Brooklyn College

Bulletin


Undergraduate Programs 2003-2006

## Division of Undergraduate Studies

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The City University of New York
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## 'Nil sine magno labore’

The Brooklyn College seal contains the Latin inscription Nil sine magno labore. This phrase means "Nothing without great effort," a reminder that nothing can be achieved without hard work. This motto symbolizes the dedication and achievement that have always been the hallmark of Brooklyn College students.

## Student responsibility

In accepting admission, students assume responsibility for knowing and complying with the regulations and procedures set forth in this Undergraduate Bulletin and in subsequent ones, as appropriate.

## Nota bene

This issue of the Undergraduate Bulletin is published for three years. Students should read the Schedule of Classes each term for the College calendar, changes in requirements, new course offerings, and other announcements.

The City University of New York reserves the right, because of changing conditions, to make modifications of any nature in the academic programs and requirements of the university and its constituent colleges without advance notice. Tuition and fees set forth in this publication are similarly subject to change by the Board of Trustees of The City University of New York. The City University regrets any inconvenience this may cause.
Students are advised to consult regularly with College and department counselors concerning their programs of study.


## Brooklyn College Bulletin

## Undergraduate Programs 2003-2006



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## About Brooklyn College

Brooklyn College is a constituent part of the City University of New York, the nation's leading public urban university. The university comprises eleven senior colleges, six community colleges, a graduate school, a law school, and a medical school. More than 200,000 students are enrolled at campuses located throughout the five boroughs of New York City.

## A historical view

The Board of Higher Education authorized the establishment of Brooklyn College in 1930, merging the Brooklyn men's branch of City College and the women's branch of Hunter College into the first public coeducational liberal arts college in the city of New York. The Division of Graduate Studies was instituted in 1935.

Brooklyn College was a large institution from the day it opened its doors in rented quarters in the borough's downtown business area. Acquisition of a permanent site in the residential Midwood section of Brooklyn provided a spacious campus; on October 2, 1935, Mayor Fiorello H. La Guardia used a silver-plated shovel to break ground for the new campus-twentysix acres of broad lawns bounded by handsome Georgian-style buildings. On November 4, 1999, that same shovel was used in the groundbreaking ceremonies that launched the $\$ 54.4$ million expansion of the Brooklyn College Library.

Since its opening, Brooklyn College has distinguished itself as one of the nation's leading public institutions of higher education. In 1989 the College was cited in a report by the National Endowment for the Humanities for developing "a core that has led to revitalization of Brooklyn College and drawn much public attention and praise." In 1987, when the Carnegie Foundation for the Advancement of Teaching asked academic deans from across the country to name institutions where general education was succeeding, Brooklyn College was among the five most frequently cited. In 1992 Brooklyn College was one of six colleges and the only public institution to have graduating students receive both a Rhodes Scholarship and a Marshall Scholarship. The Princeton Review, in The Best 345 Colleges, 2003, ranked Brooklyn College number one for the most beautiful campus nationwide, fifth for best academic value and for friendly interaction of its diverse student body, and ninth for its location in a "great college town."

The College's innovative programs continue to win national recognition. Its Freshman Year College received the Theodore M. Hesburgh Award in 1998 and the Noel-Levitz Retention Excellence Award in 1999. Brooklyn College was cited in 1999 for leadership by The Templeton Guide: Colleges that Encourage Character Development.

Brooklyn College's reputation has attracted an outstanding faculty. Known throughout the nation and the world for their scholarly achievements. Its professors include three Pulitzer Prize winners: historian Edwin G. Burrows, novelist Michael Cunningham, and journalist Paul Moses; novelist and screenwriter Carey Harrison; composer Tania Léon; computer theorist Rohit Parikh; psychologist Anthony Sclafani; nuclear physicist Carl Shakin; and mathematics educator Rosamond Welchman.

The tradition of academic excellence is reflected in the accomplishments of Brooklyn College graduates. Four hundred Brooklyn College alumni are listed in Who's Who in America and 150 alumnae, in Who's Who in American Women. More than three hundred Brooklyn College alumni are presidents, vicepresidents, or chairpersons of the boards of major corporations. Each year the College's graduates receive more than 350 acceptances to law schools and medical schools, including such institutions as Harvard, Yale, Stanford, and the University of Pennsylvania.

An outstanding faculty, highly praised academic programs, and distinguished graduates-these are the hallmarks of success at Brooklyn College. The College is continuing to develop programs and curricula that will train forthcoming generations of students. Today, under the administration of its eighth president, Dr. Christoph M. Kimmich, Brooklyn College is building on the traditions that have given it a place among the nation's most distinguished institutions of higher education.

## The mission of the college

Brooklyn College is a comprehensive, state-funded institution of higher learning in the borough of Brooklyn, a culturally and ethnically diverse community of two-and-one-half million people. As one of the eleven senior colleges of the City University of New York, it shares the mission of the university, whose primary goals are access and excellence.

Within the context of this broader mission, the particular mission of Brooklyn College is to provide a superior education in the liberal arts and sciences. The college offers a wide variety of programs, both in the liberal arts and in professional and career-oriented areas, leading to the baccalaureate and master's degrees and to
undergraduate and advanced certificates. In addition, the college participates in the doctoral programs of the Graduate Center of The City University of New York, including campus-based programs in the sciences.

Distinctive in this liberal arts education is the core curriculum, which is required of all baccalaureate students. The core has long been a national model for general education programs and for faculty and curriculum development. The ten Core Studies courses expose students to the principal branches of learning-the arts, humanities, social sciences, and sciences-and provide a rigorous foundation for study in a major field.

Through its distinguished faculty, Brooklyn College promotes excellence in teaching, advances the frontiers of knowledge through research and scholarship, and stimulates creative achievement and intellectual growth.

The overarching goal of the educational experience at Brooklyn College is to provide students with the knowledge and skills to live in a globally interdependent world and the support services to help them succeed. The College also seeks to develop a sense of personal and social responsibility by encouraging involvement in community and public service. It fosters a campus environment hospitable to multicultural interests and activities. Moreover, as an urban institution, it is able to draw upon the myriad resources of the city to enhance its educational mission.

## Accreditation

Brooklyn College is accredited by the New York State Department of Education, the Middle States Commission on Higher Education, the Council on Education for Public Health, the Association of American Universities, the American Association of University Women, the American Board of Examiners in Speech Pathology and Audiology, and the American Dietetic Association.

## Student enrollment

Student enrollment for the past three academic years has been as follows: 15,039 students in fall 2000; 15,137 students in fall 2001; and 15,635 students in fall 2002.

## Undergraduate degree programs

Brooklyn College offers more than seventy undergraduate programs leading to bachelor of arts, bachelor of fine arts, bachelor of music, or bachelor of science degrees. Additional degree programs are described in the chapter "Special Programs."

Degree requirements and course descriptions are published in this Bulletin.

Students may take classes during the day, on weekday evenings, and on Saturday and Sunday. They may study full time or part time. Classes are offered in fall, spring, and summer terms.

## Graduate study

The Division of Graduate Studies offers more than sixty programs and advanced certificates leading to the degrees of master of arts, master of fine arts, master of music, master of science, master of science in education, and master of public health and to advanced certificates in guidance and counseling, music education, school administration and supervision, and school psychologist. A number of City University doctoral courses are offered at Brooklyn College as well as at the Graduate Center. The College offers combined undergraduate and graduate degree programs described in the chapter "Special Programs," including the master of professional studies.

Undergraduate seniors who have earned a grade point average of 3.00 or higher may apply for permission to take graduate courses upon recommendation of the chairperson of the department offering the course and with the approval of the coordinator of graduate studies and the director of the Office of Academic Advisement. The courses may be taken for either undergraduate or graduate credits.

## Undergraduate curriculum

A college education at Brooklyn College is built on three kinds of study: the collegewide core curriculum, studies in a major field, and elective courses. The core curriculum establishes a level of knowledge and competence that is increased in individually selected ways in elective courses and in the major field of study. In addition, dual majors and minor programs of study are available in a number of fields.

The Brooklyn College core curriculum occupies approximately one-fourth of the total undergraduate program. Most students will take the Core Studies courses over their first two or three years. This permits early exploration and development of the major field as well as the immediate exercise, if desired, of elective course choices. The core curriculum consists of a set of interrelated courses, plus foreign language study, that offers a solid background in the liberal arts and sciences. These courses provide a foundation for more specialized study in the remaining threequarters of a student's curriculum. The core curriculum provides a shared intellectual experience as the basis for a college education. Core Studies courses are
described in this Bulletin in the chapter "Programs and Courses of Instruction."

Studies in a major field occupy up to one-half or, in some cases, more of the total undergraduate program at Brooklyn College. These studies provide a foundation for choosing a career and offer the strongest possible sequence of preparation for a major field of study. The major field is chosen by each student, with departmental advice, from among the programs listed in the "Inventory of Registered Programs" section of this Bulletin.

Elective courses permit further expression of a student's individual interests. Elective choices play a significant role in the education of every student at Brooklyn College: well-chosen electives round out and continue the liberal studies of the core curriculum, adding breadth and depth to studies in the major field. Minor programs, consisting of at least 12 credits in advanced electives, have been established by a number of departments and programs. Formal and informal counseling from the faculty throughout the undergraduate program of study assists students to direct and shape their own education.

## Goals of the curriculum

The Brooklyn College undergraduate curriculum aims at enabling a student to attain the following goals by the time of graduation:

Development of the faculty of critical thought and the ability to acquire and organize large amounts of knowledge; along with this, the ability to write and speak clearly-to communicate with precision and force.

An informed acquaintance with the vistas of modern science and a critical appreciation of the ways in which knowledge of nature and the individual is gained.

An informed acquaintance with the major forms of literary and artistic achievement, past and present, and a critical appreciation of the contributions of literature and the arts to the life of the individual and society.

An informed acquaintance with the working and development of modern societies and with the various perspectives from which social scientists study these.

A sense of the past—of the foundations of Western civilization and the shaping of the modern world.

An appreciation of cultures other than one's own, including the diverse cultures represented in the collegiate community at Brooklyn.

Establishment of personal standards of responsibility and experience in thinking about moral and ethical problems.

Depth in some field of knowledge; a major field of concentration.

The core curriculum provides the groundwork for reaching these goals by exposing students in the most effective way to the principal branches of learning and the diverse points of view of our faculty. The Core Studies courses strike a balance between the traditional concerns of liberal learning and thoroughly contemporary perspectives, providing at the same time a well-balanced blend of approaches to learning-discipline-based, modular, integrated, and combinations of these. Through a sequence that is both complementary and cumulative, a fund of crossreference for cross-disciplinary dialogue is established. In this way, the common-experience courses should increase the quality of the elective area of the curriculum and add a broader perspective to the student's chosen major.

## Brooklyn College Alumni Association

The primary charge of the Brooklyn College Alumni Association (BCAA) and the Brooklyn College Office of Alumni Affairs, 1239 Ingersoll Hall, is to foster, maintain, and enhance the alumni connection to the college by providing activities, services, and programs for regional chapters, graduating classes, and professional and cultural affiliate groups. Upon graduation, alumni begin a lifelong relationship with the college. Many participate as mentors, internship sponsors, scholarship sponsors, and career advisers in programs designed to assist students while they are still in school.

Under the auspices of the BCAA and the Office of Alumni Affairs, and with the guidance of the national board of directors, alumni chapter activities flourish all over the country. Each spring alumni return to the campus for Alumni College Day, when the BCAA holds its Annual Awards Luncheon, at which the Distinguished Achievement Awards and the Jerome S. Milgram Service Award are presented, and its Annual Meeting, at which the recipients of Sam Levenson, '34, and Esther Levine Levenson, '34, Scholarships are announced. Alumni also take part in the Annual Gala Reunion in the fall, when the BCAA honors the Alumna and Alumnus of the Year.

The Office of Alumni Affairs (telephone: 951-5065) maintains a database of more than 86,000 alumni and keeps biographical files on graduates that include news clippings, information on awards, and other relevant materials. Alumni are issued ID cards that
enable them to use selected resources of Brooklyn College and obtain such services as a long-term health care option and an MBNA affinity credit card. Graduates are encouraged to advise the office of their current addresses so that they may receive College and alumni mailings.

## The Brooklyn College Foundation, Inc.

Established in 1958, the Brooklyn College Foundation raises funds to encourage and promote the academic purposes of Brooklyn College of the City University of New York and the educational welfare of its students, faculty, alumni, and the community. The foundation is incorporated in New York State, registered as a 501(c)(3) not-for-profit corporation, and listed by the New York State Office of Charities Registration.

Through innovative fundraising, the foundation provides funds to advance the mission of Brooklyn College in educating some of the best and brightest of our nation's students.

The Brooklyn College Foundation Board of Trustees directs the foundation's operations. The trustees, chosen for their professional expertise and generous support of the college, are elected for three-year terms and serve without compensation.

The foundation provides more than six hundred scholarships and awards, valued at over $\$ 4$ million annually, helping to attract the best and most ambitious students to Brooklyn College. The foundation also administers funds that enable the college to recognize and honor faculty distinction in teaching and scholarship as well as to offer stipends for sabbaticals and travel expenses that allow faculty to pursue their scholarly endeavors. In addition, the foundation supports academic programs by providing funds to augment classroom instruction with special lectures, conferences, workshops, and distinguished guest speakers.

Gifts from alumni and friends to the Brooklyn College Foundation underwrite current needs that cannot be funded by state assistance, tuition, or fees. The college increasingly relies on such private contributions to strengthen its programs. Annual unrestricted gifts support scholarships, facilities, cocurricular student learning opportunities, equipment for classrooms and laboratories, special seminars, and faculty development initiatives.

For more information, please call or write the Brooklyn College Foundation, 2900 Bedford Avenue, Brooklyn, NY 11210 (telephone, (718) 951-5074; e-mail, giving@brooklyn.cuny.edu) or visit its Web site, www.brooklyncollegefoundation.org.

## Admission

This chapter outlines procedures and requirements for admission consideration to regular and special programs for freshman, transfer, and nondegree applicants.

Applications for admission are available from the CUNY Office of Admission Services, 1114 Avenue of the Americas, New York, New York 10036, or from the Office of Admissions, Brooklyn College, 1203 Plaza Building, Brooklyn, New York 11210. Applications for admission to the freshman class may also be obtained from city high schools. Nondegree applicants must contact Brooklyn College directly at the above address.

## Time line of academic deadlines

Below are key steps you must take from the time you enter Brooklyn College to Commencement.

Freshman Year (0-30 credits)

- Attend Orientation
- Screen for foreign language proficiency
- Screen for speech proficiency

Sophomore Year (31-60 credits)

- Declare a major (between 0-60 credits)
- Take the CUNY Proficiency Examination (CPE) (between 45-60 credits)

Junior Year (61-90 credits)

- Complete the core curriculum

Senior Year (91-120+ credits)

- File for Senior Check (first semester of senior year)
- File for graduation
- Complete all academic requirements
- Pick up Commencement tickets
- Purchase cap and gown


## Matriculated students

A matriculated student is one who is accepted and recognized by the college as working toward a degree. Students may attend Brooklyn College on a full- or part-time basis and be considered matriculated students. Five types of students may apply for admission as matriculated students: freshmen, SEEK, ESL, transfer, and Adult Degree Program students.

As one of the colleges of the City University of New York, Brooklyn College participates in centralized application procedures for freshman, SEEK, and transfer students. Application forms should be
submitted to the City University Application Processing Center, P.O. Box 350136, Brooklyn, New York 11235-0001. Applicants are encouraged to file early.

## Freshmen

Freshmen are students who have not attended any college since graduating from high school or receiving a General Equivalency Diploma (GED).

All recent graduates from domestic high schools who apply to Brooklyn College baccalaureate programs are required to submit SAT or ACT scores.

Applicants are considered for admission on the basis of their high school academic average, academic units, course selection, SAT scores, and/or GED scores. A diploma from an accredited high school, an equivalency diploma, or a United States Armed Forces Institute diploma is required for entrance to the college. A high school certificate or an IEP diploma is not acceptable.

## Recommended academic preparation

It is recommended that preparation for baccalaureate study include the following high school academic units:

## English: four units.

Social studies: four units.
Foreign language: three units of one foreign language: French, German, Greek, Hebrew, Italian, Latin, Russian, Spanish, or another foreign language.

Mathematics: three units consisting of one unit of elementary algebra (9th-year mathematics), one unit of plane geometry (10th-year mathematics), and one unit of intermediate algebra and trigonometry (11th-year mathematics); or Courses I, II, and III of the New York State Sequential (integrated) Mathematics Curriculum.

Science: three units consisting of one unit of any of the following: general biology, general science, chemistry, physics, physiography or earth science, advanced biology, botany, or zoology. (It is recommended that students intending to major in a math- or science-related area have four units each of science and math.)

Regular academic subjects and any other subjects credited in a recognized high school: four units.

## Basic skills proficiency requirements

Each student must meet the standards of proficiency in the basic skills areas of mathematics, reading,
speech, and writing as established by the college and the City University unless they are exempt. All students are tested in these areas before admission to Brooklyn College. Students who do not initially meet these standards are required to participate in the College's Skills Immersion Program (summer, for fall matriculants; intersession, for spring matriculants) and Prelude to Success/Semester-in-Residence Program. In addition, the Board of Trustees of The City University of New York has mandated that students meet a City University level of skills proficiency before entering the upper division.

Specific basic skills proficiency requirements and exemptions are in the chapter "Academic Regulations and Procedures."

## Advanced placement

Students who have completed college-level courses in high school may be considered for exemption, with or without credit, from equivalent college courses on the basis of Advanced Placement Program tests given by the College Entrance Examination Board, Box 592, Princeton, New Jersey 08541. Brooklyn College gives exemption examinations in subjects not offered by the board. Each department makes decisions regarding exemption and credit.

Students who want to apply for advanced placement based on scores received on College-Level Examination Program tests or on New York State College Proficiency Examination tests should contact the Transfer Evaluations Office, 1122 Boylan Hall, Brooklyn College, Brooklyn, New York 11210.

Students who have taken the Advanced Placement Program Test and College Proficiency Examination must request the administering agency to forward their test booklets to the Transfer Evaluations Office, 1122 Boylan Hall, Brooklyn College.

## Regular admission appeals

Students who applied to Brooklyn College but who were denied admission may appeal that decision by making an appointment for an interview with an admissions counselor (telephone: 951-5001).

## SEEK program students

The Search for Education, Elevation, and Knowledge (SEEK) program of the City University of New York assists in providing higher education opportunity for economically and educationally disadvantaged students. The program at Brooklyn College provides support through a financial-aid stipend, academic support, tutorial services, and specialized counseling.

The SEEK application procedure is the same as the freshman application procedure. Applicants should complete the special SEEK section of the freshman application.

