them, with class discussions to focus on the potentialities and limitations of each art form.
Prerequisites: CIN 100 and ENG 111

**CIN 303** Screen Comedy
4 hours; 4 credits
An examination of the screen comedians. The course will consider the comic techniques of the performers and the particular cinematic devices that are used to convey the performance. Showings of films by Chaplin, Lloyd, Keaton, Lubitsch, Laurel and Hardy, the Marx Brothers, W.C. Fields, and others.
Prerequisites: CIN 100 and ENG 111

**CIN 304** Nonfiction Film
4 hours; 4 credits
A critical and historical survey of the development of nonfiction film, including the work of such filmmakers as Robert Flaherty, John Grierson, Pare Lorentz, Willard Van Dyke, Leni Riefenstahl, Richard Leacock, Albert and David Maysles, and Frederick Wiseman.
Prerequisites: CIN 100 and ENG 111

**CIN 311** Film/Video Workshop
4 hours; 3 credits
Students will use advanced filmmaking and video equipment in the production of sync-sound documentary or fiction videos. Projects shot on film will be edited on video. Emphasis is placed on the ability of students to work in production crews. This course may be repeated for credit.
Prerequisites: CIN 111, and either CIN 211 or COM 261

**CIN 312** Non-Linear and Multimedia Production
4 hours; 3 credits
Individual projects in video and multimedia with an emphasis on digital post-production.
This course may be repeated for credit.
Prerequisites: CIN 111, and either CIN 211 or COM 261

**CIN 401** Major American Directors I
4 hours; 4 credits
The place of individual directorial style in the American movie industry: Howard Hawks, Preston Sturges, Josef von Sternberg, John Ford, Alfred Hitchcock, and Orson Welles.
Prerequisites: CIN 100 and ENG 111

**CIN 402** Major American Directors II
4 hours; 4 credits
The place of individual directorial style in the American movie industry: Martin Scorsese, Robert Altman, Spike Lee, and Francis Ford Coppola.
Prerequisites: CIN 100 and ENG 111

**CIN 404** Major French Directors I
A study of the personal vision and style of several French directors chosen from the leading figures of the 1930s, 1940s, and 1950s: Clair, Cocteau, Renoir, Vigo, Ophuls, Carne, Bresson, and Franju.
Prerequisites: CIN 100 and ENG 111

**CIN 405** Major French Directors II
4 hours; 4 credits
A study of the work of the major New Wave directors (Truffaut, Godard, Resnais, Varda, Chabrol, Rohmer) and the French and American sources that influenced their aesthetic.
Prerequisites: CIN 100 and ENG 111

**CIN 406** Postwar Italian Cinema
4 hours; 4 credits
A study of the political and cultural roots of Neorealism and of the personal style and vision of such postwar directors as Visconti, DeSica, Rossellini, Fellini, Antonioni, and Bertolucci.
Prerequisites: CIN 100 and ENG 111

**CIN 407** International Films I
4 hours; 4 credits
An exploration of the work of important film-makers from Western and Central Europe and Scandinavia. Those studied may include Olmi, Tanner, Herzog, Fassbinder, and Bergman.
Prerequisites: CIN 210 and ENG 111

**CIN 408** International Films II
4 hours; 4 credits
An exploration of the work of important film-makers from Eastern Europe, Asia, and the nations of the developing world. Those studied may include Wajda, Szabo, Forman, Kurosawa, Mizoguchi, and Ray.
Prerequisites: CIN 210 and ENG 111

**CIN 436** Screen Writing
(Also ENL 436)
4 hours; 4 credits
Study of the craft of constructing the screenplay, treatment, synopsis, and shooting script. The student will work on the problems of creating the original film script as well as adapting a piece of existing material for the screen
Prerequisite: CIN/ENL 274 or permission of the instructor

For graduate courses in Cinema Studies see the *Graduate Catalog.*

**Civil Engineering Technology**

(Chair: Professor Elliot Rothkopf, Engineering Technologies Building (5N), room 207)

This program is accredited by the Technology Accreditation Council of Engineering and Technology.
Commission of the Accreditation Board for Engineering and Technology (TAC/ABET). The Civil Engineering Technology Curriculum prepares its students to build, rehabilitate, expand and maintain the physical infrastructure of our rapidly changing society. Graduates of the program are trained to solve increasingly complex problems in the areas of housing, transportation, and environment. Technical courses in the curriculum utilize computer applications in the solution of such problems. Graduates may continue in B.S. degree programs in Computer Science, Engineering Science, or Economics.

Civil Engineering Technology (A.A.S.)

General Education Requirements

ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Core Requirements: 51-55 credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 100</td>
<td>Basic Technical Skills</td>
<td>2</td>
</tr>
<tr>
<td>ENT 101</td>
<td>Introduction to Measurement and Instrumentation</td>
<td>2</td>
</tr>
<tr>
<td>ENT 110</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>CET 201</td>
<td>Construction Materials and Methods</td>
<td>3</td>
</tr>
<tr>
<td>CET 213</td>
<td>Surveying and Highway Design</td>
<td>4</td>
</tr>
<tr>
<td>CET 223</td>
<td>Structural Drawing and Introduction to Detailing</td>
<td>2</td>
</tr>
<tr>
<td>CET 230</td>
<td>Statics</td>
<td>2</td>
</tr>
<tr>
<td>CET 331</td>
<td>Soil Mechanics and Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CET 335</td>
<td>Analysis and Introduction to Design of Structures</td>
<td>4</td>
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<tr>
<td>CET 341</td>
<td>Introduction to Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>CET 351</td>
<td>Building and Construction Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CSC 114</td>
<td>Elements of Computer Programming for the Technologies</td>
<td>2</td>
</tr>
<tr>
<td>CET 360</td>
<td>Strength of Materials</td>
<td>3</td>
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<tr>
<td>PHY 110</td>
<td>College Physics I</td>
<td>3</td>
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<tr>
<td>PHY 111</td>
<td>College Physics I Laboratory</td>
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<tr>
<td>PHY 150</td>
<td>College Physics II</td>
<td>3</td>
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<tr>
<td>PHY 151</td>
<td>College Physics II Laboratory</td>
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<tr>
<td>MTH 223, or MTH 230, or MTH 231</td>
<td>A total of 8 credits of mathematics including</td>
<td>8</td>
</tr>
</tbody>
</table>

Electives: 0-1 credit

Total Credits Required: 64

Liberal Arts and Sciences Requirement:
All courses designated CET are non-liberal arts and sciences.

Courses

CET 201 Construction Materials and Methods
2 class hours, 2 laboratory hours; 3 credits
The study of the significant properties of construction materials (soils, concrete, masonry, steel, wood, insulation, and miscellaneous materials). Concrete mixes and testing. Metal structure and heat treatment methods. All major building code requirements. Written reports are required in connection with the laboratory work.
Prerequisite: ENT 100

CET 213 Surveying and Highway Design
2 class hours, 4 laboratory hours; 4 credits
Prerequisites: ENT 100, ENT 101, and ENT 110
Pre- or corequisite: MTH 123

CET 223 Structural Drawing and Introduction to Detailing
5 laboratory hours; 2 credits
Techniques of structural drawing for steel and reinforced concrete members; slabs, beams, girders and columns. Introduction to detailing of steel members using the American Institute of Steel Construction Specifications (AISC), and the preparation of placing drawings and bar lists in accordance with the American Concrete Institute and Concrete Reinforcing Steel Institute requirements (ACI, CRSI). Computer-Aided Drafting (CAD).
Prerequisite: ENT 110

CET 230 Statics
1 class hour; 2 laboratory hours; 2 credits
Prerequisite: ENT 100 or PHY 110
Pre- or corequisite: MTH 123

CET 331 Soil Mechanics and Foundations
3 hours; 3 credits
Study of soil mechanics. Topics include sampling, density classification, moisture content, bearing capacity, stability. Introduction to foundation engineering.
Prerequisite: CET 230

CET 335 Analysis and Introduction to Design of Structures
2 class hours, 4 laboratory hours; 4 credits
Analysis of simple structures -- beams and trusses. Loading and uses of simple influence lines. Introductory design of steel structures -- beams and columns of rolled shapes. Elementary design of reinforced concrete -- beams, columns, one-way slabs. Coverage includes two student projects; one on steel and the other on concrete.
Pre- or corequisite: CET 360

CET 341 Introduction to Construction Management
2 class hours, 2 laboratory hours; 3 credits
Preparation of construction costs (financial and equipment) before bidding. Creation and interpretation of contract documents. Construction planning and scheduling using Critical
Communications

Path Method (CPM) and precedence diagrams to control project costs. Computer software is used to analyze varied construction management problems.

Pre- or corequisites: CET 201 and CET 223

CET 351 Building and Construction Estimating
2 class hours; 2 laboratory hours; 3 credits
Organization of the construction firm and the construction project, principles of cost estimating, quantity surveys from working drawings, planning and scheduling, critical path method, labor unions. The student will do a cost estimate of a building or highway structure
Prerequisite: MTH 123
Pre- or corequisite: CET 223

CET 360 Strength of Materials
2 class hours, 2 laboratory hours; 3 credits
Theoretical design analysis supplemented by practical testing and experimentation. Topics include: axial stress and strain, shear and moment diagrams, beam deflection, torsion, columns. Written reports are required in connection with the laboratory work.
Prerequisite: CET 230

Communications
(Bachelor of Science, Minor)
Department of Media Studies
Chair: Professor George Custen, The Center for the Arts (1P), room 203
This program is offered by the Department of Media Studies in collaboration with the Department of English, Speech, and World Literature and in association with the Department of Business and the Department of Psychology, Sociology, Anthropology, and Social Work. The program is designed to provide undergraduate students with a broad, comprehensive and multi-disciplinary liberal arts education, while at the same time introducing them to the field of communications and equipping them with specialized skills and competencies. Students select one of the following areas of specialization: media studies, corporate communication, publication design, or journalism.

Communications (B.S.)

General Education Requirements
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity, Foreign Language requirements: 28–47 credits
Whenever possible, these courses should be completed within the first 60 credits.

1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
6. Foreign Language: (0-12 credits)
See section on general education requirements for approved course lists and complete details.

Major Requirements: 51-57 credits
Common Core: required for all specializations 33-34 credits
1. History and Theory of Communications (16 credits)
   COM 150 Introduction to Communications 4 credits
   COM 203 Theories of Communication 4 credits
   Two of the following: 8 credits
   COM/
   SOC 374 Mass Media in Modern Society
   COM 220 History of Broadcasting
   COM/
   ENL 230 History of Print Media
2. Practical and Applied (10-11 credits)
   COM/
   ENL 277 Introduction to Journalism 4 credits
   One of the following: 3-4 credits
   CSC 102 Computing for Today
   BUS 150 Essential Software Tools in Business
   One of the following: 3 credits
   CIN 111 Film/Video Production I
   COM 250 Basic Design and Media Graphics
   COM 261 Television Studio Production
   COM 270 Radio Production
3. Internship (3 credits)
   COM/CIN 290 Internship in Media Production
4. Communications Seminar (4 credits)
   COM 450 Senior Seminar in Communication

Areas of Specialization (18-23 credits)
Communications majors must elect one of the following specializations: media studies, corporate communication, publication design, or journalism.

Electives: 25-29 credits
Total Credits Required: 120

It is strongly recommended that students majoring in Communications also elect a minor. The choice of minor should be developed in accordance with the student's career objectives in consultation with the student's faculty adviser.

Specializations:
Media Studies
The specialization in media studies prepares students for entry-level positions in media production and media research. Students study the basic production skills of film, video, audio, and television as well as the institutional contexts in which mediated
communication often occurs. Students are introduced to basic theories of communications and to specialized theories of mass communications.