## ESL program students

The recommendation that applicants present four units of high school English and the requirement that students meet the basic skills proficiency standards in reading and writing do not apply to ESL students who (1) have spent at least one year outside the United States receiving their secondary education in a language other than English, (2) present at least three units of high school mathematics, and (3) meet the basic skills proficiency requirements in mathematics. Such students are eligible for admission to Brooklyn College, where they will be assigned appropriate programs of study including ESL coursework as determined by the Office of the Dean of Undergraduate Studies and the ESL program.

The ESL application procedure is the same as the freshman application procedure.

## Transfer students

Applicants who have attended any accredited college or university are considered for admission with advanced standing on the basis of liberal arts and science credits completed as follows:

1. Up to 6 credits completed with an overall average of 2.00 or higher and the required high school academic average.
2. Seven to 14 credits completed with an overall average of 2.50 or higher, or an overall average of 2.00 and the required high school academic average.
3. Fifteen to 23 credits completed with an overall average of 2.25 or higher, or an overall average of 2.00 and the required high school academic average.
4. Twenty-four or more credits completed with an overall average of 2.00 or higher.
5. An associate degree completed with an overall average of 2.00 or higher.

It is university policy that students with an associate of arts or associate of science degree from a CUNY college are required to take only one additional general education course at a CUNY senior college. Students who transfer to Brooklyn College with an A.A. or A.S. degree need at most one core course at Brooklyn College in a subject or discipline that was not included in their associate degree curriculum.

This policy does not apply to students with an A.A.S. degree.

As of fall 2000, students transferring to CUNY from non-CUNY colleges with 45 or more credits (including those in progress) are exempt from taking and/or passing the University Skills Assessment Tests. At the college's discretion, these students may be asked to take one or more of the University Skills Assessment Tests for placement purposes.

Applicants who have been dismissed from another college for academic reasons are not admitted as transfer students.

Students needing additional information may come to the Transfer Evaluations Office, 1122 Boylan Hall, or the Office of Admissions, 1203 Plaza Building.

## Evaluation of transfer credit

All transfer students, particularly those educated outside the United States, must provide college bulletins and official copies of transcripts from their former institutions for transfer credit evaluations.

The Transfer Evaluations Office may assign credit for courses equivalent to courses at Brooklyn College that were completed with a grade of $D$ - or higher at colleges of the City University and/or with a grade of C- or higher at other accredited colleges. Credit may also be assigned, at the recommendation of the department, for courses for which there are no specific equivalents at Brooklyn College. Credit cannot be earned twice for the same course.

Transfer students who have taken courses on a pass/fail basis at another institution must provide a letter from that institution stating that a $P$ grade represents competence of a level of C - or better in the course or indicating what criteria were required to obtain a pass grade.

After the completion of 60 credits, no credit will be given toward the baccalaureate degree for work completed at a two-year college.

## Academic residence requirement

Candidates for a baccalaureate degree at Brooklyn College are required to complete a minimum of 30 credits at Brooklyn College, including the last 18 credits taken toward the degree, at least 15 credits in advanced courses in one department or program, specific in-residence course requirements described under each department listing, and additional requirements for the bachelor of science degree as noted under the heading "Degree requirements" in this Bulletin.

## Adult degree students

Brooklyn College offers adult degree programs that lead to a B.A. or B.S. degree. Admission to the Special Baccalaureate Degree Program for Adults and the Small College Program is based on application, testing, and a personal statement. The Special Baccalaureate Degree program has an additional test to determine applicants' preparedness to undertake accelerated study. See the section "Adult Degree Programs" for further information.

## General information

## Student immunization requirement

New York State Law requires all students to submit documentation proving immunity to measles, mumps, and rubella. The following constitutes proof of immunity: two doses of measles vaccine and one dose each of mumps and rubella; blood test results showing immunity to each disease or an exact date of having had mumps or measles with a copy of the blood test showing immunity (disease history is not considered valid proof of immunity for rubella).

Students who do not receive a Student Immunization Record as part of their admission packet may obtain one in the Health Programs Office, 1115 Plaza Building (telephone: 951-4505).

While certain students may be exempt because of age, medical reasons, or religious belief, they must still submit documentation of exemption before registering. Students who are not exempt must submit proof that they have received one dose each of measles, mumps, and rubella vaccine before registering; they have thirty days to submit proof of the second dose of the measles vaccine.

After thirty days, students who have not submitted complete documentation will be prohibited from attending classes and will receive a WA grade in all courses for the semester. Tuition will not be refunded, and there may be consequences with regard to financial assistance.

## Readmission

Information on readmission after a term or more of absence is in the chapter "Academic Regulations and Procedures."

## International students

All students educated abroad, including permanent residents and foreign nationals, should file the appropriate CUNY application form: Freshman forms should be filed by students who have never attended postsecondary institutions; transfer forms should be
filed by those who have. For admission in September, both freshman and transfer applicants must file by March 1. For admission in January, both freshman and transfer applicants must file by October 1.

Applications will not be complete until all required documents have been submitted. Official translations must be submitted for all documents written in a language other than English. Copies of the original documents must accompany the translations.

Foreign nationals on temporary immigration status whose native language is not English and whose secondary and postsecondary schooling was not in English are required to take the Test of English as a Foreign Language (TOEFL). For application forms and information about the examination, students should contact the Educational Testing Service, Admissions Testing Program, Princeton, New Jersey 08540.

Applicants with F-1 student status are accepted as matriculated students only. Students in this status must attend full time and pay tuition as stated in the chapter "Tuition and Fees." In order to obtain the I-20 Certificate of Eligibility from the college, students must present a documented "Statement of Financial Resources." Students are required to subscribe to a medical insurance plan and arrange for their own housing.

## Nondegree students

A nondegree student is one who is registered for credit-bearing courses but has not been accepted into a degree program. Postbaccalaureate and certificate students may be admitted to this status. Applications may be obtained from the Brooklyn College Office of Admissions, 1203 Plaza Building.

Students who do not wish to study for a degree may apply as nondegree students. Nondegree students must meet all academic admission criteria. All applicants must provide the College with official copies of high school and college transcripts.

Nondegree students may attend classes during evening or day sessions. Students with nondegree status may transfer their credits to a degree program by filing an application for status change with the Office of Admissions. Requirements for matriculation are listed in the chapter "Academic Regulations and Procedures" under "Status change requirements."

## Visiting students

Students in attendance at colleges other than a CUNY college who wish to take courses at Brooklyn College may enroll as visiting students. They must submit to the Office of Admissions an official letter certifying
that they are in good academic standing at their home college, file a Brooklyn College visiting application, and have permission to take course work at Brooklyn College. Visiting-student status is valid for only one semester.

## CUNY permit students

Students in attendance at CUNY colleges who wish to take courses at Brooklyn College may enroll as CUNY permit students. They must submit the paid permit or receipt from their home school and file a Brooklyn College CUNY permit form.

## Special programs

## Early Admission Program

High school students with superior records who have completed their junior year may be admitted as freshmen to Brooklyn College if they meet the following requirements:

1. Three years of high school work completed with an academic average of 90 percent or higher.
2. Completion of academic course work as follows:

English: three units.
Mathematics: three units that include one unit of elementary algebra (9th-year mathematics), one unit of plane geometry (10th-year mathematics), and one unit of intermediate algebra and plane trigonometry (11th-year mathematics); or courses I, II, and III of the New York State Sequential (integrated) Mathematics Curriculum.

Foreign language: three units of one foreign language: French, German, Greek, Hebrew, Italian, Latin, Russian, Spanish, or another foreign language.

Science: two units of any of the following: general biology, general science, chemistry, physics, physiography or earth science, advanced biology, botany, or zoology.

Social studies: two units.
3. A superior score on the SAT.
4. Recommendation by the high school principal (or other appropriate high school official).
5. Permission of the college admission officer, who considers, among other factors, the above requirements and the results of any tests administered by Brooklyn College.

Students should apply to the Early Admission Program through their high school adviser. Applicants should take the SAT no later than March and have the results sent to Brooklyn College. The student's
application form, high school transcript, and principal's recommendation should be mailed to the Office of Admissions by the high school not later than April 15 for fall admission and November 1 for spring admission. For further information, contact the Brooklyn College Office of Admissions (telephone: 951-5001).

## CUNY Honors College

The Honors College accepts applications only for freshman admissions in the fall semester. Students may apply to the Honors College at only one participating CUNY college. In September of the senior year in high school, applicants should work with their college advisers to complete the CUNY Honors College application. Applicants should submit this application to the University Application Processing Center (UAPC). This application serves as both the freshman admission application to CUNY and to the Honors College. The Honors College application is designed to provide information about each applicant's academic record and preparation for a rigorous intellectual experience in college. Admission to the Honors College will depend on high school grades, SAT/ACT scores, an essay, recommendations, and, in some cases, an interview.

Students may apply either for early decision or for regular decision. Applicants who apply for early decision make a binding commitment to attend the Honors College if accepted. At the discretion of the participating CUNY college, some early decision applicants may be considered for regular decision instead.

For more information, contact the Office of Admissions, 951-5001 or adminqry@brooklyn.cuny.edu.

## Scholars Program

High school applicants to Brooklyn College may apply for membership in the Scholars Program by completing an application form available at the Honors Academy, 2231 Boylan Hall, in addition to filing a CUNY application. The application asks for a short autobiographical essay, a high school transcript, SAT/ACT scores, and one letter of recommendation.

Matriculated Brooklyn College students may also apply to the Scholars Program during their first three semesters at the College, up to the completion of 48 credits. Both day and evening students are eligible to apply.

Transfer students may apply to the program when they apply for transfer to or after they begin study at Brooklyn College.

Matriculated and transfer applicants should complete the application form available from the Honors Academy. The application asks for a short autobiographical essay, a paper written for a college course, an up-to-date college transcript, and letters of recommendation from two college teachers.

Further information, a complete description of the Scholars Program, and assistance in filling out the entrance application are available in the Honors Academy, 2231 Boylan Hall, and on the Brooklyn College Web site, www.brooklyn.cuny.edu.

## Coordinated B.A.-M.D. Program

Brooklyn College and Downstate College of Medicine of the State University of New York at Brooklyn offer a joint B.A.-M.D. program. The program is limited each year to fifteen highly qualified students who are admitted to the program only in the fall term following their graduation from high school. Applicants generally have a combined SAT score of at least 1200 and a college admission average of at least 90 . On average, students selected into the program have SAT scores of 1380 and college admission averages of 95 . In addition to filing a CUNY application, applicants should file a CUNY universal honors application and a B.A.-M.D. Program application, which is available in the Brooklyn College Office of Admissions and the B.A.-M.D. office and requires letters of recommendation, an official high school transcript, and SAT scores. Applications must be completed and returned to Brooklyn College by December 31.

Subsequent admission to SUNY Downstate College of Medicine is contigent on a B.A.-M.D. student's maintaining a minimum grade point average of 3.50 overall and 3.50 in the program science requirements, completing the courses outlined in the program, completing other program requirements, and having the approval of the director. Further information and application forms may be obtained from the Brooklyn College Office of Admissions, 1203 Plaza Building (telephone: 951-5001); the B.A.-M.D. office, 2231 Boylan Hall (telephone: 951-4706); and the Brooklyn College Web site, www.brooklyn.cuny.edu.

## Engineering Honors Program and coordinated engineering programs

Brooklyn College has three coordinated four-year engineering programs-with the City College School of Engineering, with the College of Staten Island Engineering Science Program, and with Polytechnic University. Students interested in any of these programs must meet the eligibility criteria for admission to Brooklyn College and should use code 0524, the Brooklyn College engineering code, on
their City University admission application form. High school applicants may apply for membership in the Engineering Honors Program by completing an application form, available in the Honors Academy, 2231 Boylan Hall, in addition to the CUNY application. To join the Engineering Honors Program, they should also file a CUNY universal honors application. Matriculated Brooklyn College students may also apply to the coordinated engineering programs and the Engineering Honors Program during their first three semesters at the college.

For more information, see the chapter "Special Programs," contact the Brooklyn College Department of Physics (telephone: 951-5418), or visit the Brooklyn College Web site, www.brooklyn.cuny.edu.

## Certificate programs

Credit-bearing certificate programs are offered in accounting, in computers and programming, and in film production.

Undergraduate students who want to be admitted to these programs must have received a high school diploma or the equivalent and must successfully complete the University Skills Assessment Tests as described in the chapter "Academic Regulations and Procedures."

Students who have baccalaureate degrees are also eligible to enroll in the certificate programs. For more information, contact the appropriate academic department.

## Tuition and Fees


#### Abstract

Tuition and fees listed in this Bulletin and in all registration material issued by Brooklyn College are set by the Board of Trustees of The City University of New York and are subject to change without notice. If tuition or fees are increased, payments already made are counted as partial payment. Students are notified of the additional amount due and of the payment deadline.


Students pay tuition and a student activity fee for each term they enroll. Tuition is determined by a student's place of residence and classification as a continuing or new, full-time or part-time, matriculated or nondegree student. The student activity fee is determined by enrollment as a day student in the College of Liberal Arts and Sciences (CLAS) or as an evening student in the School of General Studies (SGS).

Students who have applied for, or are receiving, financial assistance and plan not to attend classes for a semester must officially withdraw before the first day of classes or they will be liable for payment of tuition and fees.

Students who are delinquent in paying tuition or fees will not be permitted to register or obtain transcripts or other records until all financial obligations have been met.

## Undergraduate tuition for continuing matriculated students

Students who were enrolled prior to June 1, 1992, pay tuition according to the following schedule.

New York State residents

| Full-time | $\$ 1,475$ a term |
| :--- | :--- |
| Part-time | $\$ 125$ a credit |

Nonresidents and international students
Full-time $\quad \$ 3,275$ a term

Part-time $\quad \$ 275$ a credit

## Undergraduate tuition for new matriculated students

Students enrolled after June 1, 1992, pay tuition according to the following schedule.

New York State residents

| Full-time | $\$ 1,600$ a term |
| :--- | :--- |
| Part-time | $\$ 135$ a credit |

Nonresidents and international students

| Full-time | $\$ 3,400$ a term |
| :--- | :--- |
| Part-time | $\$ 285$ a credit |

## Tuition for nondegree students

Nondegree students pay tuition according to the following schedule.

## New York State residents

\$160 a credit
Nonresidents and international students
\$325 a credit

## Student classification

## Continuing students

To be classified as a continuing student, a student must have enrolled at a CUNY institution prior to June 1, 1992. This classification also includes students who were in attendance prior to June 1, 1992, and readmitted within a six-year period prior to the start of the semester.

## New students

Students enrolled after June 1, 1992, are classified as new students.

## New York State residents

To be classified as a New York State resident, an applicant must have resided in the state of New York for the twelve-month period preceding the first day of classes of the term in which the student enrolls. The applicant must state his or her intention to live permanently and maintain his or her principal place of residence in New York State.

## Out-of-state residents

Students classified as out-of-state residents pay tuition as nonresident students. Newly admitted students may apply to have their status changed to New York State residents in the Office of Admissions, 1203 Plaza Building. Continuing students may apply to have their status changed to New York State residents by filing a City University residence form in the Office of the Registrar, 1112 Boylan Hall. Students should contact the appropriate office listed above for further information. Applicants for residency who are under eighteen years of age must submit certified copies of a parent's or guardian's federal and city income tax forms. Students who were admitted to Brooklyn College with an immigration permanent resident card must submit the card at the time of filing the residence form.

Additional information and requirements are contained in the City University residence form.

An applicant for residency who does not provide the required information or documentation may be classified as an out-of-state resident.

## Full-time students

Matriculated students who are enrolled for at least 12 credits or the equivalent a term are classified as full-time students.

## Part-time students

Students who are enrolled for fewer than 12 credits or the equivalent a term are classified as part-time students.

All courses taken by part-time students are billed on a per-credit basis except compensatory, developmental, and remedial courses, which are billed on a contacthour basis. The Schedule of Classes published each term lists these courses.

The tuition charged part-time students on a per-credit basis in any one term may not exceed the term rate for full-time students.

## Summer session tuition

Students enrolled in the summer session pay tuition at the per-credit rate according to their classification.

## Student activity fee

Students pay the student activity fee for each term and summer session in which they enroll. It covers funding of student government and student organizations; use of athletic equipment and campus facilities; subscription to college newspapers; admission to certain social and cultural events; and maintenance and amortization of the Student Center.

| Day Students: | Student Government, \$8.50 |
| :---: | :---: |
| \$96.55, plus \$5 | Student Center Board, \$32.50 |
| CUNY Consolidated | College Association, \$47.70 |
| Services fee | College Association/ |
| and CUNY | Student Government, \$4 |
| Technology fee: | NYPIRG (New York Public |
| \$75 per term, | Interest Research Group), \$3 |
| full-time students; $\$ 37.50$ per term, part-time students | University Student Senate, \$0.85 |
| Evening and | Student Government, \$5 |
| Weekend Students: | Student Center Board, \$32.50 |
| \$56.35, plus \$5 | College Association, \$16 |
| CUNY Consolidated | NYPIRG, \$2 |
| Services fee and CUNY | University Student Senate \$0.85 |
| Technology fee: |  |
| \$75 per term, |  |
| full-time students; |  |
| \$37.50 per term, part-time students |  |

Summer sessions Student Government, \$2.50
All undergraduate Student Center Board, \$32.50
students: \$59.85, College Association, \$24
plus $\$ 5$ CUNY University Student Senate, $\$ 0.85$

## Consolidated

Services fee each
session and CUNY
Technology fee:
$\$ 75$ per term, full-time students; \$37.50 per term, part-time students

## Special fees

Accelerated study
$\$ 100$ for 18.5 to 20 credits; $\$ 230$ for 20.5 to 22 credits; $\$ 460$ for 22.5 to 24 credits; $\$ 690$ for 24.5 credits plus.

| Application | $\$ 40$ <br> $\$ 50$ for transfer students <br> Application for <br> readmission |
| :--- | :--- |
| Duplicate diploma | $\$ 10$ |
| Duplicate record | $\$ 5$ for each duplicate of any <br> receipt or similar item. |
| Late payment | \$15 for students who are <br> delinquent in paying tuition <br> and fees by the deadlines <br> indicated in the Schedule of <br> Classes and on the tuition bill. |
| Late registration | \$15 |
| Library fines | Students should consult library <br> for the policy on fines. |
| Program change | Some courses entail a fee to <br> cover the costs of special <br> materials, film rental charges, <br> transportation, field trip <br> expenses, or other non- <br> instructional costs. Material <br> fees are subject to change and <br> are nonrefundable. Details <br> may be found in each term's <br> Schedule of Classes. |
| \$10 for adding a course, <br> changing from one course to <br> another, or changing from one <br> section to another if changes <br> are made at one time. |  |


| Reinstatement | \$15 for reinstatement if initial <br> registration is canceled for <br> nonpayment of tuition and fees. |
| :--- | :--- |
| Replacement <br> of ID card | $\$ 5$ |
| Reprocessing | \$15 for a check returned by <br> bank as uncollectible. |
| Special | \$50 for evaluation of <br> Baccalaureate <br> Degree Program <br> life experience. |
| Special examination\$15 for each examination or <br> a maximum charge of \$25 <br> for three or more, when a |  |
| student requests an |  |
| examination at a time |  |
| other than the regularly |  |
| scheduled time. |  |

## Graduate Division tuition for undergraduate students

Brooklyn College undergraduate students who take graduate courses for graduate credit pay applicable resident or nonresident tuition rates set for graduate students and are subject to the maximum tuition rate set for undergraduate students. Graduate Division tuition rates are listed in the Schedule of Classes and the Graduate Bulletin.