**Requirements: 23 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>CIN 111</td>
<td>Film/Video Production I</td>
<td>3</td>
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<tr>
<td>CIN 211</td>
<td>Film/Video Production II</td>
<td>3</td>
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<tr>
<td>COM 240</td>
<td>Media Workshop: Acting, Directing, and Producing for the Media</td>
<td>3</td>
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<tr>
<td>One of the following:</td>
<td>4 credits</td>
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<tr>
<td>COM 200</td>
<td>Media and Culture</td>
<td></td>
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<tr>
<td>COM 201</td>
<td>History and Theory of Television</td>
<td></td>
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<tr>
<td>COM/</td>
<td>ENL 312 Theories of Mass Media</td>
<td>4</td>
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<tr>
<td>One of the following:</td>
<td>4 credits</td>
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<tr>
<td>COM/</td>
<td>ANT 225 Multicultural Literacy</td>
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<tr>
<td>COM 370</td>
<td>The New Communications Technologies</td>
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<tr>
<td>COM 371</td>
<td>Minorities and the Media</td>
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<tr>
<td>Two of the following:</td>
<td>6 credits</td>
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<tr>
<td>COM/</td>
<td>ENL 241 Communications Design Workshop</td>
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<tr>
<td>COM 251</td>
<td>Advanced Design</td>
<td></td>
</tr>
<tr>
<td>COM 261</td>
<td>TV Studio Production</td>
<td></td>
</tr>
<tr>
<td>COM 271</td>
<td>Radio/TV Newscasting</td>
<td></td>
</tr>
</tbody>
</table>

**Corporate Communication**

The specialization in corporate communication prepares students to enter business and not-for-profit settings. The curriculum provides a theoretical framework and practical skills in writing and design, with particular emphasis on their interrelationship, as well as knowledge of related production and business practices.

**Requirements: 21 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 211</td>
<td>Principles of Corporate Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 241 Communication Design Workshop: Writing and Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 410</td>
<td>Media Administration</td>
<td>4</td>
</tr>
<tr>
<td>ACC 114</td>
<td>Introduction to Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>One of the following:</td>
<td>3 credits</td>
<td></td>
</tr>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td></td>
</tr>
<tr>
<td>MKT 111</td>
<td>Marketing</td>
<td></td>
</tr>
<tr>
<td>MGT 110</td>
<td>Organizational Theory and Management</td>
<td></td>
</tr>
<tr>
<td>FNC 240</td>
<td>Managerial Finance I</td>
<td></td>
</tr>
<tr>
<td>One of the following:</td>
<td>4 credits</td>
<td></td>
</tr>
<tr>
<td>MKT 211</td>
<td>Advertising</td>
<td></td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 412 Broadcast Journalism</td>
<td></td>
</tr>
<tr>
<td>ENL 437</td>
<td>Writing in the Business World</td>
<td></td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 438 Newspaper Reporting</td>
<td></td>
</tr>
<tr>
<td>ENL 439</td>
<td>Copy-Editing and Proofreading</td>
<td></td>
</tr>
</tbody>
</table>

**Publication Design**

The specialization in publication design prepares students for entry-level positions in publishing, small advertising and design organizations, and in public relations and publicity departments. The curriculum emphasizes writing and design skills and those skills specific to publicity, public relations, and publishing processes. The practical component provides students with the opportunity to develop skills and competence in at least one area of practical application: graphic design, non-broadcast video, radio, and tape production.

**Requirements: 21 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM/</td>
<td>ENL 214 Principles of Editorial Style: Integration of Writing and Graphics</td>
<td>3</td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 241 Communication Design Workshop: Writing and Design</td>
<td>3</td>
</tr>
<tr>
<td>One of the following:</td>
<td>3 credits</td>
<td></td>
</tr>
<tr>
<td>CIN 211</td>
<td>Film/Video Production II</td>
<td></td>
</tr>
<tr>
<td>COM 251</td>
<td>Advanced Design</td>
<td></td>
</tr>
<tr>
<td>COM 261</td>
<td>TV Studio Production</td>
<td></td>
</tr>
<tr>
<td>COM 271</td>
<td>Radio and TV Newscasting</td>
<td></td>
</tr>
<tr>
<td>Three of the following:</td>
<td>12 credits</td>
<td></td>
</tr>
<tr>
<td>COM 410</td>
<td>Media Administration</td>
<td></td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 412 Broadcast Journalism</td>
<td></td>
</tr>
<tr>
<td>ENL 439</td>
<td>Copy-Editing and Proofreading</td>
<td></td>
</tr>
<tr>
<td>ENL 440</td>
<td>Magazine Writing</td>
<td></td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 465 Writing for the Media</td>
<td></td>
</tr>
<tr>
<td>ENL 475</td>
<td>Writing for Advertising and Public Relations</td>
<td></td>
</tr>
</tbody>
</table>

**Journalism**

The specialization in journalism prepares students for entry-level positions in print and broadcast journalism. The curriculum provides students with a broad background in English language, linguistics, and literature and with the development of writing and reportorial skills suited to contemporary journalism.

**Requirements: 18-20 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM/</td>
<td>ENL 412 Broadcast Journalism</td>
<td>4</td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 438 Newspaper Reporting</td>
<td>4</td>
</tr>
<tr>
<td>ENL 480</td>
<td>Studies in Advanced Journalism</td>
<td>4</td>
</tr>
<tr>
<td>Two of the following:</td>
<td>6-8 credits</td>
<td></td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 465 Writing for the Media</td>
<td></td>
</tr>
<tr>
<td>COM/</td>
<td>ENL 475 Writing for Advertising and Public Relations</td>
<td></td>
</tr>
</tbody>
</table>
### Communications

**COM/ENL 214 Principles of Editorial Style:**
Integration of Writing and Graphics

**COM/ENL 241 Communication Design Workshop:**
Writing and Design

**ENL 433 Nonfiction Writing**

**ENL 439 Copy-Editing and Proofreading**

**ENL 440 Magazine Writing**

**ENL 441 Writing About the Media**

**COM/ENL 465 Writing for the Media**

**COM/ENL 475 Writing for Advertising and Public Relations**

**ENL 445 Journalism and Society**

### Internships

The program requires an internship of at least three credits.

### Minors

**Minor in Media Studies:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 150</td>
<td>4</td>
</tr>
<tr>
<td>CIN 111</td>
<td>3</td>
</tr>
<tr>
<td>One of the following:</td>
<td>4 credits</td>
</tr>
<tr>
<td>COM 200</td>
<td></td>
</tr>
<tr>
<td>ANT 225</td>
<td></td>
</tr>
<tr>
<td>ENL 312</td>
<td></td>
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<tr>
<td>COM 370</td>
<td></td>
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<tr>
<td>COM 371</td>
<td></td>
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<tr>
<td>Two of the following:</td>
<td>6 credits</td>
</tr>
<tr>
<td>COM 240</td>
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<tr>
<td>COM 250</td>
<td></td>
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<tr>
<td>COM 261</td>
<td></td>
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<tr>
<td>COM 270</td>
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</tbody>
</table>

**Minor in Corporate Communication:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COM 211</td>
<td>3</td>
</tr>
<tr>
<td>COM/ENL 241</td>
<td>3 credits</td>
</tr>
<tr>
<td>ENL 437</td>
<td>4</td>
</tr>
<tr>
<td>One of the following:</td>
<td>4 credits</td>
</tr>
<tr>
<td>COM 410</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 360</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 412</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 438</td>
<td></td>
</tr>
<tr>
<td>ENL 439</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 475</td>
<td></td>
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</tbody>
</table>

One of the following:

- COM 250 Basic Design and Media Graphics
- COM 260 Small Format TV Production
- COM 270 Radio Production

### Minor in Publication Design:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM/ENL 214</td>
<td>3 credits</td>
</tr>
<tr>
<td>COM/ENL 241</td>
<td>3 credits</td>
</tr>
<tr>
<td>ENL 277</td>
<td>4</td>
</tr>
<tr>
<td>One of the following:</td>
<td>3 credits</td>
</tr>
<tr>
<td>COM 250</td>
<td></td>
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<tr>
<td>COM 260</td>
<td></td>
</tr>
<tr>
<td>COM 270</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 412</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 438</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 445</td>
<td></td>
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</tbody>
</table>

### Minor in Journalism:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM/ENL 277</td>
<td>7-8 credits</td>
</tr>
<tr>
<td>ENL 412</td>
<td></td>
</tr>
<tr>
<td>ENL 438</td>
<td></td>
</tr>
<tr>
<td>ENL 480</td>
<td></td>
</tr>
<tr>
<td>One of the following:</td>
<td>3-4 credits</td>
</tr>
<tr>
<td>COM/ENL 214</td>
<td></td>
</tr>
<tr>
<td>ENL 433</td>
<td></td>
</tr>
<tr>
<td>ENL 439</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 440</td>
<td></td>
</tr>
<tr>
<td>ENL 441</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 465</td>
<td></td>
</tr>
<tr>
<td>COM/ENL 475</td>
<td></td>
</tr>
<tr>
<td>ENL 445</td>
<td></td>
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</tbody>
</table>
Courses

COM 100  Introduction to Media
3 hours; 3 credits
An introduction to television, radio, and related media. (art & com.)

COM 150  Introduction to Communications
4 hours; 4 credits
The course provides a general introduction to the field of communications. It is intended for potential majors, and is designed to introduce basic concepts in the study of communications modes, media, and messages; interpersonal, organizational, and mass communication contexts; and the process of communications research.

COM 200  Media and Culture
4 hours; 4 credits
Media and Culture examines the nature and structure of communication media, their interrelationships, and their social, economic, and cultural contexts. The course considers the role of the mass media in influencing its audiences, and the effects of these strategies and messages on individuals, groups, and institutions. (art & com.)
Prerequisites: ENG 111, and COM 100 or COM 150

COM 201  History and Theory of Television
4 hours; 4 credits
History and Theory of Television examines the development of commercial television broadcasting, its genesis in radio, its creation of distinctive genres, and its change and diversification in the age of cable and satellite broadcasting. The course considers different theoretical approaches to the analysis of television, investigating theories of the effects of television, the impact of television on other media, and television's "mythic" content. (art & com.)
Prerequisite: ENG 111

COM 203  Theories of Communication
4 hours; 4 credits
Theories of Communication examines the development of communications as an academic discipline, tracing its roots in rhetoric, social psychology, political science, sociology, anthropology, and other disciplines. General theories of human communication will be discussed, as well as specialized theories of mass communication. Different models of communication, e.g., Shannon and Weaver's "Information Theory," will be presented and critiqued.
Prerequisites: ENG 111 and COM 150

COM 211  Principles of Corporate Communication
(Also BUS 211)
4 hours; 3 credits
A critical survey of artifacts of corporate and public communication, including films, video programs and other audio-visual presentations, annual reports, catalogues, brochures, house organs, and other print communications. Analyses of corporate publications will focus on their meaning, purpose, audience, and significance. Writing and editing for such publications is taught, with special emphasis on audience and purpose and the development of a variety of editorial skills: proofreading, reorganizing, rewriting, collaborating, coauthoring.
Students who successfully complete COM/ENL 214 may not register for COM 211.
Prerequisites: COM 150 and ENG 151

COM 214  Principles of Editorial Style: Integration of Writing and Graphics
(Also ENL 214)
4 hours; 3 credits
Editorial style as total concept, including both visual design and written concept. An introduction to professional writing, editorial concepts, and the publication process. Focus on brochure, newsletter, magazine, advertisement, and book structure; their meaning and significance. Writing and editing for such publications and for the marketplace, with special emphasis on audience and purpose and the development of a variety of editorial skills, such as proofreading, reorganizing, rewriting, collaborating, and coauthoring.
Students who successfully complete COM 211 may not register for COM/ENL 214.
Prerequisite: ENG 151 or permission of instructor.

COM 220  History of Broadcasting
4 hours; 4 credits
This course examines the structure and development of the American broadcasting system. The course considers political, economic, social, aesthetic, and technological factors contributing to the growth of radio and television as publicly owned but privately operated, profit-generating telecommunications media.
Prerequisites: ENG 111 and COM 150

COM 225  Multi-Cultural Literacy
(Also ANT 225)
4 hours; 4 credits
This course will explore the nature of culture as it is defined by various disciplines and affected by class, race, gender, and ethnicity. Readings will include texts in anthropology, sociology, literary theory, media studies, and women's studies. (social science) (art & com.) (P&D)
Prerequisites: ENG 151, COR 100; and either ANT 100, COM 100, HST 100, POL 100, SOC 100, or WMS 100

COM 230  History of Print Media
(Also ENL 230)
4 hours; 4 credits
An introductory survey of the evolution of newspapers, periodicals, and the publishing industry, focusing on technological developments, major innovations, legal and ethical issues, and societal impact.
Prerequisite: ENG 151 and COM 150

COM 240  Media Workshop: Acting, Directing, and Producing for the Media
4 hours; 3 credits
An examination of the actor/director relationship as it applies in the various media: stage, film, and television. Students will have an opportunity to work as both actors and directors. New work from writing classes will be encouraged for student projects.
Pre-or corequisite: CIN 111
COM 241  Communication Design Workshop: Writing and Design
(Also ENL 241)
4 hours; 3 credits
Theoretical and practical approaches to the interrelationship of writing, print, and video graphics. Analysis of the role of subject, voice, and audience in determining appropriate visual and verbal forms. Practical problems of graphic and video reproduction and execution with applications through desk top publishing and small format TV. Each student works through a number of design problems and completes various projects of his/her own choice. Prequisite: COM/ENL 214

COM 249  Workshop in Typesetting
2 hours; 1 credit
An intensive five-week course designed to introduce the student to the various capabilities and applications of desk top publishing.

COM 250  Basic Design and Media Graphics
4 hours; 3 credits
A hands-on course in the skills of layout and design. The course will focus on the organization of visual space, both moving and stationary, visual strategies, and the appropriateness of visual design to various audiences. Recommended for students with limited background in design.

COM 251  Advanced Design
4 hours; 3 credits
Case studies for projects from print and electronic media, focused on informational graphics, are assigned to students. Individual development of communications, problem solving, and presentation skills is stressed. Presentation to critiques by juries of professionals and peers represents a significant dimension of each class. Prerequisite: COM 250

COM 261  Television Studio Production
4 hours; 3 credits
The emphasis is on studio production and the application of controlled studio techniques to the production of video programs. Increasingly complex projects will be planned, scripted, and carried through to a final edit. Prerequisites: ENG 111 and CIN 111

COM 270  Radio Production
4 hours; 3 credits
This course is designed to give the student an understanding of radio production, theory and practice. This includes: audio principles and aesthetics; the purpose and operation of primary (microphones, tape machines, consoles, turntables) and secondary (compressors, equalizers, delays) studio equipment; and the techniques of the production process. Prequisite: COM 270 or COM 261

COM 271  Radio/TV Newscasting
4 hours; 3 credits
This course provides students with an understanding of newscasting through an evaluation of the impact of broadcast news, and investigation of journalistic tenets and applications that include organizing, writing, and producing news programs. Prerequisite: COM 270 or COM 261

COM 277  Introduction to Journalism
(Also ENL 277)
4 hours; 4 credits
A general introduction to the principles of journalism. Work on reporting, editing, and layout, and an examination of distribution/feedback systems. Prerequisite: ENG 151

COM 290  Internship in Media Production
(Also CIN 290)
1 to 4 credits
An internship work and learning experience with a public or private agency whose activity is film, video, television, or radio production. Prerequisites: A 100-level course in communication, cinema studies, or the equivalent and permission of the faculty sponsor (special form required)

COM 312  Theories of Mass Media
(Also ENL 312)
4 hours; 4 credits
A survey of contemporary communications theory defining the language, structure, systems, effects, and rhetoric of the mass media. Practical examples in journalism, advertising, publishing, radio, television, and film will be analyzed. Prerequisite: ENG 151

COM 320  New Communications Technologies
4 hours; 4 credits
This course is an overview of the telecommunications technologies that are emerging in the marketplace today. While aspects of the fundamentals of these technologies will be examined, this is not a course primarily concerned with the operation of technical equipment or the engineering requirements of various technologies. Rather, the course will focus on understanding the psychological, social, economic, and political relationships that lead to the development of such technologies, analyzing the results of implementing these new forms of communications in contemporary society. Prerequisites: COM 203, and COM 220 or COM 230

COM 370  Mass Media in Modern Society
(Also SOC 370)
4 hours; 4 credits
This course will examine the role of the mass media as cultural institutions in shaping the images and self-images of different minority groups. Definitions and images to be analyzed are drawn from religious, medical, and social scientific sources, as well as elite and popular culture. (P&D) Prerequisites: COM 150 or a 100-level and 200-level SOC or ANT course

COM 371  New Communications Technologies
(Also SOC 371)
4 hours; 4 credits
This course will examine the role of the mass media as cultural institutions in shaping the images and self-images of different minority groups. Definitions and images to be analyzed are drawn from religious, medical, and social scientific sources, as well as elite and popular culture. (P&D) Prerequisites: COM 150 or a 100-level and 200-level SOC or ANT

COM 374  Minorities and the Media
(Also CIN 374)
4 hours; 4 credits
This course will examine the role of the mass media as cultural institutions in shaping the images and self-images of different minority groups. Definitions and images to be analyzed are drawn from religious, medical, and social scientific sources, as well as elite and popular culture. (P&D) Prerequisites: COM 150 or a 100-level and 200-level SOC or ANT

COM 377  Introduction to Journalism
(Also ENL 277)
4 hours; 4 credits
A general introduction to the principles of journalism. Work on reporting, editing, and layout, and an examination of distribution/feedback systems. Prerequisite: ENG 151

COM 290  Internship in Media Production
(Also CIN 290)
1 to 4 credits
An internship work and learning experience with a public or private agency whose activity is film, video, television, or radio production. Prerequisites: A 100-level course in communication, cinema studies, or the equivalent and permission of the faculty sponsor (special form required)

COM 312  Theories of Mass Media
(Also ENL 312)
4 hours; 4 credits
A survey of contemporary communications theory defining the language, structure, systems, effects, and rhetoric of the mass media. Practical examples in journalism, advertising, publishing, radio, television, and film will be analyzed. Prerequisite: ENG 151

COM 370  New Communications Technologies
4 hours; 4 credits
This course is an overview of the telecommunications technologies that are emerging in the marketplace today. While aspects of the fundamentals of these technologies will be examined, this is not a course primarily concerned with the operation of technical equipment or the engineering requirements of various technologies. Rather, the course will focus on understanding the psychological, social, economic, and political relationships that lead to the development of such technologies, analyzing the results of implementing these new forms of communications in contemporary society. Prerequisites: COM 203, and COM 220 or COM 230

COM 371  Minorities and the Media
(Also SOC 371)
4 hours; 4 credits
This course will examine the role of the mass media as cultural institutions in shaping the images and self-images of different minority groups. Definitions and images to be analyzed are drawn from religious, medical, and social scientific sources, as well as elite and popular culture. (P&D) Prerequisites: COM 150 or a 100-level and 200-level SOC or ANT

COM 374  Mass Media in Modern Society
(Also SOC 374)
4 hours; 4 credits
This course will examine the role of the mass media as cultural institutions in shaping the images and self-images of different minority groups. Definitions and images to be analyzed are drawn from religious, medical, and social scientific sources, as well as elite and popular culture. (P&D) Prerequisites: COM 150 or a 100-level and 200-level SOC or ANT

COM 410 Media Administration  
(Also BUS 410)  
4 hours; 4 credits  
A course dealing with the skills and concepts necessary for the competent management of a media production department. Topics include production planning and control, cost analysis procedures, contract and copyright law in relation to the media, and organization theory. Prerequisites: COM 150, and COM 261 or COM 270 or CIN 111

COM 412 Broadcast Journalism  
(Also ENL 412)  
4 hours; 4 credits  
An introduction to the theory, history, and practice of modern newscasting. Special emphasis will be placed on preparing material for broadcast on radio and television. Readings will explore the economic realities of broadcasting, legal sanctions, and social impact. Students will monitor newscasts, analyze them, and write copy suitable for broadcast. Prerequisite: ENG 151; COM 100 is recommended

COM 438 Newspaper Reporting  
(Also ENL 438)  
4 hours; 4 credits  
Techniques of copy-editing and proofreading for both the reporter-writer and the editor. Prerequisite: ENG 151

COM 445 Journalism and Society  
(Also ENL 445)  
4 hours; 4 credits  
Learning to “read” and write the news. Analysis of the ways in which news stories define our understanding of society. The course will consider both the effect of print and broadcast journalism on politics, values, and social standards and the pressures on the press which define its values. Topics vary from term to term. Prerequisite: ENG 151

COM 450 Senior Seminar in Communications Research  
4 hours; 4 credits  
This course provides an overview of communications research, and introduces students to basic research procedures, paradigms, and methods. First, we examine the historical development of the field of communications theory and research. Then we introduce some of the basic research goals, methodologies, and strategies used in communications research. Students then use these tools to formulate a research problem of their own. Not open to students who have previously taken COM 400. Prerequisites: COM 203, and COM 220 or COM 230 or COM 374

COM 465 Writing for the Media  
(Also ENL 465)  
4 hours; 4 credits  
Scripting for various media, including slide-tape presentations, audio, video, film, television, and print. The course emphasizes the translation of information, ideas, and experience into various presentational formats and applies that knowledge to specific projects such as marketing presentations, sales, promotion scripts, and motivational scripts within industry. Prerequisites: 200-level COM course and ENG 151 or permission of instructor

COM 475 Writing for Advertising and Public Relations  
(Also ENL 475)  
4 hours; 4 credits  
An introduction to the techniques of writing promotional copy, including advertising (print and broadcast), press releases, direct mail, and publicity materials. Students analyze advertising and public relations campaigns from a marketing point of view and evaluate and discuss their effectiveness. Assignments include product, audience and media analysis; copywriting ads; press releases; and direct mail letters. Prerequisites: COM 211 or COM/ENL 214 and ENG 151 or permission of instructor

COM 480 Studies in Advanced Journalism  
(Also ENL 480)  
4 hours; 4 credits  
Analysis of the techniques required for good feature writing, magazine writing, personal journalism, investigative reporting, interviewing, etc. Emphasis varies from term to term. Prerequisite: COM 412 or COM 438

COM 490 Senior Project  
2 hours; 1 credit  
A laboratory/seminar in which students select a publication project to complete during the semester, including a written analysis of the writing, design, and management problems and skills related to the completion of the project. Problems possible solutions, and final results will be shared seminar-style. Prerequisites: Senior standing and permission of the instructor

Computer Science and Computer Technology  
(Bachelor of Science, Associate in Applied Science, Minor; Master of Science - see Graduate Catalog)  
Department of Computer Science  
Chair: Associate Professor Emile Chi, Computer Science/Engineering Science Building (1N), room 215  

Computer User Responsibilities  
The computer resources of The City University of New York and The College of Staten Island must be used in a manner that is consistent with the University’s educational purposes and environment. All users of computer resources are expected to act in a spirit of mutual respect and cooperation, and to adhere to the regulations for their use (see appendix ii). The University reserves the right to monitor, under appropriate conditions, all data contained in the system to protect the integrity of the system and to ensure compliance with regulations.

Computer Technology (A.A.S.)  
The College offers a computer technology program, which focuses on general applications programming. Students seeking a bachelor's degree in Computer Science should consult the
requirements for the B.S. in Computer Science or the B.S. in Computer Science/Mathematics.