Undergraduate students who take graduate courses for undergraduate credit pay applicable tuition rates set for undergraduate students.

## Tuition waiver for employees of the City University of New York

After six months of service, full-time employees of the City University of New York may be granted a waiver of tuition for undergraduate credit-bearing courses. Courses may not be taken during an employee's working hours. Employees must meet standards and requirements of the college and may be admitted as matriculants or nondegree students. Exemption from payment of tuition does not include exemption from payment of noninstructional fees.

Information and applications may be obtained in the Personnel Office, 1219 Boylan Hall.

## Auditing fee

The fee for auditing a day, evening, or weekend course is the same as if the course were being taken for a grade. The fee for senior citizens (New York State residents sixty and older) is $\$ 65$ plus the $\$ 5$ CUNY Consolidated Services fee a term. Senior citizens who take courses for undergraduate credit must pay the applicable tuition and fee rates set for undergraduate students.

## Refunds

The following refund schedule is subject to change by the Board of Trustees of The City University of New York. Tuition may be refunded as follows: 100 percent refund for withdrawal from courses before the official opening date of the fall or spring term; 75 percent refund for withdrawal within one week after the scheduled opening date of classes; 50 percent refund for withdrawal during the second week after the scheduled opening date of classes; 25 percent refund for withdrawal during the third week after the scheduled opening date of classes. No refund is given if a student withdraws later than the third week after the scheduled opening date of classes.

Further information about refunds may be obtained in the Refunds Office. The refund schedule for the summer session is published in the summer Schedule of Classes.

Unless a student's registration is canceled by the College, or he or she withdraws before the first scheduled day of classes, no portion of the student activity fee or special fee is refunded. If a student's registration is canceled by the College, he or she must return the fee receipt to the Office of the Bursar, 1155 Boylan Hall, to claim a refund. Refund of the NYPIRG contribution may be obtained during a two-week refund period set by the organization.

Students who enlist in the armed services, Peace Corps, or AmeriCorps who have not attended classes long enough to qualify for a grade, but continue in attendance to within two weeks of induction, receive a refund of tuition and all fees, except application fees, as follows: 100 percent refund for withdrawal before the beginning of the fifth calendar week (third calendar week for summer session) after the scheduled opening date of the session; 50 percent refund for withdrawal thereafter.

Service must be documented with a copy of induction or service orders. No refund is made to a student who has been assigned a grade whether the grade is passing or failing. To obtain a grade, a student must have been enrolled for approximately thirteen weeks or for five weeks in summer session.

## Financing Your Education

Students who will need help in meeting college expenses should contact the Office of Financial Aid, 1507 Plaza Building (telephone: 951-5051). Financial aid representatives are available to advise and assist with applications. Information may also be found on the office's Web page at www.brooklyn.cuny.edu.

## The cost of education

The cost of education is an important consideration when planning for college. A student budget consists of such educational costs as tuition, fees, books, supplies, and other general costs for transportation, food, recreation, and personal expenses. Selfsupporting students will have additional day-to-day expenses for housing, food, clothing, and medical care.

## Student resources

When planning a budget for education, students should consider resources from earnings and savings, the amount their parents can contribute, and such benefits they may receive as Social Security, veterans, unemployment, or welfare.

Summer employment can help meet the first costs of enrollment, for cash is usually needed at the outset for books, supplies, and transportation.

## Financial aid programs

The following financial aid programs are available to eligible matriculated undergraduate students at Brooklyn College. Descriptions of the programs are subject to periodic evaluation and change. To apply for financial assistance, students must file a Free Application for Federal Student Aid (FAFSA) and any subsequent state applications. Applications, current information, and publications about programs may be obtained in the Office of Financial Aid or on the office's Web page at www.brooklyn.cuny.edu. Students are encouraged to visit the financial aid Web site, www.brooklyn.cuny.edu/bc/offices/finaid.

## New York State programs

Tuition Assistance Program (TAP)
Aid for Part-time Study (APTS)
Regents Awards for Children of Deceased or
Disabled Veterans
Vietnam Veterans Tuition Award Program
Regents Awards for Children of Deceased Police
Officers, Firefighters, or Corrections Officers
Empire State Challenger Scholarships for Teachers

Paul Douglas Teacher Scholarship Program
State Aid to Native Americans

## Federal programs

Federal Pell Grants
Federal Supplemental Educational Opportunity Grants (FSEOG)
Federal Perkins Loans
Federal Work-Study Program (FWS)
Federal William D. Ford Direct Loans
Federal PLUS Loans
Veterans Administration Educational Benefits

## New York State programs

Tuition Assistance Program (TAP)
The TAP program provides assistance to New York residents for tuition costs.

Application procedures. Students must file the Free Application for Federal Student Aid (FAFSA) in addition to the applicable state application for TAP. Students must apply each year for this program. The application may be filed on-line at www.fafsa.ed.gov.

The Higher Education Services Corporation determines the applicant's eligibility and mails an award certificate to the recipient indicating the amount of the grant. The college will apply the amount of the grant to the tuition bill if the award is received before registration for classes.

Selection of recipients. TAP is an entitlement program. There is neither a qualifying examination nor a limited number of awards. To be eligible for TAP a student must:

1. be a New York State resident for one year and a U.S. citizen, permanent resident alien, refugee, or paroled refugee;
2. be enrolled full time and matriculated in a program approved for state student aid by the New York State Education Department; although equated credits may be used toward the determination of full-time status, students must be registered for a minimum of 6 degree credits for their first TAP payment and a minimum of 9 to 12 degree credits for each subsequent TAP payment;
3. meet the income guidelines specified by the program (these income limits are revised annually);
4. be charged a tuition of at least $\$ 200$ a year;
5. be in good academic standing;
6. not be in default on a federal student loan; and
7. declare a major not later than the 61-credit point.

Award schedule. The amount of the TAP award is scaled according to the level of study, tuition charge, number of family members who are full-time college students, and net taxable family income for the preceding tax year.

Program pursuit and academic progress. For continued eligibility, students must meet the program pursuit and academic progress requirements outlined in the charts below.

If a student fails to meet the requirements, application may be made for a waiver. The use of the waiver is allowed once as an undergraduate and once as a graduate student. A waiver enables a student to receive TAP for that semester only. To be eligible for further payments, a student must then meet the program pursuit and academic progress requirements outlined below.

Program pursuit requirements. Undergraduate students may receive TAP for eight semesters, or ten semesters if in the SEEK program.
To be eligible for
TAP payment
number

Minimum/equated TAP payment number credits that must be completed in prior payment semester

| 2 | 6 |
| :--- | ---: |
| 3 | 6 |
| 4 | 9 |
| 5 | 9 |
| 6 to 10 | 12 |

Academic progress requirements. Students must meet the following academic progress requirements in order to be eligible for TAP payments.
\(\left.$$
\begin{array}{lcc}\begin{array}{l}\text { To be } \\
\text { eligible } \\
\text { for TAP }\end{array} & \begin{array}{l}\text { Minimum degree } \\
\text { credits earned } \\
\text { through last }\end{array} & \begin{array}{l}\text { Minimum grade } \\
\text { point average } \\
\text { through last }\end{array}
$$ <br>
payment <br>

number\end{array}\right)\)| semester of <br> attendance | semester of <br> attendance |  |
| :--- | :---: | :---: |
| 2 | 0 | 0 |
| 3 | 6 | 1.00 |
| 4 | 18 | 1.20 |
| 5 | 31 | 2.00 |
| 6 | 45 | 2.00 |
| 7 | 60 | 2.00 |
| 8 | 75 | 2.00 |
| 9 | 90 | 2.00 |
| 10 | 105 | 2.00 |

## Aid for Part-time Study (APTS)

The APTS program provides assistance to New York residents for tuition costs for part-time study.

Application procedures. To apply for APTS, students must complete the FAFSA and state applications.

## Selection of recipients and allocation of awards.

Recipients of part-time tuition awards are selected on the basis of financial need after all other grants have been awarded. To be eligible, a student must:

1. be a New York State resident for a year and a U.S. citizen or permanent resident alien, refugee, or paroled refugee;
2. have not received the maximum number of TAP/scholarship payments;
3. be in good academic standing; and
4. be enrolled for at least three but fewer than twelve semester hours or the equivalent per semester.

Graduate students, students enrolled in diploma programs in degree-granting institutions, and students attending nondegree-granting institutions are not eligible for a tuition award for part-time study.

Award schedule. The amount of the award will depend on a student's financial need, the tuition incurred, the allocation of funds, and the total number of eligible part-time students attending Brooklyn College who apply for the award.

Awards for part-time study reduce a student's total award eligibility for TAP. Part-time awards are available for a period not to exceed eight years of part-time study or ten years of part-time study in an approved five-year program.

## Program pursuit and academic progress

standards. To retain eligibility, students must meet program pursuit and academic progress standards. The requirements for these standards follow.

Program pursuit. To meet the program pursuit standard a student must earn a passing or failing grade in a percentage of the minimum part-time course load (6 real or equated credits) in each term an award is received. The percentage increases from 50 percent of the minimum in each term of the first year an award is received, to 75 percent of the minimum in each term of the second year, to 100 percent of the minimum in each term thereafter.

Academic progress. To make satisfactory academic progress a student must earn (successfully complete)
a minimum number of semester hours of credit with a minimum grade point average in each term an award is received. The satisfactory progress standard used for TAP is adapted for use in determining satisfactory progress for part-time study. Generally, part-time students will have two semesters to achieve the satisfactory progress requirement that full-time students must achieve in one semester.

## Regents Awards for Children of Deceased or Disabled Veterans

Application procedures. A special application, obtainable from the high school principal or counselor, must be filed with the New York State Higher Education Services Corporation (HESC), 99 Washington Avenue, Albany, New York 12255.

Selection of recipients. To be eligible for a Regents Award for Children of Deceased or Disabled Veterans, a student must be a legal New York State resident, and the student's parent (veteran) must have served in the United States Armed Forces during specified periods of war or national emergency and, as a result of service, have died or have suffered a 50 percent or more disability or be classified currently as missing in action.

Alternatively, the parent (veteran) must have been a prisoner of war during the specified period of service. The veteran must have been a New York State resident at the time of either entry into service or death, if death occurred during or as a result of service. The periods of service include military operations in Lebanon, Grenada, Panama, or the Persian Gulf; Vietnam Era (10/1/61 to 5/7/75); Korean Conflict (6/27/50 to 1/31/55); World War II (12/7/41 to 12/31/46); World War I (4/16/17 to 11/11/18).

These awards are independent of family income or tuition charge and are in addition to other grants or awards to which the applicant may be entitled.

Award schedule. The amount of the award is \$450 per year for up to five years, depending on the normal length of the program of study. The awards are for full-time study.

## Vietnam Veterans Tuition Award Program

Application procedures. The student must file a Vietnam Veterans Tuition Award Supplement annually to the New York State Higher Education Services Corporation (HESC), 99 Washington Avenue, Albany, New York 12255. Application forms are available in the Financial Aid Office or may be obtained by writing to NYSHESC, VVTA, Albany, New York 11255-0001.

## Selection of recipients and allocation of awards.

To be eligible for a Vietnam Veterans Tuition Award the applicant must:

1. have served in the armed forces of the United States in Indochina between January 1, 1963, and May 7, 1975;
2. have been discharged from the service under other than dishonorable conditions;
3. have been a resident of New York State on April 20, 1984, or have been a resident at the time of entry into the service and resume residency by September 1 of the current year;
4. apply for a TAP award; and
5. be matriculated in a degree program.

Award schedule. Full-time awards may range up to the cost of tuition. If the veteran also receives a TAP award, the combination of the two awards may not exceed tuition. Part-time awards may not exceed tuition. Part-time study is defined as at least 3 but fewer than 12 credits.

For full-time study, awards are available for up to eight semesters of a four-year program, or ten semesters if the student is in an approved five-year program. For part-time study, awards are available for up to sixteen semesters, or twenty semesters in an approved program that would normally require five years if the study were full time.

Regents Awards for Children of Deceased Police Officers, Firefighters, or Corrections Officers Application procedures. A special application must be obtained from the student's high school or from the New York State Higher Education Services Corporation (HESC), 99 Washington Avenue, Albany, New York 12255. Documentary evidence to establish eligibility must be submitted with the application.

Selection of recipients. To be eligible for this award the applicant must be the child of a police officer, regular or volunteer firefighter, or corrections officer who died as a result of an injury sustained in the line of duty; and a legal resident of New York State.

Award schedule. The amount of the award is $\$ 450$ per year for up to five years of full-time undergraduate study depending on the normal length of the program of study. Awards may also be made to children of deceased police officers or firefighters under a Memorial Scholarship Supplemental Program.

## Empire State Challenger Scholarships for Teachers

Application procedures. Applications are available by writing to New York State Education Department, State and Federal Scholarship Unit, Cultural Education Center, Albany, New York 12230. Applications must be filed by mid-February for the following academic year.

## Scholarship eligibility and selection of recipients.

Awards are made to undergraduate students who are New York residents enrolled in undergraduate programs that lead to certification in one of the shortage fields listed below. Students may apply no later than the first semester of their junior year of college. Selection is based on academic performance and the number of teaching vacancies within the award fields.

Programs of study include bilingual education; children with handicapping conditions; English to speakers of other languages; foreign language; mathematics; and occupational educational science.

Award schedule. The award may be up to $\$ 3,000$ a year for tuition and fees for up to four years of full-time study. Recipients must agree to teach for a period of one academic year for every two years of awards received.

## Paul Douglas Teacher Scholarship Program

Application procedures. Applications are available by writing to the New York State Education Department, State and Federal Scholarship and Fellowship Unit, Cultural Education Center, Albany, New York 12230. Applications must be filed by mid-February for the following academic year.

Selection of recipients. Scholarships are awarded for full-time undergraduate study in an approved program leading to certification as a teacher in a field designated as having a shortage of teachers. A panel of college faculty members will rank applicants on the basis of their high school and/or college work. Students may submit information concerning ACT and/or SAT scores, honors, recommendations, and other information to further substantiate their eligibility to complete the approved teacher-certification program.

Award schedule. The award may be up to $\$ 5,000$ a year for educational expenses for up to four years of full-time study. A service commitment of two years of teaching is required for each year of award payments received. This service can be reduced by one half depending upon the school and teaching program selected by the recipient. The teaching service may be performed at any public or qualifying private school in the United States.

## State Aid to Native Americans

Application procedures. Application forms may be obtained from the Native American Education Unit, New York State Education Department, Room 543B, Albany, New York 12234.

Selection of recipients. To be eligible an applicant must be an official member of a New York State tribe, or the child of a member and a resident of New York State; and must maintain satisfactory progress toward completion of the program.

Award schedule. The award is \$1,350 per year for a maximum of four years of full-time study. Students registered for less than full time will be funded at approximately $\$ 46$ per credit hour.

## Federal programs

## Eligibility requirements

To be eligible for federal Title IV student financial aid programs (Federal Pell Grants, Federal Supplemental Education Opportunity Grants, Federal Perkins Loans, Federal Work-Study Program, Federal Ford Loans, Federal PLUS Loans, Federal Supplemental Loans for Students), a student must:

1. be enrolled as a matriculated student;
2. be a U.S. citizen or an eligible non-citizen;
3. show evidence of need;
4. not be in default of a Perkins, Stafford, or Ford Direct loan, or owe a repayment of a Pell or Supplemental Educational Opportunity Grant; and
5. maintain academic standing and make satisfactory academic progress in the course of study.
Note: Brooklyn College reserves the right to withhold academic transcripts from students who default on any student loan.

## Satisfactory progress standard for Title IV federal student assistance

Federal (Title IV) student financial assistance programs require recipients to maintain academic standing and to make satisfactory progress toward their degree. See the section "Retention standards" in this Bulletin.

In order to meet the satisfactory-progress-towarddegree requirement, students must accumulate degree credits according to the following schedule:

End of year: $1 \begin{array}{lllllll} & 2 & 3 & 4 & 5 & 6 & 7\end{array}$
Credits for
satisfactory
progress: $\begin{array}{llllllll}18 & 36 & 54 & 72 & 90 & 108 & 120\end{array}$
Credits for
conditional/
provisional

status: | 0 | 21 | 42 | 63 | 84 | 105 | 120 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

In effect, students may receive federal (Title IV) assistance for a maximum of seven years of full-time study. (Students studying on less than a full-time basis will have their years of study converted to a full-time year equivalent.) Under this regulation, students must complete a minimum of 18 degree-credits (or equivalent) per full-time year. Students who fail to maintain this standard will be placed on the conditional/provisional status specified above and can continue to receive financial assistance if they maintain eligibility under this status.

Students who fail to meet at least the conditional standard may appeal to the Academic Advisement Center to retain their eligibility to continue to receive financial assistance. These appeals will be evaluated for such mitigating circumstances as personal illness, injury, family tragedy, and the student's perceived ability to regain eligibility within a reasonable time frame.

Students who have been placed on academic probation and who make satisfactory progress will continue to maintain their academic standing with the college and their concurrent eligibility for financial aid.

Remedial course work limitation. Federal regulations limit the amount of noncredit or reduced-credit remedial course work that can be included in determining enrollment status and educational costs for federal financial aid. Once you have received federal aid for 30 or more equated credits, future remedial courses may be taken into account in awarding federal aid. Only regular course work may be used to determine enrollment status (full-time, part-time) and educational costs.
Note: Courses in English as a second language do not count against this limit.

## Federal Pell Grants

Application procedures. Students apply for Federal Pell Grants using the Free Application for Federal Student Aid (FAFSA), which is available in the Office of Financial Aid, or the Renewal Application. The completed application is submitted for processing according to the included instructions.

Selection of recipients. Financial need is determined by a formula developed by the United States Department of Education and reviewed annually by Congress.

Award schedule. Annual awards range from $\$ 400$ to $\$ 3,300$. The amount of the Pell Grant will be determined according to the schedule of awards based on the family contribution, the cost of education at Brooklyn College as defined by the Pell Grant program, and whether the student is enrolled full or part time.