General Education Requirements
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis: The West and the World; Textual, Aesthetic, and Linguistic Analysis: 15 credits
1. Scientific Analysis
   A one-year, eight credit sequence of laboratory science (8 credits).
2. At least one course from two of the following groups:
   Social Scientific Analysis, The West and the World; Textual, Aesthetic, and Linguistic Analysis (7 credits)
See section on general education requirements for approved course lists and complete details.

Pre-Core Requirement: 4 credits
CSC 126 Introduction to Computer Science 4 credits
A grade of C or above in CSC 126 is required for continuation in the program. Students will be allowed to repeat the course, if necessary.

Core Requirements: 29 credits
CSC 210 Applications Programming 4 credits
CSC 229 Computers and Programming 4 credits
CSC/MTH 228 Discrete Mathematical Structures 4 credits
CSC 330 Object-Oriented Software Design 4 credits
CSC 332 Operating Systems I 4 credits
MTH 229 Calculus Computer Laboratory 1 credit
MTH 231 Analytic Geometry and Calculus I 4 credits

Total Credits Required: 60

Pre-Computer Science Sequence: 4 credits
CSC 126 Introduction to Computer Science 4 credits
A grade of C or above in CSC 126 is required for admission to the Computer Science baccalaureate program. Students will be allowed to repeat the course, if necessary.

Pre-Major Requirements: 24-26 credits
MTH 229 Calculus Computer Laboratory
MTH 230 Calculus I with Pre-Calculus
MTH 232 Analytic Geometry and Calculus II
MTH 233 Analytic Geometry and Calculus III
or
MTH 229 Calculus Computer Laboratory
MTH 231 Analytic Geometry and Calculus I
MTH 232 Analytic Geometry and Calculus II
MTH 233 Analytic Geometry and Calculus III
or
MTH 229 Calculus Computer Laboratory
MTH 235 Accelerated Calculus I
MTH 236 Accelerated Calculus II 10 credits
CSC 220 Computers and Programming 4 credits
MTH/CSC 228 Discrete Mathematical Structures 4 credits

The computer science program offers a full four-year curriculum in computer science which prepares students for careers as computer professionals and/or for graduate study. The major provides a broad-based background in computer science and includes courses in computer software, systems, mathematics, and computer engineering. A student, under the guidance of a computer science adviser, may also select additional courses to pursue particular interests. Students interested in transferring into the program from the two-year computer technology program should consult the department chairperson.

The program in Computer Science is accredited by the Computer Science Accreditation Commission (CSCC) of the Computing Sciences Accreditation Board (CSAB), a specialized accrediting body recognized by the Council for Higher Education Accreditation (CHEA).

General Education Requirements for the B.S.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 56 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 21-27 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
      Chosen from the list of courses that provide the foundation for further study in the sciences.
   b. Mathematics: (3 credits)*
      *Fulfilled in the pre-major requirements.
2. Social Scientific Analysis: (3-4 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (3-4 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   c. Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
   Plus an additional 7-9 credits from categories that are not Scientific Analysis in the general education requirements.

See section on general education requirements for approved course lists and complete details.
Six to eight additional credits of science courses chosen from the Scientific Analysis category list of courses that provide the foundation for further study in the sciences or chosen from courses with these Scientific Analysis courses as a prerequisite.

**Major Requirements: 48 credits**

Students majoring in computer science must complete:

- CSC 326 Information Structures 4 credits
- CSC 330 Object-Oriented Software Design 4 credits
- CSC 332 Operating Systems I 4 credits
- CSC/ENS 346 Switching and Automata Theory 4 credits
- CSC 347 Computer Circuits Laboratory 2 credits
- CSC 382 Analysis of Algorithms 4 credits
- CSC 430 Software Engineering 4 credits
- CSC 446 Computer Architecture 4 credits
- CSC 490 Seminar in Computer Science 2 credits
- MTH 311 Probability Theory and an Introduction to Mathematical Statistics 4 credits
- MTH 338 Linear Algebra 4 credits

Two courses chosen from the following, at least one of which must be a Computer Science course:

- CSC 420 Concepts of Programming Languages 4 credits
- CSC 424 Data Base Management Systems 4 credits
- CSC 432 Operating Systems II 4 credits
- CSC 434 Compiler Construction 4 credits
- CSC 435 Advanced Data Communications 4 credits
- CSC/MTH 335 Numerical Analysis 4 credits
- CSC 470 Introductory Computer Graphics 4 credits
- CSC 480 Artificial Intelligence 4 credits
- MTH 337 Applied Combinatorics and Graph Theory 4 credits
- MTH 339 Applied Algebra 4 credits
- MTH 350 Mathematical Logic 4 credits
- MTH 370 Operations Research 4 credits
- MTH 410 Statistics 4 credits

**Electives: 4-7 credits**

**Total Credits Required: 124**

**Minor**

Prerequisites or co-requisites: MTH 123 and

- CSC 126 Introduction to Computer Science 4 credits
- CSC 220 Computers and Programming 4 credits
- CSC/MTH 228 Discrete Mathematical Structures 4 credits

**Requirements:**

Students with a science major are strongly urged to take MTH 231 or MTH 221.

Computer Science minor requirements can be met by completion of any one of the following sequences:

1. Computer Science minor sequence for students with an interest in computer engineering:
   - CSC 326 Information Structures 4 credits
   - CSC 332 Operating Systems I 4 credits
   - CSC 435 Advanced Data Communications 4 credits
   - CSC 446 Computer Architecture 4 credits
   - and one course chosen from the following list: 4 credits
     - CSC 420 Concepts of Programming Languages
     - CSC 430 Software Engineering
     - CSC 435 Advanced Data Communications
     - CSC 470 Introductory Computer Graphics

2. Computer Science minor sequence for students with an interest in applications programming:
   - CSC 326 Information Structures 4 credits
   - CSC 330 Object-Oriented Software Design 4 credits
   - CSC 424 Data Base Management Systems 4 credits
   - CSC 420 Concepts of Programming Languages
   - CSC 430 Software Engineering
   - CSC 435 Advanced Data Communications
   - CSC 470 Introductory Computer Graphics
   - CSC 480 Artificial Intelligence

**Courses**

The courses in computer science are listed below. Students should consult a computer science adviser before registering for courses.

CSC 100, Computers and Society; and CSC 102, Computing for Today, are general introductory courses in computers. They are not credited toward the major. CSC 126, Introduction to Computer Science, is the introductory course in the associate's degree computer technology program and in the bachelor's degree program. It is designed for students who have completed MTH 025 or 030 or the equivalent. CSC 270, Introduction to Scientific Computing, is a general introductory course in computer science for engineering students and others with similar needs.

CSC 102 Computing for Today

6 hours; 4 credits

The function and use of the microcomputer in our society. Introduction to a programming language and to the operating system of a microcomputer. Software packages such as spreadsheet, database manager, word processor and dictionary, business graphics, integrated software, educational software (expert system), and communications software. Not open to students who have successfully completed a 200-level computer course or BUS 150.

Prerequisite: An appropriate score on the CUNY Mathematics Assessment Test or MTH 020

CSC 112 Introduction to Word Processing

1 class hour, 2 laboratory hours - 7 weeks; 1 credit

The latest version of a popular word processing program will be taught. Topics will include creating and editing a file, using the speller and the thesaurus, formatting, printing, merging, footnotes, and macros.

Not open to students who have successfully completed CSC 102.
CSC 114 Elements of Computer Programming for the Technologies
1 class hour, 3 laboratory hours; 2 credits
Elements of computer programming for the technologies; arithmetic and logical operations and functions, comparison operators, loops, subroutines, input and output. Programs will be written in a higher-level computer language. Specialized packages for technological applications will be used. Pre- or corequisite: MTH 123

CSC 116 Introduction to DataBase
1 class hour, 2 laboratory hours - 7 weeks; 1 credit
The latest version of a widely used database program will be taught. Topics will include creating and editing a file, sorting and indexing, printing reports and labels. Not open to students who have successfully completed CSC 102. Prerequisite: Passing the CUNY Mathematics Assessment Test

CSC 118 Introduction to Spreadsheets
1 class hour, 2 laboratory hours - 7 weeks; 1 credit
The latest version of a widely used spreadsheet program will be taught. Topics will include creating and problem solving using spreadsheets, entering data and formulas, correcting errors, the range, copy and formatting instructions, printing, tables, and graphs. Not open to students who have successfully completed CSC 102. Prerequisite: Passing the CUNY Mathematics Assessment Test

CSC 122 Computer and Windows
1 class hour; 2 laboratory hours; 2 credits
This course will introduce the novice to the essentials of Windows usage. Topics will include controlling the Windows graphical environment, customizing the desktop, screensavers, running programs, copying data between programs, and managing files with the File Manager. The supplied programs of Windows, the accessories, will be explored: Write, Terminal, Paintbrush, Notepad, Cardfile, Recorder, Calendar, and Calculator. Groups and the installation of programs will be taught. Not open to students who have completed CSC 326 or above. Prerequisite: Passing the CUNY Mathematics Assessment Test

CSC 126 Introduction to Computer Science
3 class hours, 3 laboratory hours; 4 credits
Computing and information processing. Basic computer structure. Programming methodology: analysis, design, documentation, implementation, and evaluation. Algorithmic approach to problem solving. Computer solutions of several numerical and non-numerical problems. For students who plan to pursue a degree program in computer science. Pre- or corequisite: MTH 123 or MTH 130 or MTH 230 or MTH 231 or MTH 235

CSC 135 Introduction to Information Systems
(Also BUS 135)
2 lecture hours; 2 laboratory hours; 3 credits
A hands-on laboratory course in the effective use of technology tools for problem solving. Students will understand how copyright laws apply to software and the need to acknowledge material from outside sources, including on-line material and the work of others. Corequisite: CSC 126

CSC 205 Basic Desktop Publishing
1 lecture hour; 2 lab hours; 2 credits
A hands-on course designed to provide a practical introduction to the basics of text formatting and design. Text and graphics will be combined to produce printer-ready pages for publication. Topics will stress the transformation of otherwise plain-looking documents into professional-looking, more readable copy. Typefaces, style types, type sizes and page layouts will be explored. Prerequisite: CSC 102 or CSC 112

CSC 210 Applications Programming
3 class hours, 3 laboratory hours; 4 credits
Application of programming techniques to problems in business and data processing. State of the art software packages to analyze and manipulate data for standard business applications will be taught. Prerequisite: A grade of C or above in either CSC 126 or CSC 270

CSC 220 Computers and Programming
3 class hours, 3 laboratory hours; 4 credits
Binary and hexadecimal number systems, computer structure, machine language, instruction formats and execution, addressing techniques, and digital representation of data. Computer systems organization, symbolic coding and assembly systems, programming techniques, program segmentation and linkage. Students will complete computer projects in machine language and assembly language. Prerequisite: A grade of C or above in either CSC 126 or 270

CSC 228 Discrete Mathematical Structures
(Also MTH 228)
3 class hours, 3 laboratory hours; 4 credits
Elementary set theory, functions, relations, and Boolean algebra. Elements of graph theory, matrix representation of finite functions and graphs, and matrix manipulation. Switching circuits, gating networks, and finite state machines. Applications of graph theory to computer science. Related algorithms. Introduction to combinatorial computing. Prerequisite: A grade of C or above in either CSC 126 or CSC 270; MTH 123 or MTH 130 or MTH 230 or MTH 231 or MTH 235

CSC 270 Introduction to Scientific Computing
6 hours; 4 credits
Programming elements: operators, flow control, repetition, selection, logical conditions, arrays, data import, vectors, matrices, functions. Introduction to numerical techniques using scientific software: graphing, integration, roots of equations, linear equations, eigenvectors, eigenvalues, interpolation, signal processing. Not open to students who have successfully completed CSC 120 or CSC 126. Prerequisite: MTH 231