## Federal Supplemental Educational Opportunity Grants (FSEOG)

Application procedures. Students apply through Brooklyn College on the FAFSA, which is available in the Office of Financial Aid. Maximum awards may vary yearly according to federal guidelines.

Selection of recipients. To be eligible students must have financial need and be enrolled at least half time.

Award schedule. Awards range from $\$ 100$ to $\$ 4,000$ based on available funds. Students are eligible to apply for the FSEOG for the period required for the completion of their first undergraduate baccalaureate degree.

## Federal Perkins Loans

Application procedures. Application is made through Brooklyn College by completing the FAFSA, which is available in the Office of Financial Aid.

Selection of recipients. Recipients must be enrolled at least half time and have financial need.

Loan schedule. Depending on availability of funds, students may borrow up to $\$ 3,000$ for each year of undergraduate study up to an aggregate of $\$ 15,000$. The current annual interest rate, payable during the repayment period, is 5 percent on the unpaid principal. Repayment begins six months after graduation or leaving school (nine months for first-time borrowers in 1988-89 and after) and may extend over a period of up to ten years.

For additional information about repayment schedules and deferral of repayment, contact the Office of Financial Aid.

## Federal Work-Study (FWS) Program

Application procedures. Application is made through Brooklyn College on the FAFSA, which is available in the Office of Financial Aid.

Selection of recipients. Recipients must be enrolled at least half time and have financial need.

The college must make employment reasonably available to all eligible students. In the event that more students are eligible than there are funds available, preference is given to students who have greater financial need and who must earn a part of their educational expenses.

Award schedule. The college arranges jobs on campus and off campus in public or private nonprofit agencies and in a limited number of for-profit organizations. Jobs in for-profit organizations must be academically relevant. Students may work up to twenty hours per week during the school year and full time during the summer.

The salary level must be at least the minimum wage; wages higher than the minimum depend on the nature of the job and the qualifications of the applicant.

Satisfactory academic progress must be maintained as well as satisfactory performance on the job.

## Federal William D. Ford Direct Loans

Application procedures. All students and/or their families must complete a FAFSA to determine eligibility and must establish eligibility or ineligibility for a Federal Pell Grant prior to certification of a loan application.

A loan application may be obtained from the Office of Financial Aid. The completed application is submitted to the office. The application is then certified by the college. A counseling session or interview or both may be required.

Selection of recipients. Federal Ford Direct Loans may be subsidized or unsubsidized depending on family income. Students may qualify for unsubsidized loans regardless of their or their family's income, but the federal government pays interest on need-based (subsidized) loans only.

Loan schedule. First-year students may borrow $\$ 2,625$. Students who have completed their first year of study may borrow $\$ 3,500$. Students who have completed two years of study may borrow $\$ 5,500$ in each subsequent year of undergraduate study up to an aggregate of $\$ 23,000$.

The interest rate on Direct Loans is variable but not higher than 8.25 percent. (For example, from October 1, 2001, through June 30, 2002, the interest rate was 4.06 percent.) Variable interest rates are set each June. Students must sign a promissory note agreeing to repay the loan.

Students are eligible for full-interest subsidies during the time they are in school and for six months after they cease to be at least a half-time student. Recipients are responsible for payment of the origination fee and an insurance premium (currently 1 percent) that is taken as a direct deduction when the loan is made.

Students who have in the past received a Guaranteed Student Loan at the old interest rate of 7 percent will retain their eligibility for the 7 percent rate for any additional Direct Loans. Students who have received a Guaranteed Student Loan at the annual interest rate of 9 percent will continue to pay the 9 percent rate for any additional Direct Loans.

For more detailed information about repayment schedules and procedures, contact the Office of Financial Aid.

## Federal PLUS Loans (PLUS)

Federal PLUS Loans are for parents who want to borrow to help pay for their children's education.

Application procedures. Application procedures for PLUS Loans are the same as for the Ford Direct Loan.

Selection of recipients. To be eligible for a PLUS Loan the parent must be a U.S. citizen or permanent resident alien and have a dependent student enrolled at Brooklyn College as a matriculated student attending at least half time. Neither the parent nor the student can be in default of any previous federal loan or owe a refund on a previous federal grant.

Loan schedule. Parents qualify for the PLUS Loan regardless of their income, but they may borrow an amount no more than the total yearly cost of attendance minus estimated other financial aid received. The annual interest rate is variable but not higher than 9 percent. Borrowers must sign a promissory note agreeing to repay the loan.

## Veterans Administration (VA) Educational Benefits

Application procedures. Application forms are available at all Veterans Administration (VA) Offices, active-duty stations, and U.S. embassies.

Selection of recipients. Educational benefits are available through the VA under the following programs:

New Gl Bill (Chapter 30): Service persons who entered active duty between July 1, 1985, and June 30, 1988.

Vocational Rehabilitation (Chapter 31): Veterans who have at least 10 percent disability as a result of active service.

Veterans Contributory Benefits (VEAP) (Chapter 32): Veterans and service persons who entered active duty after December 31, 1976.

GI Bill (Chapter 34): Veterans who served more than 181 days between January 31, 1955, and January 1, 1977.

Dependent's Educational Assistance Benefits (Chapter 35): Spouses and children of veterans whose death or total, permanent disability was service connected.

Selective Reserve Benefits (Title 10, Chapter 106): Members of the Selective Reserve who enlisted for a six-year period between July 1, 1985, and June 30, 1988.

For more information regarding eligibility criteria for these programs and other assistance to veterans and their dependents, contact the Veterans Administration.

# Scholarships, Awards, and Prizes 

More than six hundred scholarships, awards, and prizes are given each year to Brooklyn College students. Friends of the college, including the trustees of the Brooklyn College Foundation, Inc., have joined in helping to provide for the college's continuing scholastic excellence through the establishment of endowed funds that generate well over $\$ 1$ million annually to support the education of qualified students. In addition, the City University of New York (CUNY) holds funds for scholarships and awards specifically for Brooklyn College students. The College makes every effort to award all of this money to students each year. Holding a scholarship does not adversely affect any federal or state financial aid students may receive.

Scholarships range from partial to full tuition for the academic year, and in some cases are given for multiple years. Awards and prizes in all disciplines are given to students as onetime cash gifts.

The selection of recipients is based on criteria that may include academic performance, financial need, field of study, community service, extracurricular activities, career plans, and/or other stipulations established by donors.

For scholarship application forms and information about how to apply for scholarships, awards, and prizes, visit the Office of Scholarships, 1113 Plaza Building, or call (718) 951-4796. You may also visit our Web site: http://depthome.brooklyn.cuny.edu/scholar.

## Scholarship programs for entering freshmen

All applicants for the freshman scholarships described below must complete both a Brooklyn College scholarship application and a separate application for undergraduate admission to the City University of New York indicating Brooklyn College as their first choice. CUNY applications are available at most high schools or may be obtained from the Brooklyn College Office of Admissions, 1203 Plaza Building.

## Brooklyn College Foundation Presidential Scholarship Program

Each year the Brooklyn College Foundation Presidential Scholarship Program offers approximately fifty full-tuition scholarships to entering freshmen, some of which are awarded to students in the arts.

Scholarship recipients receive a maximum of eight tuition payments, covering four years of study.

Selection is based on merit as measured by SAT scores and high school performance. In order to be considered, a student must have a combined score of at least 1200 on the SAT (or the equivalent ACT) and a minimum high school academic average of 90 percent. Arts applicants must also demonstrate superior artistic achievement through a live or taped audition. In order to remain eligible, students must maintain continuous full-time enrollment (12 credits or more) and a minimum grade point average of 3.00 each semester.

## High Five Scholarship

Established by a bequest, the High Five Scholarship provides an opportunity for students with strong academic backgrounds and financial need to attend college full time. There will be five recipients each year, each receiving \$10,000 annually for a total of four years. To be eligible, an applicant must be a senior in a New York City public or private high school; planning to attend Brooklyn College, City College, or Queens College as a full-time student; be financially eligible for maximum TAP and Pell financial aid; and have a very strong academic record. The program is highly selective with regard to academic criteria. Students with leadership ability or special talents, such as in the arts or creative writing, will also be considered.

Applications for the scholarship must be filed by January 31 in order to be considered for the academic year beginning the following September. Further information and application forms may be obtained from the Scholarships Office or by calling (212) 997-2869.

## Scholarships, awards, and prizes for matriculated and transfer students

Through its general program of scholarships, awards, and prizes, Brooklyn College recognizes the academic achievements and needs of continuing undergraduate students. To be eligible, students must have a minimum grade point average of 2.00 .

Many scholarships are conferred by individual departments. Recipients of general scholarships are selected by a standing committee of faculty members and administrators who are guided by the criteria established for each scholarship or award.

## Special programs

## Alliance for Minority Participation (AMP)

Funded by the National Science Foundation, the Alliance for Minority Participation offers a variety of enrichment activities for minority students interested in the biological sciences, physical sciences, and mathematics. The program offers payments for tutoring and stipends for conducting research in laboratories under the supervision of Brooklyn College faculty members during the academic year and the summer. Participants must be U.S. citizens or hold resident alien status. Application forms and further information about AMP may be obtained from the program coordinator, 141 Ingersoll Hall Extension (telephone, 718-951-4346).

## CUNY Pipeline Program

The CUNY Pipeline Program provides educational and financial support to minority undergraduates, including African American, Asian American, Hispanic, and Native American students, who are interested in careers in higher education. The program is intended for students who plan to pursue a Ph.D. in preparation for college-level teaching and advanced research in any field except law or medicine. Students apply as juniors and must be U.S. citizens or permanent residents with a grade point average of 3.20 or higher. The program offers stipends of $\$ 3,250$, summer research opportunities, help in preparing applications to graduate school, and tuition waivers for the first year of study in a CUNY Ph.D. program. Applications and further information on CUNY Pipeline may be obtained from the program coordinator, 2231 Boylan Hall (telephone, 718-951-4114).

## Leadership Alliance

Brooklyn College participates in the Leadership Alliance, a consortium of colleges and universities that seeks to increase the participation of underrepresented minority students in graduate programs oriented toward research careers in all fields other than law, medicine, or business. The Leadership Alliance sponsors summer research fellowships through its Early Identification Program (EIP), which places undergraduate students in major research universities or in industrial settings at IBM or Schering Plough. EIP students also have the opportunity to participate in other activities that enhance their graduate school prospects. Summer stipends vary from $\$ 3,000$ to $\$ 5,000$. A minimum grade point average of 3.00 is required. The application has an early February deadline. Application forms and further information about the Leadership Alliance may be obtained from the program coordinator, 4311 James Hall (telephone, 718-951-5610).

## Minority Access to Research Careers (MARC) Fellowships

The MARC program, sponsored by the National Institutes of Health, is for minority honors students (African American, Hispanic, Pacific Islander, or Native American) who are interested in pursuing research careers in the biomedical sciences, including biochemistry, experimental psychology, neuroscience, biology, and health-related research. The program offers annual fellowships of about $\$ 10,000$, tuition support, and funds for travel to professional meetings.

Students in the program devote a significant amount of time to independent research with a faculty mentor and participate in a wide range of activities that familiarize them with research methodology and potential research careers and prepare them for graduate school.

To be eligible, students must be U.S. citizens or hold resident alien status and have a grade point average of at least 3.20. Students should apply in the spring semester of the sophomore year, although applications may also be submitted in the first semester of the junior year. Application forms and further information on MARC program requirements and benefits may be obtained from the program director, 4311 James Hall (telephone, 718-951-5171).

## New York City Louis Stokes Alliance for Minority Participation (NYC-LSAMP)

The New York City Louis Stokes Alliance for Minority Participation (NYC-LSAMP) is a federally funded minority research and training program sponsored by a grant from the National Science Foundation in collaboration with the City University of New York. The program's main objective is to ensure a long-term capacity to produce significantly greater numbers of minority students in science, mathematics, and engineering careers through lasting changes achieved by the participating CUNY institutions. The program offers financial support to undergraduate and graduate students in the form of a stipend of up to $\$ 15,000$ per year and the opportunity to be part of facultysupervised research teams on campus. NYC-LSAMP also provides various support systems for students through a cadre of peer tutors, workshop leaders, and faculty mentors. In addition, students are supported for attendance at and participation in local, regional, and national scientific meetings where they can present their research findings.

To be eligible, applicants must be full-time students, have a minimum grade point average of 3.00, and be U.S. citizens or permanent residents of African American, Alaskan Native, Hispanic, Native American, or Pacific Islander descent. Qualified students usually major in biology, biochemistry, chemistry, computer and information science, engineering, geology, health and nutrition sciences, mathematics, physics, psychology, or speech communication arts and sciences.

Application forms and further information may be obtained from the program coordinator, 141 Ingersoll Hall Extension (telephone, 718-951-4346).

## Project Ascend/McNair

Funded by the United States Department of Education and administered by the Graduate Center of The City University of New York, Project Ascend/McNair seeks to encourage promising CUNY undergraduates from low-income families and underrepresented groups to pursue doctoral training leading to careers in research and academia. The program offers workshops and seminars in preparation for graduate school as well as research fellowships with stipends of $\$ 2,800$ that allow students to work with CUNY faculty members during the summer. Applicants must have a minimum grade point average of 3.00 . For application forms and further information about Project Ascend/McNair, contact the program director (telephone, 212-817-1828).

# Academic Regulations and Procedures 

## Academic Advisement Center

The Academic Advisement Center, 3207 Boylan Hall, provides academic advisement to all undergraduate students. It offers continuing guidance to freshmen and sophomores to help them meet college requirements and assess their academic strengths and weaknesses. The center also assists students in the selection of an academic major. In addition, the center receives student requests for modifications of college procedures and regulations, general academic advisement activities and special projects, and advisement of transfer students regarding degree requirements.

A student may appeal a decision of a professional adviser of the Academic Advisement Center to the director of the center and to the Faculty Council Committee on Course and Standing. All appeals are made through the center. On each level of appeal, a student may have a personal hearing.

## Office of the Registrar

The Office of the Registrar is located in 1108 Boylan Hall. The central information counter is in 1118 Boylan Hall. The office prepares the Schedule of Classes, facilitates registration for continuing students through the Web or by telephone, determines eligibility for graduation, evaluates transfer credits, maintains records, processes applications for readmission, and issues transcripts and diplomas. Students should consult the office regarding any questions about transcripts and applications as outlined in this chapter. Many of the services provided by the Office of the Registrar are also available through WebSIMS at www.brooklyn.cuny.edu.

## ID card

A student is issued a photoidentification card for the entire period of enrollment. The card must be validated each term at registration. It is used as a library card and entry permit to college facilities. The ID card is required identification for receiving checks distributed by the college. A student must report a lost card to the Security Office and the card must be replaced; a fee of $\$ 5$ is charged.

## Social Security numbers

Social Security numbers are used as the permanent identification of a student's college record. A student who does not have a Social Security number should
obtain one before registration from the Admissions Office. An incorrect number on a registration card should be reported to the Registrar's Office.

## Change of name or address

The Office of the Registrar should be notified immediately, either in person or through WebSIMS, of any change in a student's name or address. To change a name, for other than a spelling error, documentation must be provided. Documentation may consist of one of the following: a photocopy of a marriage certificate, a copy of a court order with the original county clerk's certification, a birth certificate, or naturalization papers.

## Application for graduation

Students who expect to graduate in June should file an application for graduation by the preceding March 15. Students who expect to graduate in February should file an application for graduation by the preceding October 15. Students who expect to graduate in September should file an application by the preceding June 15. Applications may be filed in 1118 Boylan Hall or through WebSIMS. Applications on file by the proper date will be processed in time for graduation. Students who apply for graduation in one semester and do not graduate must reapply for graduation for the semester in which they expect to graduate. All work must be completed by the end of the term in which a student expects to graduate.

## Degree requirements

To earn a bachelor's degree, a student must complete a set of requirements that includes those of the college and the student's major department or program. Students must fulfill the requirements in effect at the time of their entrance to Brooklyn College. When there are changes in any of the degree requirements, a student in attendance may continue to follow the old requirements or choose to fulfill the new requirements. In the event that any courses in a department or program are withdrawn with Faculty Council approval, a student who has not fulfilled the old requirements must satisfy the substituted requirements. Students must complete a concurrent set of Brooklyn College and department or program requirements.

Students who are readmitted to the college after a term or more of absence must meet the requirements for degrees in effect at the time of readmission. Students in good standing who must interrupt their studies for one or more full semesters, up to a cumulative maximum of two years, may apply in advance to the Office of the Registrar for an official leave of absence. Such students, upon their return, may fulfill the requirements that were in effect while they were in residence.

The Faculty Council Committee on Course and Standing may permit exceptions to college, department, or program requirements. Exceptions to department or program requirements may be considered only on recommendation of the department chairperson or program director. Petitions must be filed in the Academic Advisement Center.

Students should become familiar with degree requirements as they are described in this Bulletin and plan programs in consultation with appropriate college, department, or program advisers. It is a student's responsibility to be certain that he or she follows a program of study that satisfies all requirements. Degrees are awarded to students who have completed all degree requirements provided that they have fulfilled all financial obligations to Brooklyn College.

## Credits required for a baccalaureate degree

The college requires 120 credits and a GPA of 2.00 or higher for a baccalaureate degree. For students who have taken some courses elsewhere, this GPA must be achieved on both the Brooklyn College and the entire college record.

A student who has earned at least 150 credits but does not have a 2.00 GPA or higher on the entire Brooklyn College record may present 120 credits in courses in which the minimum grade of $C$ has been earned. These 120 credits must include all college requirements. A student who is pursuing this option and has not earned a grade of C in a required course must repeat the course. Students who wish to pursue this option are strongly advised to consult the Academic Advisement Center.

## Collegewide requirements

All students must satisfy the following general education requirements:

1. The basic skills requirements in mathematics, reading, English composition, and speech as stated in this Bulletin under the heading "Basic skills requirements."
2. The Core Studies courses and the foreign language requirement of the core curriculum as stated in this Bulletin under the heading "Core curriculum."
3. The writing-across-the-curriculum requirement as stated in this Bulletin under the heading "Writing-across-the-curriculum requirement."
4. Starting September 1, 2003, all enrolled students, regardless of when they entered CUNY, are subject to the CUNY Proficiency Examination (CPE) requirement. Students who transfer with 45 credits or more must take the examination in their first
semester. Students who are not in good academic standing (GPA below 2.00) or who have not passed the University Skills Assessment Tests in Reading and Writing (unless exempted) may not take the CPE. Students must take the examination when they will have earned 45 credits. Students with a bachelor's degree or higher from an accredited program are exempt from the CPE.

Students have three opportunities to take and pass the CPE. If the third time is needed, students may retest no later than the semester in which they register for their seventy-fifth credit. Failure to take the CPE when required is counted as a forfeiture of one of the three opportunities to take the examination.

A description of the CPE, criteria for passing, sample questions, graded student responses, and test policies is available in the Testing Office, 0203 James Hall, and on the CUNY Web site, www.cuny.edu/cpe.

Students in the Special Baccalaureate Degree Program for Adults or the Small College Program should consult the "Special Programs" chapter of this Bulletin.

## Requirements for a major

All degree-seeking students must declare a major no later than the semester in which the combination of credits earned and credits for which they currently are registered total 61 or greater. Students declare a major by completing a Declaration of Major form available in department or program offices. The form must be signed by both the student and a departmental or program adviser. Students with double or dual majors must complete a separate Declaration of Major form for each major.

For students who are nearing the 61-credit point and remain undecided about their choice of major, there are a number of avenues of assistance. Faculty counselors in each academic department advise prospective majors about the undergraduate programs and related career possibilities. Also, the Academic Advisement Center and the Career Development and Internship Center offer assistance in choosing a major. The college is concerned that students select their major with careful consideration and with good knowledge of the range of options. Students who have not declared a major by the 61-credit point are ineligible for TAP financial aid.

A major consists of the following requirements, which are specified for each major under "Department requirements" or "Program requirements" in this Bulletin:

1. Specified introductory courses in the major department and in other departments.
2. Either (a) or (b):
(a) No fewer than 15 credits in advanced courses in the major department, which must be completed with a grade of C - or higher in each course.
(b) No fewer than 21 credits in advanced courses that are approved as part of an interdisciplinary program, each completed with a grade of C- or higher; at least 12 of these credits must be in a single department or program.
Additional requirements for a B.S. degree in specified major fields are noted below.
3. Specified additional advanced courses in the major department and/or courses in other departments; minimum grade requirements may be specified for these courses.

Students should be aware of the meaning of any symbol preceding a course number, such as the asterisk (*) and dagger ( $\dagger$ ), and the section (§), which refers to independent work. These and other symbols, which are defined at the start of each department's listings, may restrict the use of certain courses in fulfilling major or degree requirements.

## Requirements for the dual major in a special program

Interdisciplinary programs within the college that offer a dual major are Caribbean studies, linguistics (which also offers an independent major), and studies in religion. Dual majors are not independent majors. The student must also complete a major in an approved department of Brooklyn College.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in biology, chemistry, computer and information science (including computational mathematics), geology, physics, and psychology must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the major department or departments. These 24 credits must be completed at Brooklyn College with a grade of C - or higher in each course (Departments of Biology, Chemistry, Geology, Mathematics, and Psychology) or with a grade of $C$ or higher in each course (Departments of Computer and Information Science and Physics). Several departments have specific course requirements for a B.S. degree; these requirements are described under each department listing.

The following courses may be applied toward the 60 credits in science and mathematics: all courses in the Departments of Biology, Chemistry, Computer and Information Science, Geology, Mathematics, Physics, and Psychology; courses marked with a (•) symbol in the Department of Health and Nutrition Sciences;

Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3; Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2; Economics 30.2, 30.3, 31.1, 31.2; Philosophy 13, 33, 42; Physical Education and Exercise Science 22.71, 22.75, 23, 30, 51; and Sociology 77.1.

## Residence requirement

Residence, which in this context refers to the number of credits that must be taken at Brooklyn College, is one of the requirements for a degree. Candidates for a bachelor's degree are required to complete at least 30 credits at Brooklyn College, including:

1. The last 18 credits taken toward the degree;
2. Either (a) or (b):
(a) No fewer than 15 credits in advanced courses in the major department, which must be completed with a grade of C - or higher in each course.
(b) No fewer than 21 credits in advanced courses that are approved as part of an interdisciplinary program, each completed at Brooklyn College with a grade of C - or higher; at least 12 of these credits must be in a single department or program; and
3. The specific in-residence course requirements described under each department listing and additional requirements for the bachelor of science degree as noted under the heading "Degree requirements" above.

## Requirements for the minor

A minor consists of at least 12 credits in advanced electives as determined by a department or program at Brooklyn College, each completed with a grade of C - or higher. At least six of these credits must be completed at Brooklyn College. Specific requirements are described under department and program listings.

## Transfer students

Transfer students who are candidates for a bachelor's degree must meet Brooklyn College residence requirements, including the requirement for the major as described in item 2 under "Residence requirement" above.

The Transfer Evaluations Office evaluates courses completed at other institutions and, where possible, indicates equivalent Brooklyn College courses. On recommendation of the department chairperson or designated deputy, there may be assignment of credit for courses satisfactorily completed at other institutions that may not have precise Brooklyn College equivalents.

It is university policy that students with an associate of arts or associate of science degree from a CUNY college are required to take only one additional general
education course at a CUNY senior college. Students who transfer to Brooklyn College with an A.A. or A.S. degree need at most one core course at Brooklyn College in a subject or discipline that was not included in their associate degree curriculum. This policy does not apply to students with an A.A.S. degree.

Information about the equivalents of core curriculum courses may be found under the heading "Core equivalencies" in this Bulletin.

## Second undergraduate degree

Students with an undergraduate degree from Brooklyn College may earn a second undergraduate degree from the College in a different academic department or program if they meet all the requirements for the second degree and if they complete 30 credits in residence beyond the requirements for the first degree, including at least 15 advanced elective credits in the major department or program for the second degree. Such students are required to obtain readmission to the College.

Students with an undergraduate degree from Brooklyn College who wish to earn an undergraduate degree from the same department as the first degree must complete the requirements for the second degree and obtain approval from the chairperson of the department. Such students are required to obtain readmission to the College.

## Basic skills requirements

## General requirements

All entering freshmen and non-CUNY transfer students who plan to matriculate at Brooklyn College must take and pass the University Skills Assessment Tests in reading and writing before they will be allowed to register for any course at Brooklyn College. Exempted from this requirement are applicants who have scored at least 480 on the verbal section of the SAT, 20 on the English section of the ACT, or 75 on the New York State English Language Arts Regents Examination. Also exempted are non-CUNY transfer students with 45 or more credits (including those in progress). In some cases, exempted students may be required to take reading and writing tests to determine placement in appropriate courses.

All entering freshmen and non-CUNY transfer students who plan to matriculate at Brooklyn College must take and pass the University Skills Assessment Test in mathematics before they will be allowed to register for any course at Brooklyn College. Exempted from this requirement are applicants who have scored at least 480 on the mathematics section of the SAT, 20 on the mathematics section of the ACT, or 75 on the Sequential Math II or III or the Math A or B New

York State Regents Examinations. Also exempted are students with 45 or more credits including those in progress. In some cases, individuals who have demonstrated readiness for college-level work by the SAT/ACT or Regents option in math will be required to take the University Skills Assessment Test in mathematics for placement in appropriate nonremedial courses.

All other students (transfer and returning students) who plan to matriculate at Brooklyn College and who have not previously taken or been exempted from the University Skills Assessment Tests must take the tests before they will be allowed to register for any course at Brooklyn College.

Scores on the assessment tests, whether taken at Brooklyn College or at other units of CUNY, will be noted on students' transcripts. The results of these tests determine whether a student may register for a baccalaureate program.

The following students are required to attend the Summer Immersion Program (for fall matriculants) or the Intersession Immersion Program (for spring matriculants) in order that they may gain the necessary skills for passing the University Skills Assessment Tests: Students who score below 480 on the verbal or mathematics sections of the SAT or below 20 on the English or mathematics sections of the ACT, and below 75 on the English Language Arts Regents Examination or on the Sequential Math II or III or on the Math A or B Regents Examination, or who have failed one or more of the sections of the University Skills Assessment Test. Students are advised to obtain information about these programs from the Office of the Dean of Undergraduate Studies.

SEEK and ESL students who do not successfully pass the University Skills Assessment Tests at the end of the Summer Immersion Program will be permitted to register and will be advised of their programs of study by their respective advisers.

## English composition requirement

All entering students who have scored at least 480 on the verbal section of the SAT, 20 on the English section of the ACT, or 75 on the New York State English Language Arts Regents Examination or who have passed the University Skills Assessment Test in writing and reading will be placed in English 1.

Students in English 1 take an exit test at the end of the semester (during the final examination period). This test will be prepared by the Department of English and graded by the instructor. Students who fail this test will
receive a grade of NC or F in English 1. The grade in English 1 for students who pass this test will be based solely upon the quality of their work during the semester and may be A+ through C-, NC, or F.

Students who do not pass English 1 must repeat it the following semester. However, the course may not be taken more than three times, and students who receive three grades of $F, N C, W F$, and/or WU will be dismissed from the College.

Students who receive an A+, A, or A- in English 1 are eligible for exemption from English 2 based on an evaluation of their performance on the English 1 exit test by an exemptions committee. Such exemption will be noted on students' transcripts.

Students who pass English 1 and who are not exempted from English 2 must take English 2 within two semesters of successful completion of English 1.

Students who complete English 2 will receive a grade of A+ through C-, NC, or F. Students who do not pass English 2 must repeat it the following semester. The course may not be taken more than two times, however, and students who receive two grades of $F$, NC, WF, and/or WU will be dismissed from the College.

ESL students. Students in the ESL Program move from ESL 14 or 14.1 through 15, 15.1, or 17.1 on the basis of their score on the Brooklyn College Post-Test for Second-Language Learners. Students in ESL 14 and 14.1 take the post-test at the end of the semester. Students in ESL 15, 15.1, or 17.1 take the University Reading and Writing Assessment Tests as exit tests. Students who pass the tests with a minimum score of 7 on the University Writing Assessment Test and a minimum score of 65 on the University Reading Assessment Test are placed in English 1.

## Writing-across-the-curriculum requirement

All students must successfully complete one writingintensive course. It is strongly recommended that the writing-intensive course be taken in the student's major or in an allied field.

Students may register for a writing-intensive course only after passing or being exempted from English 2.

Writing-intensive courses are defined as specially designated courses or sections in which writing functions as an important mode of learning. Students in such courses do informal writing in class, and there are several formal writing assignments. The writing requirement for a writing-intensive course is a minimum of twelve to fifteen pages of prose that have
gone through a process of revision. Writing-intensive courses meet for one hour more per week than regular sections of such courses.

The W designation, when appended to a course number, indicates that the course satisfies the requirements of the Writing-across-the-curriculum program. A student who has successfully passed a $W$ class is considered to have met any college requirement that requires the equivalent non-W class.

## Mathematics requirement

Students who have passed the University Skills Assessment Test in mathematics or who have been exempted from it on the basis of SAT or Regents Examination scores and who have passed Course 2 but have not passed Course 3 of the New York State Sequential Mathematics Curriculum or who have passed Regents course A but not course B and who wish to take precalculus will be placed in Mathematics 2.91.

Students who have completed three years of sequential mathematics or the equivalent in high school and wish to register for calculus without having passed with a C or above a college course in precalculus should consult a counselor in the Mathematics Department to determine their placement.

## Speech requirement

All students (except those selected for ESL and those with the equivalent of Speech 3, 3.2, 10, or 10.1) must be screened for speech proficiency before having completed 60 credits. Students may elect to be screened earlier. Students selected for ESL will be screened for speech proficiency when they exit the program and before they will be allowed to register for additional courses.

This screening will be performed by members of the speech faculty to determine students' ability to communicate orally and either to place them in an appropriate course in speech (0.1, 3, 3.2, 3.3, 10, or 10.1) or to grant them exemption. The results of the speech screening(s) will be noted on students' transcripts. Students initially placed in Speech 0.1 (Speech Clinic) are advised to register for it immediately upon placement and should continue to enroll in it each semester until they successfully complete the course. At that time they will be screened again and, if assigned to another speech course, must register for it immediately.

Students who fail to pass an assigned speech course in any semester must register for that course the following semester.

In order to receive a Brooklyn College degree, students must pass the speech course(s) in which they were placed.

## Withdrawal from basic skills courses

Students shall not be permitted at any time to delete, drop, or withdraw from an assigned skills course without permission of the Academic Advisement Center, which shall consult the department involved.

## Exemption examinations

The Brooklyn College course exemption examination is designed to permit students of unusual ability to accelerate and enrich their college education. Such students may qualify, after suitable independent preparation, for exemption from designated courses on the basis of examination procedures prescribed by the faculty of the department or program responsible for the regular course. The examination reflects the full scope of the course. In addition to an examination, there are, where appropriate, papers, reports, laboratory experiments, or any other assignments that the faculty of a department considers proper for the course.

The following rules govern exemption examinations:

1. The student must be registered for the term during which the exemption examination is to be taken.
2. The student must have a minimum overall Brooklyn College GPA of 3.00 at the time of application for the examination. This requirement is waived for a student who is in the first semester of college attendance.
3. The student may offer for credit toward the baccalaureate degree a maximum of six courses taken by Brooklyn College exemption examinations.
4. The student may take no more than two exemption examinations in any one term.
5. The student may not take exemption examinations in courses in which he or she was previously registered, whether or not the course was completed.
6. The student may not take an exemption examination in a course after auditing that course.
7. The student may not repeat an exemption examination in a course.
8. Departments will designate those courses in which credit may be earned through an exemption examination.
9. Students apply for an exemption examination in the Office of the Registrar, 1118 Boylan Hall. A record of courses attempted by the student through exemption examinations is kept by the Office of the Registrar.
10. Grades and credits: (a) With a grade of B- or higher on an exemption examination, the student earns credit for the course and the grade is counted in the GPA; (b) A grade of C+ or lower is not considered satisfactory on an exemption examination. The student is not exempt from the course, no credit is earned, the grade is not counted in the GPA, and the course is not listed in the transcript. Grades lower than passing are not recorded on the transcript or counted in the GPA; (c) No honors credit may be earned for courses completed by exemption examination.

## Credits for military service

A veteran may receive up to 6 credits toward a baccalaureate degree for four months or more of documented active service and up to 12 credits for at least one year of documented active service. Veterans must have an honorable discharge from American services. When granted, these credits are given as elective credits only.

During their next-to-last term at the college, veterans may apply for these credits in the Academic Advisement Center. Veterans must carry a full program each term even though they apply for credits for military service. A GPA of 2.00 or higher is required to qualify for credits for military service.

## Registration

A Schedule of Classes is published each term and is also available on the college's Web site for the Divisions of Undergraduate and Graduate Studies. It contains a list of course offerings for the term, an academic calendar, instructions for registering, and important announcements. Students are notified by mail as to how to obtain a schedule. The time and place of registration are printed in the class schedule. The Schedule of Classes includes the Final Examination Schedule and should be kept until the end of the term. Students should plan more than one program, for some classes may be filled by the time they register.

All students, with the exception of freshman, SEEK, ESL, and new transfer students, may register by telephone or on the Web. Instructions are provided in the Schedule of Classes.

## Course restrictions

Exclusion clauses, prerequisites, and corequisites that restrict a student's enrollment in some courses appear in this Bulletin following the course description.

An exclusion clause closes a course to a student who is enrolled in or has completed a course similar in content.

A prerequisite indicates the academic preparation and special permission that may be required for a course; a corequisite indicates required work to be completed in conjunction with a specific course.

It is each student's responsibility to be aware of and be guided by exclusion clauses, prerequisites, and corequisites that apply to any courses for which he or she plans to register. Students will not be permitted to register for a course unless they have fulfilled the prerequisites as listed in this Bulletin.

## Program changes

After the student has completed initial registration, program changes may be made by adding a course, dropping a course, dropping all courses, or changing from one course section to another. Deadlines, fees, and other information regarding program changes are published each semester in the Schedule of Classes. Students whose programs require an adviser's approval prior to registration must obtain an adviser's approval for any program changes.

Adding a course. The last day for adding a course without special permission is printed in the Schedule of Classes. After this deadline date, an application for the addition of a course must be obtained from the Office of the Registrar. Each application must include permission of the course instructor and the department chairperson.

Dropping a course. During the first three weeks of the fall and spring semesters, a student may drop courses without special permission. These courses will not appear on the permanent record. The precise deadline date is printed in the Schedule of Classes.

## Withdrawing from a course with or without penalty.

After the end of the three-week "program-change" period described above, a student may request a withdrawal from a course. The course, however, will remain on the student's permanent record. The procedure to be followed and the grade to be assigned will vary according to the time periods listed below:

1. Fourth through tenth weeks. The nonpenalty grade of W will be assigned after the end of the "programchange" period but prior to the end of the tenth week of classes.
Students should apply for the withdrawal through the Office of the Registrar. However, prior approval of the Academic Advisement Center is required for (1) students whose programs require an adviser's approval prior to registration and (2) students who wish to withdraw from basic skills courses
(e.g., English 1).
2. After the tenth week. Beginning with the eleventh week of the fall or spring semester, all students must apply for withdrawal through the Academic Advisement Center. The nonpenalty grade of W will be assigned only in unusual circumstances. Reasons for the withdrawal request will be very carefully evaluated. In addition, the instructor's report must indicate that the student is passing the course or that there is insufficient basis for grading the student.
The penalty grade of WF, withdrew failing, will be assigned under two conditions: (1) the reason for the withdrawal request is not approved by the Academic Advisement Center; and (2) the reason may be approved by the Academic Advisement Center but the instructor's report indicates that the student is failing the course at the time of the withdrawal request.
3. Unofficial withdrawals. Students who unofficially withdraw from a course-i.e., stop attending during the semester-will be assigned either an F or a WU (unofficial withdrawal, equivalent to F) by the instructor. The F signifies that the student was failing prior to leaving the course; the WU signifies that when the student stopped attending there was either insufficient basis for assignment of a grade or the student was passing the course. A WU grade will therefore also be assigned to students who are listed on the official registration roster but never attended class. Since the WU grade is a penalty grade, it may be to the student's advantage to officially request course withdrawal.

Withdrawals in relation to financial aid. Students receiving financial aid assistance who apply for withdrawal from a course should discuss with a financial aid counselor the effect of such a withdrawal on financial aid eligibility for that semester and for future semesters.

## Veterans registration

Veterans claiming benefits must complete application forms in the Veterans Affairs and Counseling Center, 0301 James Hall, each term during registration.

## Taking a course at another college

Brooklyn College students who want to take one or more courses at another college must apply for permission in advance in the Office of the Registrar. Students must have a bulletin or catalog of the college they want to attend. After the completion of 60 credits, however, no credit will be given toward the baccalaureate degree for work completed at a two-year college.

## Admission of seniors to graduate courses

Seniors whose scholastic work is superior and who want to take graduate courses must be recommended by the department chairperson or designated deputy. The Academic Advisement Center will then consider students for admission to graduate courses for undergraduate or graduate credit.