CSC 310 Input/Output Operations and File Management
3 class hours, 3 laboratory hours; 4 credits
Files and file structures. Physical vs logical files. Secondary storage devices and system software. Input/output and access techniques. File organizations, indexing and processing. The capabilities of file handling in at least one higher-level programming language will be explored. Prerequisite: CSC 126
CSC 326  Information Structures
3 class hours, 3 laboratory hours; 4 credits
Organization and processing of various types of information. Storage allocation techniques. Linear list structures including stacks, queues, deques, rings and linked arrays. Tree structures and multi-linked structures. Advanced sorting and searching techniques. Scatter storage techniques. Recursive programming.
Prerequisites: CSC 310 or CSC/MTH 228 or ENS 336; a knowledge of C programming language

CSC 330  Object-Oriented Software Design
3 class hours, 3 laboratory hours; 4 credits
Large-scale software design issues; object-oriented design paradigms: encapsulation; polymorphism; inheritance; reusability; specifics of an object-oriented language and associated development tools. Students will be required to implement a substantial and well-engineered project using an object-oriented language.
Prerequisites: CSC 220 or ENS 362, and CSC 326

CSC 332  Operating Systems I
3 class hours, 3 laboratory hours; 4 credits
Prerequisites: CSC 220 or ENS 362, and CSC 326

CSC 334  Computer System Fundamentals
4 lecture hours; 4 credits
The course covers concepts of hardware and software systems and programming concepts common to the corporate data processing environment. Topics include fundamentals of hardware and software, rudiments of operating systems, and communication between microcomputers and mainframes. Various software application and utility packages utilizing both mainframes and microcomputers will be studied.
Prerequisite: CSC 310

CSC 346  Switching and Automata Theory
4 hours; 4 credits
Prerequisites: CSC 270 and ENS 320, or CSC 220 and CSC/MTH 228 and EIL 240, or CSC 220 and CSC/MTH 228 and MTH 130

CSC 347  Computer Circuits Laboratory
4 hours; 2 credits
The design and implementation of circuitry found in modern computers. Physical realizations of minimized switching functions. Design and implementation of finite state machines including synchronous sequential circuits and asynchronous sequential circuits.
Prerequisite: CSC 346

CSC 382  Analysis of Algorithms
4 hours; 4 credits
Complete development of an algorithm. Statement of problem, model development, design and correctness of algorithm, complexity analysis, program testing, and documentation. Design techniques include subgoals, branch and bound, heuristics, recursion, simulation, and parallelism. Computer solution of several representative problems.
Prerequisite: CSC 326

CSC 405  Applied Concepts in Information Systems
(Also BUS 405)
3 lecture hours; 3 laboratory hours; 4 credits
The course covers applied concepts in Information Systems. Theory and methodology for the design, development, and implementation of a large scale reliable business software projects; and tool and techniques for managing business software projects will be discussed. Presentations and GUI interfaces will be emphasized.
Prerequisites: CSC 326 and BUS 352

CSC 420  Concepts of Programming Languages
4 hours; 4 credits
Definition of programming languages, data types and declaration, storage allocation, statement types, operations, control structures, binding time, procedure, subroutine, function declaration, parameters, string manipulation. Several programming languages will be discussed and problems using these languages will be assigned.
Prerequisites: CSC 220 and CSC 326

CSC 424  Data Base Management Systems
4 hours; 4 credits
Prerequisite: CSC 326

CSC 430  Software Engineering
4 hours; 4 credits
Developing large-scale reliable software systems. Theory and methodology for the design and implementation of software systems from requirements analysis through design and implementation, testing, integration, and maintenance. Tools and techniques for all phases of a software system’s life cycle will be discussed. Documentation, testing, and management of large-scale systems. A significant project will be required.
Prerequisite: CSC 350

CSC 432  Operating Systems II
4 hours; 4 credits
Concurrent processing. Linear and tree-structured address space. Resource allocation for multiprogramming. Queuing and network control policies. Protection mechanisms. Case studies of various state-of-the-art systems and implementation of a small operating system.
Prerequisite: CSC 332
CSC 434  Compiler Construction  
4 hours; 4 credits  
Review of assembly techniques of symbol table techniques and macros, and of compilation, loading, and execution. One-pass compilation techniques. Translation of arithmetic expressions from prefix form to machine language. Detailed organization of a simple complete compiler.  
Prerequisites: CSC 330 and CSC 326

CSC 435  Advanced Data Communications  
4 hours; 4 credits  
Concepts of circuit, packet and message switched networks; local, campus, metropolitan, and wide area networks; concepts of data transmission; the emerging telecommunications industry, private networks, and integrated services digital networks.  
Prerequisite: CSC 346

CSC 446  Computer Architecture  
(Also ENS 446)  
4 hours; 4 credits  
Instruction formats and addressing schemes. Arithmetic and logic unit design. Control unit design: hardwired and microprogrammed. Main memory technology. Virtual, high speed, associative and read-only memories. Programmable logic arrays. Computer organizations including stack, parallel and pipeline. System structures: time sharing, multiprocessing, and networking. Digital communications. Input/Output systems; direct memory access.  
Prerequisite: CSC 346 or ENS 320

CSC 450  Honors Workshop  
4 hours; 4 credits  
Students, with the approval of the department, work in teams on large-scale projects.  
Prerequisites: Computer Science Major with senior standing and departmental approval

CSC 462  Microprocessors  
(Also ENS 362)  
2 class hours, 4 laboratory hours; 4 credits  
Introduction to 8086 architecture using the SDK-86 single board computer. Interfacing of programmable chips including the 8255 P10, 8259 Interrupt controller, 8254 counter/timer, 8279 keyboard/display controller and ADC 0804 analog to digital converter. Testing and debugging of assembler language programs to exercise the interface. Troubleshoot with oscilloscope and Debug.  
Prerequisites: ENS 220 and ENS 221, or CSC 346 and CSC 347

CSC 470  Introductory Computer Graphics  
4 hours; 4 credits  
Prerequisite: CSC 326

CSC 480  Artificial Intelligence  
4 hours; 4 credits  
Prerequisite: CSC 326

CSC 482  Discrete Simulation  
4 hours; 4 credits  
Prerequisite: MTH 311 and CSC 326

CSC 484  Theory of Computation  
4 hours; 4 credits  
Prerequisites: A grade of C or above in (CSC 126 or 270) and MTH 339 and (MTH 233 or 236)

CSC 490  Seminar in Computer Science  
2 hours; 2 credits  
Invited speakers will lead discussions on the ethical and societal impact of the computer. Students will write and present papers on current research topics in the computing field.  
Prerequisites: Computer Science Major with senior standing

Computer Science-Mathematics (B.S.)  
The Departments of Computer Science and Mathematics offer a joint B.S. degree program in Computer Science and Mathematics that provides a balance between these two disciplines with an emphasis on their applied aspects and their relationship to each other.

General Education Requirements for the B.S.  
ENG 111, ENG 151, COR 100, PED 190: 12 credits  
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 21-27 credits  
General education requirements are the same as for other B.S. degrees.

Pre-Computer Science Sequence: 4 credits  
CSC 126  Introduction to Computer Science
A grade of C or above in CSC 126 will be required for admission to the Computer Science-Mathematics baccalaureate program. Students will be allowed to repeat the course, if necessary.

**Pre-Major Requirements: 18-21 credits**

Students planning to major in computer science-mathematics should complete the following requirements prior to their junior year.

- MTH 230  Calculus I with Pre-Calculus
- MTH 232  Analytic Geometry and Calculus II
- MTH 233  Analytic Geometry and Calculus III
- MTH 229  Calculus Computer Laboratory
- or
- MTH 231  Analytic Geometry and Calculus I
- MTH 232  Analytic Geometry and Calculus II
- MTH 233  Analytic Geometry and Calculus III
- MTH 229  Calculus Computer Laboratory
- or
- MTH 235  Accelerated Calculus I
- MTH 236  Accelerated Calculus II
- MTH 229  Calculus Computer Laboratory 10-13 credits
- CSC 220  Computers and Programming 4 credits
- MTH/CSC 228  Discrete Mathematical Structures 4 credits

**Major Requirements: 48 credits**

Computer Science: 24 credits

- CSC 326  Information Structures 4 credits
- CSC 330  Systems Programming: Concepts of Software Design 4 credits
- CSC/ENS 346  Switching and Automata Theory 4 credits
- CSC 382  Analysis of Algorithms 4 credits
- CSC 420  Concepts of Programming Languages 4 credits

Mathematics: 24 credits

- MTH 311  Probability Theory and an Introduction to Mathematical Statistics 4 credits
- MTH 335  Numerical Analysis 4 credits
- MTH 338  Linear Algebra 4 credits
- MTH 339  Applied Algebra 4 credits

Any one from the following group of advanced computer courses:

- CSC 424  Data Base Management Systems 4 credits
- CSC 480  Artificial Intelligence 4 credits
- CSC 482  Discrete Simulation 4 credits

- MTH 330  Applied Mathematical Analysis I 4 credits
- MTH 337  Applied Combinatorics and Graph Theory 4 credits
- MTH 341  Advanced Calculus I 4 credits
- MTH 350  Mathematical Logic 4 credits
- MTH 370  Operations Research 4 credits
- MTH 410  Mathematical Statistics I 8 credits

**Electives: 13 credits**

**Total Credits Required: 120**

**Liberal Arts and Sciences Requirement**

All courses designated CSC are non-liberal arts and sciences. (Courses are listed under Computer Science and Mathematics)

**COR 100  United States: Issues, Ideas, and Institutions**

4 hours; 4 credits

Contemporary American society, culture, politics, and the economic and historical forces that shaped them with particular attention to factors that have had a critical impact on: the nation's political ideas and institutions; its social structure and the relationships between its diverse cultures; and its economy. The course will focus on both the contemporary American scene and on several formative historical periods: the creation of the Republic 1776-1789; the Civil War and the two Reconstructions, 1860-1877 and 1954-1965; and the New Deal/Great Society, 1930s/1960s. Throughout the course, students will be made aware of the principles of logical and clear thinking.

Pre- or corequisite: ENG 111

**CUNY Baccalaureate**

Established in 1971, the CUNY BA/BS Program is a small, university-wide alternate degree program intended for self-directed, academically strong students who have well-formulated academic and career goals. Students who are admitted to the program work on an individualized area of specialization with guidance from a CUNY faculty member who agrees to serve as a mentor. The alternate degree program must also satisfy the liberal arts and sciences requirements and other degree requirements. Although students in the program are matriculated at one CUNY college, they are free to pursue take courses at any of the other CUNY colleges. To be eligible to apply, students must have a clear academic goal and must have completed at least 15 college credits with a grade-point-average of 2.50 or higher. The CUNY B.A. and B.S. degrees are fully accredited and are awarded by The City University rather than by an individual college. The program operates under the auspices of the CUNY Graduate School and University Center.

**Dance**

(Minor)

Department of Performing and Creative Arts

Coordinator: Associate Professor Charles Thomas, Center for the Arts (1P), room 224

The minor in dance is available to students in all baccalaureate programs. In conjunction with a major in psychology, this minor prepares students for graduate work in dance therapy.

**Requirements: 18 credits**

Required courses:

- DAN 101  Contemporary Dance Technique I 2 credits
- DAN 111  Choreography I 3 credits
- DAN 184  Afro-Haitian Rhythms I 2 credits

Eleven credits to be selected from the following courses:

- DAN 112  Choreography II 3 credits
### Dance

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DAN 150</td>
<td>Dance History: 20th Century</td>
<td>3 credits</td>
</tr>
<tr>
<td>DAN 171</td>
<td>Improvisation I</td>
<td>2 credits</td>
</tr>
<tr>
<td>DAN 172</td>
<td>Improvisation II</td>
<td>2 credits</td>
</tr>
<tr>
<td>DAN 231</td>
<td>Ballet I</td>
<td>2 credits</td>
</tr>
<tr>
<td>DAN 232</td>
<td>Ballet II</td>
<td>2 credits</td>
</tr>
<tr>
<td>DAN 261</td>
<td>Modern Jazz Dance I</td>
<td>2 credits</td>
</tr>
<tr>
<td>DAN 262</td>
<td>Modern Jazz Dance II</td>
<td>2 credits</td>
</tr>
<tr>
<td>DAN 331</td>
<td>Private Study in Dance</td>
<td>2 credits</td>
</tr>
</tbody>
</table>

It is recommended that DAN 160 Modern Dance Technique I or DAN 180 International Folk Dancing be taken by as electives; these courses cannot be taken for credit toward the minor. A medical examination form must be on file in the College Health Center (Campus Center) prior to registration for DAN 160 and DAN 180.

#### Courses

**DAN 101** Contemporary Dance Technique I  
3 hours; 2 credits  
The progressive stages in the development of a technical vocabulary and movement patterns into the art form and expression of modern dance. Each stage develops naturally from the preceding one, contributing to the total advancement of the dance. For beginning students.  
Prerequisite for DAN 102: DAN 101 or permission of the instructor

**DAN 102** Contemporary Dance Technique II  
3 hours; 2 credits  
The progressive stages in the development of a technical vocabulary and movement patterns into the art form and expression of modern dance. Each stage develops naturally from the preceding one, contributing to the total advancement of the dance. For beginning students.  
Prerequisite for DAN 102: DAN 101 or permission of the instructor

**DAN 111** Choreography I  
3 hours; 3 credits  
I: Elements of Composition; II: Dance Composition. The art of the dance as a creative expression which offers students the opportunity to explore the traditional and experimental approach to choreography through interaction of time, space, and energy. It commands a critical judgment of one's own creative experience and expression. For beginning students.  
Prerequisite for DAN 112: DAN 111 or permission of the instructor

**DAN 112** Choreography II  
3 hours; 3 credits  
I: Elements of Composition; II: Dance Composition. The art of the dance as a creative expression which offers students the opportunity to explore the traditional and experimental approach to choreography through interaction of time, space, and energy. It commands a critical judgment of one's own creative experience and expression. For beginning students.  
Prerequisite for DAN 112: DAN 111 or permission of the instructor

**DAN 122** Black Dance Workshop  
(Also AFA 122)  
4 hours; 3 credits  
Based on traditions of the peoples of Africa and the Caribbean, this course develops the technical language of black dance, emphasizing the cultural interaction of native tradition and western influence; the retelling of legends and tales through dance rhythms and symbolism.

**DAN 150** Dance History: Twentieth-Century  
(Also AMS 150)  
4 hours; 3 credits  
Concentrating on the “pioneers of modern dance” -- Duncan, Denishawn, Graham, Humphrey, Weidman, and others -- as well as on the experimental and avant-garde, using lectures, demonstrations, video, and film to illustrate examples of outstanding choreography. The course includes the dances of other countries, coordinated with professional concerts and student reports. Includes “Happenings in Today’s World of Dance.” No dance background required. (art & com.)

**DAN 160** Modern Dance Technique I  
2 hours; 1 credit  
Technical movement skills used in dance to further the appreciation of dance as an art form and experiment with dance movement for the beginning student. Professional dance films will be shown. Open to all students.

**DAN 171** Improvisation I  
**DAN 172** Improvisation II  
3 hours; 2 credits  
Experimenting with movement exploration to help develop sensitivity and creative response through free movement patterns. Simple props sometimes used in improvising.  
Prerequisite for DAN 172: DAN 171 or permission of the instructor

**DAN 180** International Folk Dance  
2 hours; 1 credit  
Group dancing for both style and pleasure geared to the national characteristics and traditional folk dances from the British Isles, Russia, Germany, Greece, Israel, and the Scandinavian countries.

**DAN 184** Afro-Haitian Rhythms I  
**DAN 185** Afro-Haitian Rhythms II  
3 hours; 2 credits  
The history, theory, and practice of dance as performed in Haiti and other parts of the Caribbean. This course will introduce the student to the historical and anthropological sources of Afro-Haitian dance, as well as to its choreometrics.  
Prerequisite for DAN 185: DAN 184

**DAN 201** Contemporary Dance Technique III  
**DAN 202** Contemporary Dance Technique IV  
3 hours; 2 credits  
The progressive stages in the development of a technical vocabulary and movement patterns translated into the art form and expression of modern dance, each stage developing naturally from the preceding one, contributing to the total advancement of the dance. For intermediate students.  
Prerequisite for DAN 201: DAN 102 or permission of the instructor; for DAN 202: DAN 201 or permission of the instructor

**DAN 211** Choreography III  
**DAN 212** Choreography IV  
3 hours; 3 credits  
Elements of composition. The art of the dance as a creative expression which offers students the opportunity to explore the traditional and experimental approach to choreography through interaction of time, space, and energy. It commands a critical judgment of one's own creative experience and expression. For intermediate students only.  
Prerequisite: DAN 112 or permission of the instructor

**DAN 231** Fundamentals of Ballet I  
**DAN 232** Fundamentals of Ballet II  
3 hours; 2 credits  
Using the five fundamental positions of feet and legs, and the associated positions of the arms, a vocabulary of classical ballet is developed and combined into longer dance phrases. Emphasis is placed on fluidity of movement for mastery of expression.
Dramatic Arts

DAN 261 Modern Jazz Dance I
3 hours; 2 credits
The course includes basic technique and style of dance used with rhythmic improvisation in contemporary American jazz dance.

DAN 262 Modern Jazz Dance II
3 hours; 2 credits

DAN 331, 332, 333, 334
Private Study in Dance I, II, III, IV
2 credits each
Students interested in the development of style and technical skills necessary for performance may earn credit through study under an approved teacher in repertory class. Evaluation of the work will include performances in dance workshops and concerts. Registration is by permission of a full-time member of the dance faculty.
Prerequisite: Permission of instructor

Dramatic Arts
(Bachelor of Science, Minor)
Department of Performing and Creative Arts and Department of English, Speech, and World Literature
Program Coordinator: Assistant Professor Maurya Wickstrom, The Center for the Arts (1P), room 224

The program in dramatic arts provides the opportunity to earn a Bachelor of Science degree in Dramatic Arts, with a focus on theatrical production and technique, including a study of dramatic literature. Students whose primary interest is in dramatic literature are referred to the program that leads to the Bachelor of Arts degree in English with a Concentration in Dramatic Literature. (See section on English.)

Dramatic Arts (B.S.)

General Education Requirements
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 28-47 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
       Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (6-4 credits)
6. Foreign language: (0-12 credits)
See section on general education requirements for approved course lists and complete details.

Major Requirements: 52 credits
DRA 110 Acting I 3 credits
DRA 131 Introduction to Technical Theater 3 credits
DRA 210 Acting II 3 credits
DRA 235 Introduction to Stage Management 3 credits
DRA 260 History of Theater I 4 credits
DRA 261 History of Theater II 4 credits
DRA 320 Directing I 3 credits
DRA 372 Theater Practicum 4 credits
DRA 597 Internship 3 credits
Four courses in Dramatic Literature at the 300 level or above 16 credits
Electives in DRA or cross-listed courses 6 credits
Note: DRA 100 no longer qualifies as a course applicable toward the major requirements. It is, however, recommended as an introduction to the major.

Electives: 28 credits

Total Credits Required: 120

Honors
To graduate with Honors in Dramatic Arts a student must have a 3.5 grade point average in dramatic arts courses and must complete a creative project in acting, directing, design, or in the writing of plays or criticism.

Minor
Prerequisite Courses: 3-6 credits
DRA 100 Introduction to Theatre 3 credits
DRA 110 Acting 3 credits
or
DRA 131 Introduction to Technical Theatre 3 credits

Minor Requirements: 14 credits
At least six credits in courses in dramatic arts chosen from DRA 210, 213, 214, 220, 230, 231, 232, 233, 310, 320, 370, 371, 410, 420.
At least eight credits in dramatic literature courses chosen from DRA 260, 261, 460, or DRA courses that are cross-listed with English (ENL), French (FRN), or Spanish (SPAN) courses.

Courses
DRA 100 Introduction to Theatre
4 hours; 3 credits
Students will read plays of different periods and study the collaboration between the text and those who produce it: actors, directors, and designers. Visits to the theatre and field trips will be arranged. There may be modest expenses for tickets. (art & com.)

DRA 101 Exploring the New York Theatre Scene
4 hours; 3 credits
Students will see at least five productions, on and off Broadway, and will examine them in order to gain an understanding of what comprises the theatre experience so that critical standards may be developed. Students are expected to purchase tickets. See the Schedule of Classes for estimated cost of theatre tickets.
DRA 110 Acting I
4 hours; 3 credits
A basic approach to acting for stage, film, and television.

DRA 131 Introduction to Technical Theatre
4 hours; 3 credits
Survey of different kinds of theatres, their physical plants, and production techniques. Construction and handling of scenery, properties, and lighting equipment.

DRA 202 African-American Drama
(Also AFA 202)
4 hours; 4 credits
A study of the emergence of the black theatre in the United States and an examination of the theatre as a manifestation of the black genius.

DRA 205 African-American Musical Theatre
(Also AFA 205)
4 hours; 4 credits
A study of the musical theatre of African-Americans from its early beginnings in African culture to genius manifested in the nineteenth century, its influence on early vaudeville, its unique contribution to American musical theatre, and the present day popularity of its style. Whenever possible, current productions will be attended and studied in detail.

DRA 210 Acting II
4 hours; 3 credits
Exercises and improvisations, with an emphasis on scene study. Prerequisite: DRA 110

DRA 215 Movement for the Theatre
4 hours; 3 credits
Techniques to assist the actor in exploring the elements of movement and mime. This course may be repeated for credit. Prerequisite: ENG 111

DRA 214 Voice and Diction for the Theatre
4 hours; 3 credits
The development and training of the actor's voice as a flexible instrument. Work on individual problems in diction in order to develop an effective self-expression on the stage. This course may be repeated for credit. Prerequisite: DRA 100 or 110 or permission of the instructor

DRA 215 Modes of Drama
(Also ENH 212)
4 hours; 4 credits
An introduction to the variety of forms and themes of dramatic literature. Major problems treated by dramatists will be examined, as well as genres: tragedy, comedy, farce, melodrama, tragicomedy, and the thesis play. (literature) (art & com.) Prerequisite: ENG 151

DRA 220 Play Production
4 hours; 3 credits
The role of the producer in the management of non-profit and commercial theatres. A consideration of theatre space, budget, organization of the production staff, front of the house and backstage management.

DRA 230 Set Design for the Theatre
4 hours; 3 credits
Principles, materials, and practices of set design, with an emphasis on its contribution to various theatrical styles and periods. Prerequisites: ENG 111 and DRA 100 or DRA 131 or permission of the instructor

DRA 232 Costume Design for the Theatre
4 hours; 3 credits
Principles, materials, and practices of the design of costumes and theatrical properties, with an emphasis on their contributions to various theatrical styles and periods. Prerequisite: ENG 111

DRA 233 Introduction to Design for the Theatre
4 hours; 3 credits
Theory and practice of designing stage settings, lighting, and costumes. Visits to the theatre and to professional scene shops. Prerequisite: ENG 111

DRA 235 Introduction to Stage Management
4 hours; 3 credits
Principles and practices of contemporary stage management. Interprets the function of the stage manager in the entire production process. Identifies the relationship of the stage manager to the director, designers, technical director, actors, stage hands and costume and properties managers. Specifies responsibilities and practices. Prerequisite: ENG 111

DRA 240 Theater for Young People
4 hours; 3 credits
Theory and methods of producing theater for young people. An examination of appropriate dramatic literature, as well as the problems of play production for and with children and adolescents. Creative drama as an educational process will be viewed in relationship to theater for young people as an aesthetic product. Students will develop dramatic material in class for presentation.