## Auditing a course

Anyone may audit a course provided there is room in the class. Auditing allows the interested student to increase his or her knowledge and proficiency by attending courses without receiving either a grade or credit toward a degree. The amount of student participation in an audited course may vary, at the discretion of the instructor, from complete fulfillment of all course requirements to classroom attendance alone. The following regulations apply to auditing:

Auditing requires permission of the instructor, permission of the department chairperson, and official registration as an auditor. Unofficial auditing is not permitted. Students who receive permission to audit a course may register in the Office of the Registrar, 1118 Boylan Hall, beginning on the first day of classes up until the usual deadline for adding courses. Information about the fee for auditing is in the chapter "Tuition and Fees" in this Bulletin.

If, for any reason, students later take courses that they have already audited, they will be governed by the regulations for repetition of courses, which are described in this Bulletin.

Students may not receive credit for courses taken by exemption examinations if they have already audited the courses.

Courses audited are so designated on the student's transcript.

## Pass-fail option

Sophomores, juniors, and seniors who have a grade point average of 2.00 or higher are eligible to take some courses for a pass or fail grade. Only students in degree status for the baccalaureate may qualify. A pass grade is not counted in a student's GPA; a fail grade is counted in the GPA. A GPA of 2.00 or higher is not required for the pass-fail option in the physical education activities referred to below.

The pass-fail option is designed to encourage students to explore areas of inherent interest and thus achieve greater breadth of view. Often students hesitate to take courses in new areas since they have no way to gauge their capabilities in such areas. Since
maintaining the best possible GPA is of paramount importance to most students, many are discouraged from such exploration.

A total of ten courses may be taken under the option. Students may take a maximum of six courses that are not physical education activities courses, with the exceptions noted below. All students, except majors in physical education, may also take four courses in physical education activities (Physical Education and Exercise Science 17.2 through 17.45).

The following courses may not be taken for a pass or fail grade:

1. Collegewide requirements, including Core Studies courses for students who are subject to the core curriculum as well as courses accepted by the college as substitutes for Core Studies courses. Students should be aware, however, of the retroactive pass option for core curriculum courses, as described in the chapter "Programs of Study" in this Bulletin.
2. All courses in the student's major department.
3. Courses outside the major department that are required to complete the major.
4. Honors courses.

In the fall and spring terms, students may take for a grade of pass or fail no more than two courses each term as follows: one physical education activity course and one course chosen within the other limitations noted above. During summer session, students may apply to take physical education activities (Physical Education and Exercise Science 17.2 through 17.45) for a pass or fail grade. Summer application should be made in the Office of the Registrar by the third day of the term.

The registration procedure for taking a course for a grade of pass or fail is the same as for any other course; application to elect the pass-fail option is made in the Office of the Registrar after a student registers. Students should keep a copy of the application. The application must be filed no later than two weeks after classes begin. The specific deadlines are published in the Schedule of Classes each semester.

A student who takes a course under the pass-fail option must complete the course under that option. A pass grade may not be changed to another grade. All requirements of a course taken for a pass or fail grade, including term papers and examinations, must be completed satisfactorily. Honors projects may be submitted. However, courses completed with a pass grade are not counted in computing a student's
eligibility for the Dean's Honor List. A student who receives a pass grade in a department that subsequently becomes the student's major department may apply to the Academic Advisement Center for permission to apply the course toward requirements for a degree.

## Interdivisional transfer

Students in attendance who want to change their status from DAY to EVE or EVE to DAY must file an application for status change in the Office of the Registrar.

## Size of program

A full term's work is at least 15 credits. For compensatory courses, contact hours are counted instead of credits in the determination of program size and tuition. For compensatory courses, contact hours are counted instead of credits. Limitations are as follows:

1. Entering freshmen may take a maximum of $161 / 2$ credits.
2. Upper freshmen who have at least a B average (3.00) may take a maximum of $171 / 2$ credits.
3. Students who have at least 27 credits and who have at least a 2.70 GPA for the preceding term may take a maximum of $181 / 2$ credits. If their GPA for the preceding term was below 2.70 but was 2.00 or higher, they may take a maximum of $171 / 2$ credits.
4. Students who have an average of below 2.00 may not take more than 12 credits and must see an adviser to register.

Students should bear in mind that typically at least three hours of work (classwork plus homework) are assumed for every credit.

Students who are employed or have other obligations or responsibilities that substantially restrict their study time are advised to reduce their work loads as follows:

Employed 10 to 15 hours: reduce work load by 3 credits.

Employed 16 to 25 hours: reduce work load by 4 to 6 credits.

Employed 26 to 35 hours: reduce work load by 7 to 9 credits.

Permission to carry more than the permitted number of credits may be given to superior students on application to the Academic Advisement Center. Students should apply at least one week before registration.

Students who receive Social Security benefits and recipients of certain scholarships and financial aid are responsible for finding out the size of program they must carry each term and the academic standards they must meet to be eligible for these programs.

## Credits required for classification

A student's class standing is determined by the number of credits earned, as follows:

Upper freshman: 15 credits
Lower sophomore: 30 credits
Upper sophomore: 45 credits
Lower junior: 60 credits
Upper junior: 75 credits
Lower senior: 90 credits
Upper senior: 105 credits

## Attendance

Class attendance is recorded each session. Students are expected to attend all scheduled sessions of every class for which they register. Students late for class may be excluded from the room.

An instructor may consider attendance and class participation in determining the term grade. Freshmen absent from a course for a number of times equivalent to two full weeks of class meetings may be denied credit for the course.

When an instructor is late, students should remain in class for ten minutes before consulting the department office for instructions. When an instructor is absent and no substitute is provided, the department informs the class.

Students are responsible for taking examinations as scheduled and for submitting assignments on time.

## Final examinations

Unless a course is specifically exempted by the Faculty Council, a final examination is required to be given in the fifteenth week of every course. A student who has done A work in an advanced course may be excused from the final examination at the discretion of the instructor. The Final Examination Schedule is listed in the Schedule of Classes each semester.

## Absence from final examination

A student absent from the final examination in any course may be given the grade ABS. A makeup examination may be taken only by authorization of the Academic Advisement Center on presentation of written evidence that the student was physically unable to be present at the regularly scheduled examination.

Application for a makeup examination must be made by the end of the second week of classes of the following term. The makeup examination must be taken during the term following enrollment in the course, not including summer session. If the makeup examination is not authorized or not completed, the grade FAB is assigned.

Illness during an examination should be reported immediately to the proctor, who will make note of it on the examination booklet and inform the Academic Advisement Center. Students should apply to the Academic Advisement Center for permission to take an absentee examination.

## Second final examination for graduating seniors

A student who is a candidate for graduation may receive authorization from the Academic Advisement Center, with the concurrent approval of the instructor and/or the department chairperson, to take a reexamination in a course to raise the final grade. The course must be one taken in the last term and must be essential to graduation requirements.

## Grades

Instructors are expected to provide students with a syllabus of the work to be covered in the course and to make grading procedures clear to students by the end of the first week of classes. Instructors should return all papers and tests, except for final examinations, after grading. Students should be informed of where and when the instructor is available to discuss course work and grades. Students should raise questions promptly about test marks or grades on papers.

## Final grades

Students receive a final letter grade in every course. If there is an appeal of a grade, it should be made as soon as possible after the grade is assigned. See "Protest of final grade," below.

At the end of each term, grades are available through the telephone registration system, (212) 671-2700, and at WebSIMS, www.brooklyn.cuny.edu. Students should report immediately a discrepancy between a grade received from an instructor and a grade on the transcript to the Office of the Registrar. The following grading system is used:

| Grade | Definition |
| :--- | :--- |
| A+, A, A- | 90-100 percent |
| B+, B, B- | $80-89$ percent |
| C+, C, C- | $70-79$ percent |
| D+, D, D- | 60-69 percent; lowest passing grade |
| F | Failure |
| P | Pass (applicable only in the pass-fail option) |
| ABS | Absent from final examination |
| CR | Credit earned; no grade assigned |
| FAB | Failure because makeup final examination <br> is not authorized or not completed |
| FIN | Failure because incomplete work is not <br> completed |
| H | Honors (may be assigned with grade of <br> B- or higher or P) |
| INC | Term's work incomplete |
| NC | No credit earned |
| S | Satisfactory <br> U |
| Unsatisfactory |  |

For grades $A$ through $D$, a plus sign indicates a stronger performance and a minus sign indicates a weaker performance within the range of the letter. If a failing grade is preceded by a pound sign (for example, \#F, \#FAB, \#FIN, \#WF, \#WU), see "F-grade replacement" below.

## F-grade replacement

Undergraduate students who receive a failing grade in a Brooklyn College course and who retake that course at Brooklyn College and earn a grade of C- or better may have the failing grade deleted from the calculation of the GPA and replaced by the passing grade. The original failing grade will remain on the transcript, but a special note will indicate that it is not used in the computation of the GPA.

The number of failing credits that can be replaced in calculating the GPA shall be limited to a total of 16 for the duration of the student's undergraduate career in any of the institutions of the City University of New York.

A failing grade may not be partially deleted from the calculation of the GPA. For example, a student who has used 14 credits of the 16 -credit total may only replace a failed 2 -credit course.

In order for the grade of C- or better to replace a failing grade in the calculation of the GPA, students must repeat the course at the same college where they originally received the failing grade.

## Unresolved grades

The grades ABS and INC are unresolved grades. The grade ABS may be assigned if a student is absent from a final examination. The grade INC may be assigned if the instructor gives a student an extension of time to complete the course work for the term. The instructor may change the grade of INC to another grade when the work has been completed.

Deadlines for resolution of the grades ABS and INC appear in the Schedule of Classes published each term. Students who do not meet the deadlines are assigned a grade of FAB or FIN.

## Protest of final grade

The grade submitted by the instructor and entered on the student's transcript stands unless there is good reason to change it. A change is made if an error was made in entering the grade or if the instructor agreed in advance to late completion of work. When a grade has been assigned and recorded, the instructor may not raise the grade by accepting additional work except when the grade ABS or INC has been assigned.

A student who thinks a final grade is inaccurate should consult the instructor immediately after learning the grade. The instructor may recommend a change of grade to the department chairperson, citing a valid reason for the change. The chairperson or deputy chairperson may then recommend the change to the Academic Advisement Center. The office either approves the change and forwards it to the Office of the Registrar for entry on the student's transcript or advises the department of the reason for disapproval. The Academic Advisement Center notifies the student of its decision.

If the instructor does not recommend a change of grade, a student may request a review by the department chairperson through appropriate departmental procedures. If the student wants to pursue the matter further, he or she should apply to the Academic Advisement Center regarding final appeal to the Faculty Council Committee on Course and Standing.

## Grade point average (GPA)

To demonstrate satisfactory academic progress, Brooklyn College students must maintain at least a 2.00 cumulative grade point average (GPA).

To calculate the GPA:
Step 1: Based on the following values, multiply the number of credits in each course by the numerical value of the grade in each course. Add the sum of those products to calculate the total number earned.

A+ and A equal 4.00; A- equals 3.70;
$B+$ equals 3.30 ; $B$ equals 3.00 ; $B$ - equals 2.70 ;
C+ equals 2.30; C equals 2.00; C- equals 1.70;
$D+$ equals 1.30; D equals 1.00; $D$ - equals 0.70 ; and F, WF, and WU equal 0 .

Step 2: Add the total number of credits. This sum includes credits for courses passed as well as failed. It does not include the final grade of $W$ or unresolved grades of ABS and INC. Once resolved, final letter grades that replace ABS and INC are included in the GPA calculation. To calculate the effect of repeating a course, see the subheading "Repeating a course" below.

Step 3: To calculate the GPA, divide the total number earned (sum from step 1) by the total number of credits taken (sum from step 2). For example, the cumulative GPA of a student who has completed 55 credits with the letter grades indicated below calculates as follows:

| Grade | GPA value | Credits taken |  |  | Total |
| :--- | :---: | ---: | ---: | :--- | ---: |
| A+ | 4.0 | x | 3 | $=$ | 12.0 |
| A | 4.0 | x | 12 | $=$ | 48.0 |
| B+ | 3.3 | x | 10 | $=$ | 33.0 |
| B- | 2.7 | x | 5 | $=$ | 13.5 |
| C | 2.0 | x | 17 | $=$ | 34.0 |
| D- | 0.7 | x | 3 | $=$ | 2.1 |
| F, WF, WU | $\mathbf{0 . 0}$ | x | $\mathbf{5}$ | $\mathbf{=}$ | $\mathbf{0 . 0}$ |
| Total |  |  | 55 |  | 142.6 |

In this example, the GPA is $142.6 \div 55=2.592$.

## Retention standards

## Satisfactory academic progress and the grade point average (GPA)

To demonstrate satisfactory academic progress students must maintain at least a 2.00 cumulative grade point average (GPA) based only upon credits attempted at Brooklyn College. Students experiencing difficulty with their course work should see an adviser in their major department and a counselor in the Academic Advisement Center for assistance and counseling. Students whose cumulative GPA falls below 2.00 are subject to probation and dismissal from Brooklyn College.

Repeating a course. When a student repeats a course or its equivalent and the student received a grade of $D$ - or higher the first time he or she completed the course, the student does not receive credit for the repetition. Brooklyn College does not compute the grade received for the repeated course, whether a passing grade, F, WU, or WF, into the student's cumulative GPA.

There are instances in which a student must successfully complete a sequence of two courses in order to receive credit for the first course. When Brooklyn College withholds credit for graduation because the student has completed only the first course, the grade for that course is not counted in the cumulative GPA.

Some departments limit the number of courses or credits in a particular discipline that a student may apply toward the baccalaureate degree-for example, in writing courses in the Department of English and physical education courses for non-majors in the Department of Physical Education and Exercise Science. If a student completes courses in excess of the limitations, Brooklyn College records the credits and grades earned on the transcript with a symbol. The symbol indicates their inapplicability to the fulfillment of the baccalaureate degree requirements and they are not included in the computation of the GPA.

## Academic standing, probation, and dismissal

A student's academic standing is reviewed at the end of each semester. Students whose cumulative GPA falls below 2.00 are subject to dismissal from the college, based upon the following guidelines:

## Academic Probation:

Students are placed on academic probation if:

1. Their cumulative GPA falls below 2.00; or
2. They have two consecutive academic semesters in which their semester GPAs fall below 2.00 regardless of their cumulative GPA.

Students placed on academic probation will receive a letter from the Academic Advisement Center informing them of their academic standing and blocked registration and notifying them of the necessary steps they must take in order to remove themselves from academic probation.

1. Students placed on academic probation for condition 1 (cumulative GPA falls below 2.00) will remain on probation for three successive semesters (including the semester in which they are originally placed on probation). During probation, students must maintain satisfactory academic progress to restore their cumulative GPA to 2.00 , which includes earning a GPA of at least 2.30 while on probation. Failure to maintain satisfactory academic progress during the probationary period will result in dismissal.
2. Students placed on academic probation for condition 2 (they have two consecutive academic semesters with semester GPAs below 2.00 regardless of their cumulative GPA) will remain on probation until they maintain a minimum 2.00 GPA for two successive semesters.

Students who have been placed on academic probation and who make satisfactory progress will continue to maintain their academic standing with the college and their concurrent eligibility for financial aid.

## Dismissal:

Students who do not maintain satisfactory progress toward restoring their cumulative GPA to 2.00 during the academic probation period (described above) will receive a letter from the registrar advising them of their dismissal from Brooklyn College. Students dismissed from Brooklyn College for unsatisfactory academic progress cannot apply for reinstatement for at least one full semester (excluding summer session), and when they apply for reinstatement, they must provide evidence that they are capable of performing at the level required to prevent further dismissals. Brooklyn College encourages students to meet with a counselor in the Academic Advisement Center to review their
options once dismissed and the evidence they will need to provide for reinstatement.

Students in the SEEK program who do not meet the program's academic standards will be placed on academic probation. SEEK students on probation must meet regularly with their SEEK counselors, the SEEK proctor of students, and SEEK tutors. Students who do not improve their academic standing and who do not meet the program's requirements while on probation will be dismissed from the SEEK program.

## Reinstatement on academic probation

In accordance with CUNY policy, a student dismissed for unsatisfactory academic performance may apply for readmission on academic probation no sooner than one full term, excluding summer session, following dismissal. Brooklyn College rarely considers readmission, however, until dismissed students have remained absent from college for a full year. Although there is no guarantee of readmission, the student may be admitted on probation based upon the following reinstatement guidelines:

After remaining out of Brooklyn College for at least one full term, students who have been academically dismissed may apply for reinstatement by presenting evidence that they are capable of performing at the level required to prevent a second dismissal. Once reinstated, students must apply for readmission to Brooklyn College and adhere to the general guidelines for reinstated students as follows:

1. Following reinstatement, students formerly dismissed from Brooklyn College will remain on academic probation until they complete 24 credits with a cumulative GPA of 2.00 and will be subject to final academic dismissal if they fail to meet the requirements for removal from academic probation as listed above.
2. Once removed from academic probation, they will be subject to the same conditions for subsequent academic probation and dismissal as students not previously academically dismissed.

## Reinstatement after two or more years (Brooklyn College Fresh Start)

The following reinstated students may apply for the Brooklyn College Fresh Start program, which includes having none of their previous Brooklyn College course work counted toward graduation and the computation of their grade-point standing: those who have completed an associate's degree with a minimum 2.50 GPA at a community college; those who have acquired 60 credits of course work at another accredited institution of higher education with a minimum 2.50 GPA; and those who have taken an absence from all colleges and universities for two or more years. All students seeking admission to the Brooklyn College Fresh Start program must first complete at least 12 Brooklyn College credits on academic probation with a GPA of 2.00 or better after readmission. The calculation of the GPA after readmission begins with the semester of readmission. Students in the Fresh Start program will remain on academic probation until they complete 24 credits with a cumulative GPA of 2.00 and will be subject to final academic dismissal if they fail to meet the requirements for removal from academic probation as listed above. Students who wish to apply for the Brooklyn College Fresh Start program must meet with a counselor in the Academic Advisement Center.

Part-time or full-time students may take advantage of the Brooklyn College Fresh Start rule. If a student has completed a degree and re-enrolls, the Brooklyn College Fresh Start does not apply to Brooklyn College courses credited toward the degree already completed. Moreover, students may use the Brooklyn College Fresh Start option only once, and they are subject to the same conditions for academic probation and dismissal as students not enrolled in the program.

## Status change requirements

Students with nondegree-bearing status may apply for degree-bearing status through the Office of Admissions on the basis of having achieved one of the following:

1. A GPA of 2.50 for the first $7-14$ credits or more earned at Brooklyn College in a well-balanced academic program of liberal arts and core courses.
2. A GPA of 2.00 for the first 24 credits or more earned at Brooklyn College in a well-balanced academic program of liberal arts and core courses.
3. Students transferring as nondegree students from other colleges will not have their credits from that institution evaluated until they have been accepted by Brooklyn College as matriculated students. Applicants must provide official records of high school and previous college attendance. Applications for status change are available in the Office of Admissions, 1203 Plaza Building. Deadlines for filing applications for status change are January 3 for the spring semester and July 1 for the fall semester.
4. Applicants are required to pass all three University Skills Assessment Tests in reading, writing, and mathematics.

## Readmission

After a term or more of absence, students who want to be readmitted to the college must apply at least two months before registration in the Office of the Registrar. Students must have copies of their records sent directly to the Office of the Registrar, Readmission Division, by any institution attended since they last attended Brooklyn College.

Students who have withdrawn from college after the twentieth school day of a term automatically receive registration material for the following regular term. Students who have dropped all their courses before the twentieth school day of a term and want to be readmitted the following term must file an application for readmission in the Office of the Registrar.

Entering freshmen and transfer students who drop all their courses before the twentieth day of their first term must reapply for admission through the University Application Processing Center, Box 136, Bay Station, Brooklyn, New York 11235.

Students must meet the requirements for degrees in effect at the time of readmission. For exceptions to this policy, see "Degree requirements" above in this chapter.

## Scholastic honors

## Dean's Honor Lists

There are two Dean's Honor Lists: one for full-time students and one for part-time students. Eligibility criteria for both are as follows: a student must achieve a 3.50 GPA excluding courses assigned grades of $P$, credits granted for life experience, and summer session courses; cannot have grades of F, FAB, FIN, WF, WU, or NC or grades with \# or * in front of them; cannot have grades of INC or ABS unless these grades are resolved in the semester immediately following and the student becomes eligible, in which case the student will be named to the list retroactively; and must be a matriculated student seeking a Brooklyn College degree (nondegree, CUNY B.A.,
and post-baccalaureate students are not eligible). Students cease being eligible after the semester in which 135 credits have been completed.

## Additional criteria for each list are as follows:

Full-time students who are eligible for the Dean's Honor List must have achieved at least 12 completed credits (excluding courses taken for a grade of pass or fail) in the semester for which they are being considered.

Students who are eligible for the Dean's Honor List, Part-time, will have been part-time students for a full academic year beginning with the fall semester; i.e., registered for less than 12 total credits (excluding courses taken for a grade of pass or fail) in each of the two consecutive semesters. Students must have achieved a total of at least 15 credits (excluding courses taken for a grade of pass or fail) over the two consecutive semesters.

## Honors awarded at graduation

At graduation there are two honors designations: honors for general excellence and honors for excellence in advanced study centered in a department.

Honors for general excellence. A degree summa cum laude is granted for a GPA of at least 3.90. A degree magna cum laude is granted for a GPA of 3.75 or higher, but less than 3.90. A degree cum laude is granted for a GPA of 3.50 or higher, but less than 3.75 . For transfer students, the GPA for honors is computed on the basis of the complete college record, including all transfer credits, as well as separately on the basis of grades earned in courses taken at Brooklyn College. The required GPA for graduation with honors for general excellence must be achieved in both cases.

Honors for excellence in the major. A degree with honors for excellence in the major is granted for a GPA of at least 3.50 in all advanced work in the major; satisfactory completion of at least 3 credits in honors work at an advanced-course level or its equivalent as determined by the individual department or program.

# Special Programs 

## College Now program

Under the auspices of the Brooklyn College Center for Educational Change, the College Now program provides extensive collaborative partnerships between the college, CUNY, and the New York City Department of Education. The goal of these partnerships is to publicize and facilitate college-bound awareness among high school students. The program provides early-intervention services to twelve high schools.

Teaching scholars-"peer tutors," student observers, and student teachers from the Brooklyn College School of Education—provide a customized learning community at the school sites. The program offers a full array of services, including a core program in literacy with a strong focus on reading; college preparatory CAP counselor advocates for eleventh graders; college-credit courses for high school students who enroll at Brooklyn College; theater experiences at the schools and at Gershwin Theater; high school and service learning credit to students taking college preparatory courses and interactive hands-on workshops; extensive professional development for teachers and tutors through on-campus conferences and workshops; intergenerational "open house" family days to increase college-bound awareness; and an arts consortium component. For further information, contact the College Now program, 2210 James Hall (telephone: 951-5209).

## Freshman Year College

Designed to help new students make the transition to college life, the nationally recognized Freshman Year College offers a coordinated program of advisement, support services, and specially designated course sections for first-time freshmen and transfer students. Under the auspices of Freshman Year College, all entering students meet with faculty and peer advisers to plan their first-semester programs. Entering freshmen are encouraged to register for block programs, groups of courses chosen from among writing and communication courses and courses in the core curriculum. Freshman block courses are taught by selected faculty. Since the same group of students take all three courses in a given block, new students have the opportunity to establish informal learning communities, both in and outside of the classroom or laboratory. Course work in Freshman Year College is coordinated with the Learning Center and the Starr English-as-a-Second Language Center. For information, contact the Office of the Dean of Undergraduate Studies, 3208 Boylan Hall (telephone: 951-5771).

## The On-Course Advantage

 3215 Boylan Hall, 951-5773Students who have successfully completed at least 12 credits in their first semester with a GPA of 3.00 or higher and who plan to register for at least 12 credits in their second semester are invited to participate in The On-Course Advantage (TOCA), a program that will help them graduate in four years. Benefits of the program include expedited registration and guaranteed access to required courses. Although graduation in four years is the aim of the program, students may also develop individual plans for graduation in five or even six years, depending on their goals and circumstances.

Second-semester transfer students who have successfully completed a minimum of 45 credits including 12 credits completed at Brooklyn College with a GPA of 3.00 or higher and whose preliminary transfer credit evaluation indicates that the requirements for a baccalaureate degree can be completed in two to three years are invited to participate in TOCA as well. Although graduation in two years is the aim of the program, transfer students may also develop individual plans for graduation in three or even four years, depending on their goals and circumstances.

## Preprofessional studies in healthrelated and law careers

The Office of Preprofessional Advisement provides individualized counseling and other services for undergraduate and post-baccalaureate students who are planning to pursue careers in medicine, the allied health professions, and law. The preprofessional adviser offers workshops on such topics as academic preparation, volunteer and research involvement, the application process, writing personal statements, and interviewing. Other resources include current prehealth and prelaw admissions materials, catalogs, and information regarding on- and off-campus volunteer and research opportunities. The preprofessional adviser also maintains a credential service for forwarding letters of recommendation to professional schools.

## Coordinated B.A.-M.D. program

Brooklyn College and Downstate College of Medicine of the State University of New York at Brooklyn offer a coordinated B.A.-M.D. program for students who are graduating from high school and entering Brooklyn College as freshmen. The program is designed to produce physicians who are well educated in the humanities and social sciences as well as in science.

Students are admitted to the program only in the fall term. Further information, including special application forms and detailed requirements of the program, may be obtained from the Brooklyn College Office of Admissions and from the B.A.-M.D. office. Additional information is in the "Admission" and "Interdisciplinary Studies" chapters in this Bulletin.

## Premedical and health-related professions curriculum

Brooklyn College students pursuing medicine or other health-related professions may major in any liberal arts discipline but must complete the following minimum requirements in science and mathematics: one year of general biology, one year of general chemistry, one year of organic chemistry, one year of general physics, and at least one semester of precalculus mathematics. Students should meet with the preprofessional adviser to ensure that they are meeting the minimum requirements of the medical and health profession schools of their choice.

Students who have completed at least 60 credits and other specific requirements may apply for transfer admission to health-related degree programs at the State University of New York (SUNY) Health Science Center at Brooklyn and other university health professions programs. The Health Science Center offers programs in public health, occupational therapy, physical therapy, physician assistant, nursing, and diagnostic medical imaging. In addition, Brooklyn College has an articulation agreement with the Health Science Center for the physical therapy program. Students interested in the physical therapy program should contact the Office of Preprofessional Advisement for further information, 3235 Boylan Hall (telephone: 951-5771).

## Brooklyn College-SUNY Optometry 3-4 Program.

 Beginning in January 2003, Brooklyn College and the State University of New York State College of Optometry will implement an agreement whereby up to six Brooklyn College students per year may be admitted into a seven-year bachelor of arts or science (B.A. or B.S.) and doctor of optometry (O.D.) program. Students accepted to the 3-4 Program are admitted to a designated, prescribed major at Brooklyn College and simultaneously admitted to candidacy into the SUNY College of Optometry's professional program of study. Students interested in the optometry program should contact the Office of Preprofessional Advisement for further information.
## Engineering curriculum

Students who intend to major in engineering can complete the first two years of requirements for a four-year engineering degree by taking appropriate courses at Brooklyn College in chemistry, computer and information science, mathematics, physics, engineering, and liberal arts. Well-qualified students interested in engineering may also apply to the Honors Academy at Brooklyn College. Students should consult the engineering counselor about the entrance requirements of engineering schools. Information may be obtained in the Physics Department, 3438 Ingersoll Hall. Additional information is in the chapter "Admission" in this Bulletin.

## Coordinated engineering programs

Brooklyn College has three coordinated engineering programs with the City College School of Engineering, the College of Staten Island Engineering Science Program, and Polytechnic University. In these programs, the well-prepared student attends Brooklyn College for the first two years of study in an engineering curriculum that includes courses in mathematics, computer science, chemistry, physics, and the liberal arts. In addition, courses in mechanical and electrical engineering are offered. Upon successful completion of the Brooklyn College component, the student is guaranteed transfer to Polytechnic University, the College of Staten Island, or the City College School of Engineering for an additional two years to fulfill bachelor of science degree requirements in one of the following fields: aerospace, chemical, civil and environmental, computer, electrical, or mechanical engineering; or engineering science. The Brooklyn College courses in these programs are fully transferable to City College, the College of Staten Island, or Polytechnic University, and they are generally acceptable at other engineering schools.

## Brooklyn College/City College Coordinated Engineering Program

For the City College program, students must complete their engineering studies with a grade point average of 2.00 or better in required science, engineering, computer and information science, and mathematics courses in order to transfer with junior-year status to the City College School of Engineering. Areas of specialization comprise computer science, civil, electrical, and mechanical engineering. Students transferring to City College through this program may be required to complete certain courses during the summer before the junior year. For further information, call the Brooklyn College engineering coordinator (951-5418).

## Brooklyn College/College of Staten Island Coordinated Engineering Program

For the College of Staten Island program, students must complete their engineering studies with a grade point average of 2.00 or better in required science, engineering, computer and information science, and mathematics courses in order to transfer with junioryear status to the College of Staten Island Engineering Science Program. Areas of specialization comprise electrical, environmental, and mechanical engineering. For further information, call the Brooklyn College Engineering Coordinator (951-5418).

## Brooklyn College/Polytechnic University Coordinated Engineering Program

For the Polytechnic University program, students must complete their engineering studies with a grade point average of 2.50 or better in required science, engineering, computer and information science, and mathematics courses in order to be guaranteed admission with junior-year status in the specific, corresponding Polytechnic engineering program. Areas of specialization comprise electrical and computer, chemical, civil and environmental, and mechanical and aerospace engineering. Students transferring to Polytechnic University through this program may be required to complete certain courses during the summer before the junior year. The engineering degree will be awarded from Polytechnic University.

For further information, call the Brooklyn College engineering coordinator (951-5418) or the Polytechnic University Associate Director of Admissions
(718-260-3100).

## CUNY Baccalaureate Program

The CUNY Baccalaureate Program is a versatile program that enables students to design their own program of study leading to a B.A. or B.S. degree. Students who have completed at least 15 credits of college-level work with a grade point average of 2.50 or higher for their recent work may apply to the program.

Under the guidance of a faculty mentor, participants develop an individual course of study. Students must obtain their mentor from the relevant academic department. Applicants should have clear academic or career goals. Every student must complete 90 credits in regular course work and at least 30 credits while in the program. In some cases credits may be awarded for previous life experience.

Students who are admitted are eligible to study at any combination of the seventeen undergraduate colleges of the university. The degree is awarded centrally by the City University of New York. Students pay the same tuition and fees as Brooklyn College matriculants.

Information and application forms may be obtained in the Office of Adult Degree Programs, 1411 Boylan Hall (telephone: 951-5525); from the CUNY Baccalaureate Program, 365 Fifth Avenue New York, New York 10016 (telephone: 212-817-8220); or from the CUNY Baccalaureate Program Web site, www.cunyba.cuny.edu.

## Professional option

Students may earn a B.A. or a B.S. degree from Brooklyn College if they have satisfactorily completed all requirements except 30 elective credits and have satisfactorily completed at least one year's work in an accredited medical, optometry, veterinary, dental, engineering, or law school.

Courses offered to fulfill degree requirements, including those completed in the professional school, must constitute an acceptable degree program approved by the Academic Advisement Center. A student's professional school record is examined for duplication of work done at Brooklyn College, the extent of liberal arts work, the appropriateness of the professional courses as supplementary work in a liberal arts program, and the quality of the work.

Students interested in engineering should consult the engineering coordinator in the Physics Department, 3438 Ingersoll Hall. Students interested in health professions and law should consult the Office of Preprofessional Advisement, 3235 Boylan Hall (telephone: 951-4294). Students interested in law should consult a prelaw counselor in 1305 James Hall.

## Honors Academy

The Brooklyn College Honors Academy, 2231 Boylan Hall, serves exceptionally well-qualified, eager, imaginative students who are flexible in their interests and open to new discoveries and experiences. Its purpose is to stimulate students to develop their potential and to assume responsibility for educating themselves and, by learning collaboratively, for educating one another. The academy shares a suite of rooms with the Wolfe Institute for the Humanities.

The academy provides a coherent curriculum relevant to the needs of more than three hundred students. It offers access to faculty members through smaller classes, closely monitored apprenticeships, and working relationships with successful local professionals; a student commons room; a collaborative community of students similarly interested, ambitious, and talented; computer facilities and room to work and study together; access to the scholarly and cultural resources of New York City; tutoring experience; and programmatic guidance ensuring that students follow academic paths appropriate to their interests and talents.

The Honors Academy curriculum includes honors sections of English 1 and 2 and of Core Studies 1, 3, 4, 6, and 10; an interdisciplinary sophomore seminar; the B.A.-M.D. colloquium; and the senior colloquium for senior thesis support.

The academy brings together in one location nine distinctive, separately directed honors programs: the CUNY Honors College, the City University of New York intercollege honors program; the Scholars Program, a four-year program in interdisciplinary studies; the B.A.-M.D. program, a four-year program for students guaranteed entrance to the State University of New York Downstate College of Medicine; Engineering Honors, a two-year engineering curriculum leading to transfer to engineering studies elsewhere; the Dean's List Honors Research Program; the Mellon Minority Fellowship, a two-year upper-division program for minority students considering scholarly study in the humanities and other fields; the Honors Academy Research Colloquium, for selected seniors; Minority Access to Research Careers (MARC), a program in the sciences for minority students; and the Special Baccalaureate Degree Program, an innovative program for adults.

Application forms for all nine programs may be obtained in the Honors Academy office and in the Office of Admissions. Admission criteria for the four-year programs may be found in the "Special programs" section of the "Admission" chapter in this Bulletin. For scholarships offered by Brooklyn College, see "Scholarships, Prizes, and Awards."

## CUNY Honors College

The mission of the CUNY Honors College is to meet the needs of an exceptional group of the ablest and most highly achieving students in the City University of New York. Membership in the Honors College earns a student the designation University Scholar. Brooklyn College provides University Scholars with a specially created common suite of interdisciplinary courses designed to stimulate interest in and deepen understanding of the institutions and people of New York City. They pursue majors in a vast number of fields and are provided with funded opportunities for internship and research. In addition, the Honors College arranges events at artistic, cultural, and scientific venues of New York City. Distinguished faculty visit with students at both formal and informal events.

University Scholars receive substantial financial and academic support during their four years as undergraduates. All tuition and fees are paid by grants; additional stipend covers books. A generous academic expense account funds opportunities for study abroad and internships. Students are given a Cultural Passport that provides them with free or sharply reduced tickets to nearly one hundred artistic and cultural institutions in New York City. They are also provided with state-of-the-art laptop computers to facilitate research and communication.

As freshmen and sophomores in the Honors College, University Scholars take an Honors College seminar each semester and the balance of their course load in core curriculum and major requirements. The Honors College seminars are taught at Brooklyn College by distinguished faculty. Each seminar entails a research project that students carry out in teams with University Scholars from their own and other campuses. During their junior and senior years, students in the Honors College complete a minimum of 12 credits of honors courses in addition to the Honors College seminars. University Scholars take honors in their majors, which may involve a senior thesis. They are also required to complete an internship, a senior colloquium, or honorslevel study abroad, and thirty hours of community service. University Scholars must achieve an overall 3.30 GPA by the end of their first year and a 3.50 GPA by the end of their sophomore year. The 3.50 GPA must be maintained until graduation.

## Scholars Program

A four-year interdisciplinary liberal arts program, the Scholars Program is designed for a small community of well-prepared, academically ambitious students who are eager to extend themselves beyond normal course requirements. Its honors classes are small. Its curriculum encourages students to develop and pursue new interests by exploring relationships among different areas of knowledge. Students learn how to formulate, discuss, and write clearly about significant issues and to evaluate their work independently and realistically.

Scholars Program students carry the same course load as other students but each semester do honorslevel work in one or two of the courses they are carrying. As freshmen, they take an honors section of Freshman Composition that prepares them to work independently on interdisciplinary honors projects during their sophomore, junior, and senior years. They also take honors sections of selected Core Studies courses, a sophomore seminar, and a senior colloquium. The program encourages students in their junior year to broaden their experience with study at other colleges, study abroad, or involvement in workinternship programs in the New York City area.

Courses that Scholars Program students take for honors credit and pass with a grade of $A, B$, or $P$ are indicated on their transcripts with an H. Graduation from the program is marked with special recognition at Commencement, by a transcript notation, and by a note on the diploma, "Honors in the Scholars Program." Curricular requirements for the Scholars Program are described in the "Interdisciplinary Studies" section of this Bulletin.

## Coordinated B.A.-M.D. program

Admission requirements for the B.A.-M.D. program are described in the "Admission" chapter of this Bulletin. Curricular requirements are described in the "Interdisciplinary Studies" section of this Bulletin.

## Engineering Honors Program

The Brooklyn College Engineering Honors Program prepares students for careers in such fields as computer design, communications, robotics, aerospace, industrial chemistry, environmental protection, and materials science. The areas of specialization are aerospace, chemical, civil and environmental, computer, electrical, and mechanical engineering.

During their two years in the Engineering Honors Program, students follow a course of study of more than 70 credits in engineering and the liberal arts that provides a solid foundation for transferring as juniors to major engineering schools. Course work includes
physics, chemistry, biology, mathematics, and computer science as well as liberal arts courses in Brooklyn College's Core Studies program. Students also take courses in such subjects as engineering mechanics, electrical circuit analysis, data structures, and computer organization. These courses are equivalent to courses required during the first two years of study at most engineering schools. Further details are described in the "Engineering Curriculum" section of this Bulletin.