DRA 260 History of Theatre I
4 hours; 4 credits
A critical history of theatre and theatrical style from prehistory through Shakespeare and his contemporaries. Aspects to be covered include the ritual origins of drama, the drama of ancient Greece and Rome, the middle ages, and the English and European theatre of the sixteenth and seventeenth centuries. The primary emphasis will be the total theatrical context in which plays were written and produced (the social and cultural environment, the playhouse, the prevailing theatrical styles of the time). The secondary emphasis will be the reading of major dramatic texts which help to illustrate that development. (literature) (art & com.) Prerequisite: ENG 111

DRA 261 History of Theatre II
4 hours; 4 credits
A critical history of theatre and theatrical style from the re-opening of the English theatre in 1660 through American drama of the 1960s. Aspects to be covered include the English Restoration
Dramatic Arts

and eighteenth-century theatre. European theatre of the eighteenth and nineteenth centuries, the theatre of Asia, and modern European and American theatre. The primary emphasis will be on the total theatrical context in which plays were written and produced (the social and cultural environment, the playhouse, the prevailing theatrical styles of the time). The secondary emphasis will be the reading of major dramatic texts which help to illustrate that environment. (literature) (art & com.)

Prerequisite: ENG 111

DRA 270  Performance I
DRA 271
Performance II
4 hours; 3 credits
Performance of a play. Students will be involved in various aspects of theatrical presentation.
Prerequisite: permission of the instructor

DRA 310  Acting III
4 hours; 3 credits
Work on scenes, encouraging the actor to explore a variety of characters and to perform them before an audience.
Prerequisite: DRA 210

DRA 314  Media Workshop for Actors/Directors
(Also COM 314)
An examination of the actor/director relationship as it applies in the various media: stage, film, and television. Students will have an opportunity to work both as actors and directors. New work from writing classes will be encouraged for student projects.
Prerequisite: COM 210

DRA 320  Directing I
4 hours; 3 credits
Basic principles of directing. The function of the director in the production relating to actors, designers, the producer, stage manager and house manager. Students direct scenes and produce a final workshop performance.
Prerequisites: DRA 110, and DRA 131 or DRA 233, ENG 111

DRA 345  Spanish Theatre
(Also SPN 345)
4 hours; 4 credits
Discussion of ideas, background, and staging traditions of representative Spanish language plays from the Golden Age to the present. The course is taught in English. Readings and assignments in Spanish required for majors; readings and assignments may be done in English for non-majors.
Prerequisite: SPN 313 or equivalent for those doing readings and assignments in Spanish; ENG 151 or a 200-level English course for those doing readings and assignments in English

DRA 350  English Drama to 1800
(Also ENL 350)
4 hours; 4 credits
Selected works with emphasis on Elizabethan and Jacobean drama (exclusive of Shakespeare), and Restoration and eighteenth-century drama.
Prerequisite: an ENH 200-level course

DRA 355  Modern European Drama
(Also ENL 355)
4 hours; 4 credits
A study of the major dramatists of the modern European theatre, with an emphasis placed upon the development of dramatic styles and themes, as well as the theatrical context in which the plays were produced.
Prerequisite: an ENH 200-level course

DRA 356  American Drama
(Also ENL 356)
4 hours; 4 credits
Readings of plays by O’Neill, Williams, Miller and others who have dramatized the conflicts and predicaments of twentieth-century Americans.
Prerequisite: an ENH 200-level course

DRA 357  World Drama to 1800
(Also ENL 357)
4 hours; 4 credits
Selected plays from the Greeks to 1800.
Prerequisite: an ENH 200-level course

DRA 358  World Drama Since 1800
(Also ENL 358)
4 hours; 4 credits
Selected plays from 1800 to the present.
Prerequisite: an ENH 200-level course

DRA 359  Contemporary Drama
(Also ENL 359)
4 hours; 4 credits
Major figures, works and movements in Dramatic Literature since World War II, with special emphasis on the last two decades.
Prerequisite: an ENH 200-level course

DRA 361  The Early Shakespeare
(Also ENL 361)
4 hours; 4 credits
A selection of Shakespeare’s work written before 1600: early and middle comedies, the major histories, the earlier tragedies, and the poems.
Prerequisite: an ENH 200-level course

DRA 362  The Later Shakespeare
(Also ENL 362)
4 hours; 4 credits
A selection of Shakespeare’s work written after 1600: the major tragedies, the problem plays, the late comedies and romances.
Prerequisite: an ENH 200-level course

DRA 370  Theatre Workshop I
4 hours; 3 credits
Projects in acting and directing are developed by members of the workshop. An effort will be made to have a current playwright’s workshop contribute material for the course.
Prerequisite: DRA 110 or permission of the instructor

DRA 371  Theatre Workshop II
4 hours; 3 credits
Projects in acting, directing, and playwriting, representing
Economics various theatrical styles, will be developed by members of the workshop. Prerequisite: DRA 370 or permission of the instructor.

DRA 372 Theater Practicum 4 hours; 4 credits Participation in acting or production roles in a production sponsored by the Program in Dramatic Arts. Students are to be evaluated by the faculty production coordinator. Students will keep a journal to be submitted at the conclusion of the production. This course may be repeated for credit.

DRA 410 Acting IV 4 hours; 3 credits Work on more complex scenes leading to their performance before an audience. Prerequisite: DRA 310

DRA 426 Classical French Drama (Also FRN 426) 4 hours; 4 credits Plays of Corneille, Racine, Molière, with special emphasis on the continuing role of Molière in the world’s theatre. Prerequisite: FRN 313 or equivalent for those doing readings and assignments in French; ENG 151 for those doing readings and assignments in English.

DRA 460 Dramatic and Theatrical Criticism 4 hours; 4 credits A survey of theories of drama and theatre and of the development of dramatic and theatrical criticism from their origins in such writers as Aristotle and Horace to the present. Prerequisites: At least two 300-level courses in dramatic literature or English or permission of the instructor.

DRA 465 Spanish Theatre in the Twentieth Century (Also SPN 465) 4 hours; 4 credits Principal tendencies in Spanish theatre in the twentieth century. Including an analysis of the major works of dramatists such as Benavente, Valle-Inclán, García Lorca, Miñura, Buero Vallejo, Alfonso Sastre, Carlos Muniz, Lauro Olmo, Arrabal, Antonio Gala, and others. Prerequisite: SPN 313 or equivalent.

Dramatic Arts students should also consider:
ENL 272 Playwriting I, ENL 373 Playwriting II, and ENL 435 Playwright’s Workshop.

Economics (Bachelor of Arts, Bachelor of Science, Business Specialization, Finance Specialization, Minor) Department of Political Science, Economics, and Philosophy Chair: Associate Professor Vasilios Petratos, PEP/History Building (2N), room 224

The economics program serves several different student needs. It provides a major in economics for students interested in the study of the subject at the bachelor’s degree level or in preparation for graduate study of economics. A business specialization and a finance specialization are available for interested students.

Economics (B.A.)

General Education Requirements for the B.A.
ENG 111, ENG 151, COR 100, PED 190: 12 credits Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 28-47 credits Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (7-8 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (6-8 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
       Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
6. Foreign Language: (0-12 credits)
See section on general education requirements for approved course lists and complete details.

Pre-Major Requirement: 3 credits ECO 101 Introduction to Economics 3 credits

Major Requirements: 28-32 credits (28-32 credits include Computer Proficiency Requirement)
28 credits in economics courses at the 200-, 300-, or 400-level or above including:
ECO 210 Price Theory 4 credits
ECO 212 Income and Employment Theory 4 credits
ECO/ MGT 230 Introduction to Economic and Managerial Statistics 4 credits
ECO 323 Introduction to Econometrics or
ECO 326 Introduction to Mathematical Economics 4 credits
And at least two additional 300- or 400-level economics courses 8 credits
The remaining four economics credits may be at the 200, 300, or 400 level.

Computer Proficiency Requirement: 0-4 credits In addition, economics majors must demonstrate computer proficiency in one of the following ways:
1. Successful completion of any course in Computer Science.
3. Demonstration of proficiency with computers in a manner satisfactory to the economics faculty.
   (CSC 108, 112, 114, 116, 118, special focus, abbreviated courses, do not meet this requirement.)

Electives: 44-48 credits
Total Credits Required: 120

Economics (B.S.)

General Education Requirements for the B.S.
ENG 111, ENG 151, COR 100, PED 190: 12 credits
Whenever possible, these four courses should be completed within the first 36 credits.

Scientific Analysis; Social Scientific Analysis; The West and the World; Textual, Aesthetic, and Linguistic Analysis; Pluralism and Diversity requirements: 21-27 credits
Whenever possible, these courses should be completed within the first 60 credits.
1. Scientific Analysis: (11 credits)
   a. Science and Technology: (8 credits)
   b. Mathematics: (3 credits)
2. Social Scientific Analysis: (3-4 credits)
3. The West and the World: (4 credits)
4. Textual, Aesthetic, and Linguistic Analysis: (3-4 credits)
   a. Literature: 200 level
   b. Arts and Communications: 100 level
   c. Arts and Communications: 200 level
5. Pluralism and Diversity Requirement: (0-4 credits)
   See section on general education requirements for approved course lists and complete details.

Pre-Major Requirements, 3 credits and Major Requirements, 28-32 credits, including Computer Proficiency Requirement, are the same as those listed for the B.A.

Specializations
Within the major in economics, the College offers two specializations, business and finance, combining the major in economics with the study of selected courses in business. The program is administered jointly by the Department of Political Science, Economics, and Philosophy and the Department of Business. The specialization adds courses useful to students who plan to pursue careers in business or finance and/or continue their education.

Business Specialization: 17 credits

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<tr>
<td>ACC 114</td>
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<td>ACC 121</td>
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<td>MGT 110</td>
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<td>MKT 111</td>
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Finance Specialization: 19 credits
The Finance Specialization has the following requirements within the 28-32 credits required for the major:
Four credits at the 200 level:

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<td>ACC 121</td>
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Eight credits in 300-level economics courses chosen from the following:

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<tr>
<td>ECO/FNC 213</td>
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<td>ECO/FNC 240</td>
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Specialization courses: 19 credits

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<td>ECO/FNC 240</td>
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The course ECO/FNC 213 Money and Capital Markets is a recommended elective.

Electives: 26-49 credits
Total Credits Required: 120

Honors
To graduate with Honors in Economics a student must have a 3.5 grade point average in economics courses and must complete a thesis or project determined by the student and his or her faculty sponsor and the course POL/ECO/PHL 490 Senior Seminar in Political Science, Economics, and Philosophy.

Minor
Prerequisite Course:

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<th>Course</th>
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<tr>
<td>ECO 101</td>
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Minor Requirements:

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<td>ECO 210</td>
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<td>ECO 212</td>
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<td>ECO 230</td>
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One 300- or 400-level course in Economics 4 credits

Courses

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<tr>
<td>ECO 101</td>
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This course examines the principles of economics in the context of the operation of the United States economy. Both
microeconomic theory (behavior of firms and households) and
macroeconomic theory (total output, inflation, employment and
unemployment, economic growth) will be introduced as will
economic approaches to social problems. (social science)
Prerequisite: MTH 020 or an appropriate score on the CUNY
Mathematics Assessment Test

ECO 210  Price Theory
4 hours; 4 credits
Examination of the workings of the price mechanism by which a
free enterprise system solves the basic economic problems of
production, distribution, and optimum methods of production.
The roles of household and firm in determining prices under
varying market structures. Development of a theoretical approach
as the foundation for more advanced work in economics.
Application of analytical tools to contemporary problems.
Prerequisites: ECO 101; and MTH 025 or MTH 030 or an
appropriate score on the CUNY Mathematics Assessment Test, or
permission of the instructor.

ECO 212  Income and Employment Theory
4 hours; 4 credits
Aggregate economic analysis from the classical and the modern
post-Keynesian point of view. The major objective is an
understanding of the factors that determine the levels of national
income, output, employment, over-all prices, and rates of
economic growth. The roles of consumption, investment, and
alternative governmental policies are demonstrated.
Measurement of national income and output is also studied.
Prerequisites: ECO 210; and MTH 025 or MTH 030 or an
appropriate score on the CUNY Mathematics Assessment Test, or
permission of the instructor.

ECO 213  Money and Capital Markets
(Also FNC 213)
4 hours; 4 credits
The course examines financial markets from the standpoint of
investors and users. Markets studied are those for money market
instruments, T-bill futures, Ginnie Mae futures, T-bond futures,
stocks, stock options, bonds, mortgages, and Eurocurrencies.
Federal Reserve operations, U.S. Treasury operations, and
international financing are considered with regard to their effects
on financial markets.
Prerequisite: ECO 101

ECO 214  Money and Banking
(Also FNC 214)
4 hours; 4 credits
An analytical, institutional, and historical examination of the
monetary system of the United States with particular attention
paid to the operation of commercial banks, and to the powers,
purposes, and performance of the Federal Reserve System. The
influence of the quantity of money on the level of economic
activity will be considered.
Prerequisite: ECO 101

ECO 230  Introduction to Economic and
Managerial Statistics
(Also MGT 230)
4 hours; 4 credits
Development and application of modern statistical methods,
including such elements of descriptive statistics and statistical
inference as correlation and regression analysis, probability
theory, sampling procedures, normal distribution and binomial
distribution, estimation, and testing of hypotheses.
Prerequisites: ECO 101; MTH 121 or 123 or equivalent

ECO 231  Quantitative Analysis of Business and
Economic Problems
(Also BUS 230)
3 hours; 3 credits
The application of mathematical techniques to business and
economic problems. An introduction to operations research,
linear programming, PERT and related materials.
Prerequisites: MGT 110 and 230

ECO 240  Managerial Finance I
(Also FNC 240)
3 hours; 3 credits
Examination of securities markets, analysis of methods of long
term financing, financial ratio analysis, budgeting, current asset
management, present value concepts, capital budgeting, cost of
capital, and dividend policy.
Prerequisites: MTH 025 or MTH 030 or MTH 121 or MTH 123 or
equivalent and ACC 114

ECO 250  International Economics
4 hours; 4 credits
A study of the effects and causes of trade between nations. Tariffs
and non-tariff barriers to free trade will be analyzed, as will the
effect of common markets on international trade. Historical
patterns of international trade, and the theory and evidences of
imperialism will be considered. The course will include an
introduction to the financial aspects of international trade. (West
& World)
Prerequisites: ECO 101, ENG 111, COR 100

ECO 251  International Political Economy
(Also POL 251)
4 hours; 4 credits
This course examines the relationships among nation-states,
corporations, and key international trade and financial
organizations. It also examines how world politics affects
distribution of economic wealth and, in turn, how economic
growth/changes affect world politics.
Prerequisites: At least one political science or economics course,
ENG 111, COR 100

ECO 252  Economic Geography
(Also GEG 252)
4 hours; 4 credits
Introduction to the principles of economic geography: Systematic
analysis of the location and distribution of resources and
economic activities: studies of the scope and methods of modern
economic geography. (West & World)
Prerequisite: ENG 111, COR 100

ECO 253  United States Economic History
(Also HST 253)
4 hours; 4 credits
The growth of the American economy; analysis of the components
of growth: capital, labor, and government.  
Prerequisites: ECO 101, any college-level history course and ENG 111

ECO 256  Analysis of Underdeveloped Areas  
4 hours; 4 credits  
An examination of economic problems confronting underdeveloped countries and the exploration of possible solutions. Historical perspectives of economic development and general theories of retardation followed by specific policy issues facing economic planners. Problem areas to be discussed include social capital, agriculture, industry, manpower utilization, fiscal policy, foreign aid, and the interaction of political, social and cultural factors as they affect economic development. (West & World) (P&D)  
Prerequisites: ECO 101, ENG 111, COR 100

ECO 257  The Japanese Economy  
4 hours; 4 credits  
This course explores factors that influence the contemporary economy of Japan: historical components, including the Meiji Restoration and the expansion of the Japanese empire, World War II and the post-war Allied occupation; more recent components, principles of Japanese business, management style, government-business relations, education, labor relations, trade restrictions and agreements, and influence on the U.S. economy, and Japanese goals. (social science) (P&D)  
Prerequisites: ECO 101, ENG 111, COR 100

ECO 260  Labor Economics  
4 hours; 4 credits  
A critical examination of theories of wage determination; factors responsible for wage differentials; the effect of unionism upon wages; empirical trends in wage differentials and average wage levels; wage push inflation, unemployment, minimum wage laws, and automation; human capital, educational expenditures, and manpower analysis.  
Prerequisites: ECO 101 and ENG 111

ECO 261  Labor Relations  
(Also MGT 261)  
4 hours; 4 credits  
History, theories, structure, and objectives of trade unionism. Grievance procedures, collective bargaining, union power, strikes and other weapons, mediation and arbitration. Government regulation of the labor sector. Students will participate in the re-enactment of actual arbitration cases.  
Prerequisites: ECO 101 and ENG 111

ECO 276  The Non-Profit Institution  
4 hours; 4 credits  
The finances, management, and decision-making of such non-profit institutions as the university, school systems, governmental departments, hospitals, and foundations. The effects of the non-profit institution upon society: Evaluation of the achievements of non-profit institutions.  
Prerequisite: ECO 101

ECO 285  Economics for Engineers  
4 hours; 4 credits  
An accelerated calculus-based course. Introduction to contemporary macroeconomic and microeconomic theory. Topics include output, unemployment, inflation, functioning of markets, government policy, and productivity. The course concludes with engineering applications. (social science)  
Prerequisites: ENG 111, COR 100; MTH 230 or MTH 231 or MTH 235, CSC 126 or CSC 270 or other evidence of equivalent proficiency with computers

ECO 291  Political Economy of War and Peace  
(Also POL 268)  
4 hours; 4 credits  
An interdisciplinary introduction to political and economic decision making as it concerns national defense spending, focusing on such issues as the "military-industrial complex," the draft, a volunteer army, the question of national priorities, the impact of war and peace on such economic problems as inflation, recession, employment, growth, and the federal budget.  
Prerequisite: ENG 111

ECO 292  Urban Economics  
4 hours; 4 credits  
Economic factors in the emergence of urban centers and historical changes in their economic functions. Determinants of the size and location of cities and the occupational characteristics of the urban labor force. Analysis of the proper economic scope of local government and the financing of its expenditures. Allocating and pricing public services. Aspects of urban renewal and study of the urban ghetto.  
Prerequisites: ENG 111, ECO 101 or permission of the instructor

ECO 296  History of American Business  
4 hours; 4 credits  
The history of business in American life; theories of business evolution; the role of business in shaping American social institutions and values; the effect of the American social, political, and economic environment upon business thought and practice.  
Prerequisite: ENG 111

ECO 315  Monetary Theory and Policy  
(Also FNC 315)  
4 hours; 4 credits  
Theoretical and applied problems of monetary policy. Emphasis is placed on contemporary developments. Current controversies concerning the use of monetary policy, relationship to fiscal policy, and impact on economic activity.  
Prerequisites: ECO 212 and either ECO/FNC 213 or ECO/FNC 214

ECO 318  Economic and Business Forecasting  
4 hours; 4 credits  
Forecasting the nation's economy and economic trends over the short term and the longer term. Also forecasts of business trends and sales of individual businesses will be considered within the economic framework.  
Prerequisites: ECO 210, ECO 212, ECO/MGT 230

ECO 323  Introduction to Econometrics  
(Also MGT 324)  
4 hours; 4 credits  
This course will examine the relationship between economic theory and statistical measurement. It will deal mainly with the
general linear regression and correlation model. A selected number of other statistical tools will also be treated. Emphasis will be on the understanding of the concepts rather than on their mathematical derivation.

Prerequisites: ECO 101 and ECO/MGT 230 or permission of the instructor

ECO 326 Introduction to Mathematical Economics
4 hours; 4 credits
The use of mathematical analysis in solving economic problems. Methods of calculus, matrix algebra, deductive logic, and elementary set theory will be developed and employed to understand the equilibrium of the market, firm, and consumer. The uses and misuses of the mathematical method in economics will also be discussed.
Prerequisite: ECO 101, MTH 121 or 123 or the equivalent, or permission of the instructor

ECO 327 Intermediate Mathematical Economics
4 hours; 4 credits
A continuation of ECO 326. Differential and difference equations, elementary dynamic models and stability of equilibrium, rigorous development of modern microeconomic and macroeconomic theory using the mathematical approach.
Prerequisite: ECO 326 or permission of the instructor

ECO 330 Public Finance
4 hours; 4 credits
Analysis of causes and effects of government expenditure and taxation in the United States economy. Some treatment of determination of optimal types and amounts of government expenditure on goods and services, but greater emphasis on various types of taxation examined for equity, efficiency, role in fiscal policy, and effect on productive effort. Some attention to standards of income distribution and to inter-governmental fiscal relationships in the United States.
Prerequisite: ECO 210

ECO 331 Law and Economics
4 hours; 4 credits
Fundamental concepts of economics, especially efficiency, will be utilized to explain and evaluate legal rulings. The tools of economics will be employed to analyze not only tort, contract, and property principles, but also marriage and divorce law, criminal law, and constitutional issues such as abortion, the death penalty, and racial and gender-based discrimination.
Prerequisites: ECO 101; BUS 160 or any two POL courses

ECO 333 Economics and Philosophy
4 hours; 4 credits
This course will cover topics that overlap in the fields of economics and philosophy. It will enlighten economics majors about the philosophical underpinnings of economics and introduce philosophy majors to the more "thoughtful" aspects of economics. Topics discussed will include: rational choice and ethics; social welfare; justice, efficiency, and equity; social choice; and game theory.
Prerequisites: ENG 111 and any introductory level economics or philosophy course

ECO 336 Industrial Organization
4 hours; 4 credits
The rise and development of industrial combinations and their effect on the structure and performance of the United States economy; models of monopoly and oligopoly pricing; analysis of the power of monopoly and oligopoly in relation to efficient allocation of resources, technological growth, inflation, and political influence; causes and effects of mergers; government policies aimed at the preservation of competition in industrial markets, and regulation of trade practices.
Prerequisite: ECO 210

ECO 338 Government and Business
4 hours; 4 credits
The relationship between government and business in the United States will be investigated under three general headings: antitrust policy, regulation, and the promotion of specific business interests. Theoretical issues, historical developments, political and economic interrelationships, legislation and its judicial and quasi-judicial interpretation relevant to each area will be explored.
Prerequisite: ECO 210

ECO 345 Managerial Finance II
(Also FNC 345)
4 hours; 4 credits
Working capital management, current asset management, sources of short term financing, financial structure and use of leverage, valuation and rates of return, dividend policy and internal financing, mergers and acquisitions, and liquidation; includes computer lab for solving financial management problems.
Prerequisites: ECO/FNC 240 and MGT/ECO 230

ECO 352 Comparative Economic Systems
4 hours; 4 credits
An analysis of economic systems through formulation of abstract economic models and an analysis of actual economic societies, including comparison of capitalism and socialism.
Prerequisites: ECO 101 and at least two other courses in the social sciences

ECO 360 Investment Analysis
(Also FNC 360)
4 hours; 4 credits
Survey of the principles governing the investment of individual and institutional capital funds: the theory and mechanics of investments; general analysis and valuation procedures including quantitative and qualitative tests for judging security values; valuation to fixed income securities and common stocks. Introduction to the analysis of industrial, public utility, and governmental securities. Management of an individual investor’s portfolio.
Prerequisite: ECO/FNC 345

ECO 370 International Finance
(Also FNC 370)
4 hours; 4 credits
The financial interrelationships between countries. Analysis of balance of payments, fixed and flexible exchange rates, the role of international reserves. Historical trends in payments and