Upon completion of the program, students are guaranteed enrollment as juniors at City College School of Engineering, the College of Staten Island Engineering Science Program, or Polytechnic University. They may also apply for admission to any other engineering school.

For members of Engineering Honors who decide not to pursue engineering, the program's Core Studies requirements enable students to continue in one of the more than seventy undergraduate programs available at Brooklyn College.

## Dean's List Honors Research Program

Each year, well-qualified juniors with 61 to 90 credits may join the Honors Academy at Brooklyn College if they have been on the Dean's List for two consecutive semesters and are active candidates for departmental honors in their major.

Honors Academy students gather in the Honors Academy meeting and seminar rooms for work, study, and friendship with like-minded students from other academy programs. They have access to the academy's computer facilities and are offered honors courses and symposia, guidance in planning academic programs appropriate to their individual interests and abilities, and priority registration. Upon graduation, they receive "Honors Academy Graduate" certification on their transcript and diploma.

Students may apply for Dean's List Honors Research Program membership in the Honors Academy regardless of their major-humanities, sciences, social sciences, or the arts. Students who are not yet candidates for departmental honors may begin work on departmental honors by asking the chairperson or honors coordinator of their major department to approve a plan of honors-level study.

To continue as a Dean's List Honors Research Program member of the Honors Academy, students must maintain a GPA of 3.50 or higher, take one Honors Academy course or one Core Studies honors section during their first or second full semester as a member, and actively pursue departmental honors in their major. Their department honors adviser will keep
the academy informed of their progress. Applications for the Dean's List Honors Research Program are available in the Honors Academy Office.

## Mellon Minority Undergraduate Fellowship

Funded by the Mellon Foundation, the Mellon Minority Undergraduate Fellowship is open to African American, Hispanic, and Native American undergraduates who are interested in a career in college or university teaching and research in the humanities and other selected fields. Students are offered special courses and colloquia, faculty mentoring, and research opportunities. The major requirements are those of the department in which the student enrolls and will not be modified for this program. Mellon Fellows receive modest stipends for work done in the program.

Applicants must be full-time students in the second semester of their sophomore year (45-60 credits). Requirements for entrance include evidence of solid academic achievement, two letters of recommendation from faculty members, a written essay describing career interests, and an interview by the screening committee. Applications for admission and additional information are available from the director.

## Honors Academy Research Colloquium

The Honors Academy Research Colloquium is the Honor Academy's upper-division capstone program. Its goal is to enable students to pursue graduate and professional studies toward research careers in college and university teaching, medicine, law, or other professions. The colloquium requires two seminars, "Critical Analysis in Scholarship and Research" and "Knowledge and Society," in which students reflect on research they have been or are currently engaged in, the goals of research, the nature of research disciplines, and research methodologies. Students also study differences among kinds of research and the nature of institutions where research is conducted. The colloquium also requires a senior thesis or an independent study honors project in the student's major department or interdisciplinary program.

Students with 45 to 75 credits may apply for membership in the Honors Academy Research Colloquium. To be eligible, students must be members of one of the Honors Academy's eight other constituent honors programs or be accepted into the Mellon Minority Undergraduate Fellowship Program or the Dean's List Honors Research Program. Application forms are available in the Honors Academy office.

Minority Access to Research Careers (MARC)
The MARC program, for minority honors students (African American, Hispanic, Pacific Islander, or Native American) who are interested in pursuing research careers in the biomedical sciences, is described in the chapter "Scholarships, Awards, and Prizes" of this Bulletin.

## Special Baccalaureate Degree Program for Adults

The Special Baccalaureate Degree Program, for exceptional students who are returning to college as adults, is described in the chapter "Adult Degree Programs" of this Bulletin. Special Baccalaureate students may be accepted into the Honors Academy after they have completed 30 credits of course work with a GPA of 3.50 or higher.

## Honors

Students may earn honors credit and graduate with honors in several ways at Brooklyn College: through membership in the Honors Academy, by completing honors work in a departmental major, and by doing independent study projects in regular courses.

## Departmental honors

Students may do honors-level work in any departmental major or interdisciplinary program. Brooklyn College encourages students to begin making plans to graduate with departmental honors late in their sophomore year or early in their junior year. Students should begin making these plans by talking with a teacher in their major department, with the department chairperson, or with the department's honors committee chairperson. Some departments publish an honors brochure explaining requirements for graduating with honors. Departmental honors courses, usually numbered 83 through 89, are open primarily to juniors and seniors. Qualified upper sophomores may be admitted with the written permission of the department chairperson. Honors credit may also be earned for completion of honorslevel supplementary work in an introductory or advanced regular course in which the final grade is A, B, or P (see "Honors credit for regular courses," below). Honors credit is indicated on transcripts with an H. Students must have permission of the course instructor before beginning honors-level work.

## Honors credit for regular courses

Students may earn honors credit by doing substantial supplementary work in an introductory or advanced course in the regular undergraduate curriculum after arranging with the instructor at the beginning of the semester to do an honors project in that course.

To apply to do an honors project, students should fill out an "Honors Credit in Regular Courses" form obtained from the Office of the Registrar, 1118 Boylan Hall, and ask the instructor to sign it after discussing thoroughly the nature of work to be done.

At the end of the semester, the form should be returned to the instructor along with the completed honors project work. The instructor will submit the form with the grade roster for the course if the project has been satisfactorily completed. Honors credit will be allowed when the final grade in the course is $A, B$, or $P$. Honors credit is indicated on transcripts with an H .

## Certificate programs

Credit-bearing certificate programs are offered in accounting, computers and programming, and film production. Credits earned in these programs are also applicable toward the baccalaureate degree. A description of the certificate program in accounting is in the "Department of Economics" section of this Bulletin.

A description of the certificate program in film production is in the "Department of Film" section of this Bulletin.

## Study abroad

The Office of the Dean of Undergraduate Studies coordinates the study-abroad program and maintains a library of study-abroad information and program catalogs. The programs outlined below are offered exclusively by Brooklyn College. A variety of other study-abroad opportunities, such as those offered by other City University of New York campuses, the State University of New York, private colleges, and Study-Abroad Consortia, are also available to Brooklyn College students. A study-abroad adviser is available to meet with students and to assist in locating programs to meet their needs. The adviser and the library of study-abroad information are located in 3215 Boylan Hall (telephone: 951-3195 or 951-5773).

## Summer Program in London

The Department of English conducts an intensive summer program in London with the opportunity to study and travel during a five-week period, generally from the last week in June to the end of July. The program integrates reading and course work with the experience of living and studying in London and generally includes a Shakespeare course and another course focused on a period or genre of British literature. Classes meet Monday through Thursday mornings, leaving afternoons and weekends free. Frequent excursions and day trips are organized by the program's resident advisers, and students are
encouraged to use the weekends to explore other parts of England and Europe. This program is especially valuable to students studying English literature and history.

Program costs generally include round-trip airfare from New York to London, a private room at a University of London dormitory, daily breakfast, a London Transport pass for unlimited travel on tube and bus lines in Central London, and admission to eight plays. Tuition and college administrative fees are not included in the program costs and must be paid separately. Admission to the program is by application. The program is open to both undergraduate and graduate CUNY and non-CUNY students in good standing with a current GPA of 3.00 or higher. For more information, contact the director of the Summer Program in London, Department of English, 2308 Boylan Hall (telephone: 951-5195), or visit the program Web site, http://depthome.brooklyn.cuny.edu/bcinlondon/ home.html.

## New York/Paris Exchange Program

The New York/Paris Exchange Program offered by Queens College provides CUNY undergraduate and graduate students in all disciplines the opportunity to study at one of the Universities of Paris for one or two semesters. Participating students will register at their home colleges for a minimum of 12 blanket credits per semester before departing for France. When they return, the credits and grades they earned there may be applied toward their degrees as elective credits. Students of all departments are invited to apply. A minimal proficiency in French (three semesters of college French recommended) and a 2.70 overall GPA are required. There is a representative of the program on each campus. For more information or application, contact the study-abroad adviser, 3215 Boylan Hall (telephone: 951-3195).

## Study and Field Experience in Montpellier, France

In addition to language study, students may take advantage of service learning internships at local hospitals, societies for the disabled, and other social service agencies. The hosting institutions are the University of Montpellier II and the Institut d'Administration. Students may earn 3 to 6 credits in this summer program. To be eligible, students must be at least in their sophomore year, have at 2.75 GPA or higher, and meet a minimum language requirement of introductory-level French. For more information, contact the study-abroad adviser, 3215 Boylan Hall (telephone: 951-3195 or 951-5773).

## CUNY/Brooklyn College Program for Study in Israel

Brooklyn College undergraduate and graduate students may study for a semester, a year, or a summer in any of the following universities in Israel: Bar Ilan University, Ben Gurion University, University of Haifa, Hebrew University, or Tel Aviv University. Courses are taught in English, but students learn Hebrew as well. Internships and individualized, supervised study may be arranged to meet the special needs and interests of students. In addition, special activities, including archaeological digs, provide opportunities for students to become acquainted with the history, people, and culture of Israel.

Students earn full academic credit for courses taken in Israel. Some scholarships are available, and as long as students are enrolled at Brooklyn College during their study abroad, they remain eligible for most financial aid. For more information about the program, contact the director of the CUNY/Brookyln College Program for Study in Israel, 3608 James Hall (telephone: 951-5146).

## Summer Program in Africana Studies

The Department of Africana Studies periodically offers, through Africana Studies 73, a 6-credit summer seminar, usually in Africa, a Caribbean country, or one of the nations of South or Central America, or a region of the United States with a large population of people of African descent. Costs include Brooklyn College tuition and fees (including administrative fees) and a program fee that covers transportation and room and board. A graduate seminar is also available through Africana Studies 770X. For more information on Africana Studies summer seminars and on plans for future seminars, contact the Department of Africana Studies, 3105 James Hall (telephone: 951-5597 or 951-5598).

## Summer Abroad in China

This program is an excellent opportunity for students who are interested in learning about China, experiencing Chinese culture, and improving their Chinese language skills. All classes are Brooklyn College classes taught by the College faculty and may fulfill some College requirements. The five-week program offers a meaningful combination of classroom teaching about Chinese history, culture, and language and activities and excursions to six of the most beautiful Chinese cities: Beijing, Xi'an, Nanjing, Yangzhou, Suzhou, and Shanghai. The program is open to both undergraduate and graduate CUNY and non-CUNY students in good standing with a current GPA of 2.50 or higher. For more information, program costs, and application procedures, contact the study-abroad adviser, 3215 Boylan Hall (telephone: 951-3195 or 951-5773).

## Summer Seminar in Puerto Rican and Latino Studies

The Department of Puerto Rican and Latino Studies periodically offers a 6-credit summer seminar that enables students to study in Puerto Rico, the Caribbean, or other Latin American geographical settings. In conjunction with a university and/or other institutions or organizations in the host site, the summer seminar affords an opportunity for advanced work in Puerto Rican and Latino studies. In order to provide students with a broad Latino context, the seminar is occasionally held in a region of the United States that has a significant Latino population. A graduate seminar is also available. Costs include Brooklyn College tuition and fees (including an administrative fee) and a program fee that covers transportation and room and board. For more information, contact the Department of Puerto Rican and Latino Studies, 1205 Boylan Hall (telephone: 951-5561).

## Brooklyn College-in-Spain

Brooklyn College students may study for a semester in Madrid at the Fundación José Ortega y Gasset. Courses are offered for both heritage and non-heritage students from high intermediate to advanced levels. All courses are taught in Spanish, with an emphasis on the development of written and spoken language skills, reading competency, and cultural knowledge. Internships are available for qualified students. Courses include "The Golden Age of Spanish Literature and the Arts" and "Conversation and Contemporary Spanish Culture." Participants live with carefully selected Spanish families.

## Summer Institute in Spain for Teachers

Brooklyn College offers a summer program in Madrid in collaboration with the Fundación José Ortega y Gasset. The program responds to the interests and needs of New York State and New York City teachers by providing the opportunity to earn 6 undergraduate or graduate credits in Spanish and Spanish culture. Program participants may be heritage or non-heritage speakers of Spanish, with skill levels varying from elementary to advanced.

## Summer programs

## Summer sessions

Brooklyn College offers two summer sessions to matriculated and nondegree students. Students may not take more than 7 credits or two courses in each session. Students may, however, register for more than 7 credits if they are in a single summer institute. For study-abroad summer programs, see above.

Information about registration, tuition and fees, and course offerings is in the summer Schedule of Classes, which may be obtained from the Office of Student Records, 1112 Boylan Hall. Departments have information about specific courses.

## Summer Latin/Greek Institute

In the summer Latin/Greek Institute, Brooklyn College and the City University Graduate Center offer collegelevel work in language and literature. In the intensive eleven-week program, qualified students earn 12 undergraduate credits. No previous knowledge of Latin or Greek is required.

The Latin curriculum consists of study of forms and grammar, reading and analysis of representative texts from archaic remains through the Renaissance, and study of classical or medieval Latin literature. The Greek curriculum consists of language study and reading and analysis of representative texts in Attic, Ionic, and Koine Greek.

Information and application forms may be obtained in the Department of Classics, 2408 Boylan Hall (telephone: 951-5191), or at the Latin/Greek Institute Office, 365 Fifth Avenue, New York, New York 10016 (telephone: 212-817-2081).

## Continuing Education Program

The Continuing Education Program offers adults and young persons an opportunity for lifelong learning. New skills or careers may be acquired and talents developed in a friendly, professional atmosphere. A variety of test preparation offerings are available for elementary and high school students. Customized training programs are designed and delivered to businesses, industries, agencies, and corporations.

Noncredit courses offered for professional development and career enhancement, as well as those leading to training certificates, are given in the following areas: computer skills, child care, renal dialysis technology, medical billing, medical administration, bookkeeping, accounting, allied health professional training, paralegal studies, real estate, gerontology, and medical writing.

Students may explore a variety of noncredit programs in the humanities and foreign-language study. As goals are established, students develop skills that will enable them to progress academically and prepare for such tests as college entrance, English-as-a-second-language, and high school equivalency examinations.

High school and college preparatory academies are four-week summer programs designed to enhance academic skills of young adults. The programs are taught by experienced teachers who are certified by New York State or professionals who are accomplished in their fields.

Catalogs and information may be obtained at the Continuing Education Program, 1212 Boylan Hall (telephone: 951-4141), or by visiting the Web site, http://academic.brooklyn.cuny.edu/adulted.

## Institute for Retirees in Pursuit of Education

The Brooklyn College Institute for Retirees in Pursuit of Education offers opportunities for retired people to continue their education, develop creative talents, share life experiences, and foster social and interpersonal relationships. Courses vary in duration and subject matter and may include traditional disciplines, current events, trips, concerts, and workshops. Information may be obtained in 3160 Boylan Hall or by calling 951-5647.

## Campus high schools

## Midwood High School at Brooklyn College

Midwood High School is the affiliated campus high school of Brooklyn College. The campus high school project reflects the College's continuing concern for strengthening public secondary education and building professional working relationships between its faculty and teachers in the city's schools. Its goal is to strengthen the preparation of Midwood High School students for college and expand the constituency from which those students are drawn.

In this partnership, Midwood High School remains under the jurisdiction of the New York City Department of Education. In matters of curriculum design, school organization, and high school-college articulation, the president of Brooklyn College maintains contact with the chancellor of the New York City public schools, the High School Division of the Department of Education, and the Midwood High School principal.

## Brooklyn College Academy

The Brooklyn College Academy is a middle college high school on campus for students who can benefit from smaller classes, more individual attention, and a nurturing environment. The Senior Institute, on campus, houses grades eleven and twelve; "Bridges to Brooklyn," a new off-campus annex, houses grades seven through ten. The mission of the academy is to strengthen student performance and to expand students' horizons to include postsecondary educational opportunities and career goals.

Curriculum and alternative teaching strategies are developed through the collaborative efforts of the college and academy faculties. An integral part of the curriculum is a career education program that places students in self-selected working environments where they can acquire skills, experience, and selfconfidence while serving the community and earning high school credit. Enriched educational experiences are also offered through collaborations with cultural, civic, and educational institutions in the community.

Admission to the academy is open to Brooklyn residents, who may apply through their elementary school, junior high school, or high school guidance counselor.

## Adult degree programs

Adult degree programs leading to a B.A or B.S. degree extend higher education opportunities to adults. Information about these programs may be obtained from the Office of Adult Degree Programs, 1411 Boylan Hall (telephone: 951-5525).

The educational philosophy of adult degree programs proposes that age, job, and personal responsibilities should not bar a student from pursuing his or her higher education; that a student who needs a second chance for higher education, or a first chance later in life, should have that opportunity; and that study of the liberal arts and sciences provides the basic foundation for personal enrichment and career advancement. Convenient scheduling and academic counseling are important features of all degree programs for adults, which may be attended on day, evening, and/or weekend schedules.

## Special Baccalaureate Degree Program for Adults

Qualified adult students enrolled in this program may apply for life-experience credit for courses in which they can document or demonstrate mastery of the theoretical and practical content. Life-experience credit is awarded only on completion of the secondyear seminars.

Students study as a group for three years in interdisciplinary seminars. These seminars in communications and humanities, social sciences, and natural sciences make up 52 of the credits required for a B.A. or B.S. degree and satisfy the Core Studies requirements of the college. Students may concentrate in any academic major that the college offers during the day, evening, or weekend. Students may earn a B.A. or B.S. degree in three-and-one-half to four-and-one-half years. A counseling staff provides academic counseling and career guidance.

Admission to the program is based on application, testing, and a personal interview. Courses are listed in this Bulletin. The program office is in 1411 Boylan Hall (telephone: 951-5262).

Students with a Dean's List average (3.50) at the end of their first year in the program may become members of the Honors Academy. For more information, see the "Special Programs" section of this Bulletin or contact the director of the Honors Academy, 2231 Boylan Hall (telephone: 951-4114).

## Small College Program

The Small College Program is a full-time or part-time program in which adults may earn a B.A. or B.S. degree by attending a combination of day, evening, and weekend classes. The program offers the same course of study required of all students pursuing a degree. Students may take English 1.7 and 2.7 instead of English 1 and 2. Those who complete English 1.7 and 2.7 are exempt from English 1.7 and 2.7 and Core Studies 6, Landmarks of Literature. Students meet with an academic counselor each semester to plan their course of study and to ensure that their academic goals are being met. Students may select any major offered by Brooklyn College if they take some classes during the day. If they are able to attend evening and weekend classes only, they may major in eleven areas: accounting; business, management, and finance; computer and information science; economics; education; English; health and nutrition sciences; mathematics; philosophy (option 2); political science; psychology; and sociology.

Admission is based on an application, testing, and a personal statement. Consideration is given to a student's potential and motivation as well as prior education. Transfer students may be given credit for previous college work. Courses are listed in this Bulletin. The program office is in 1411 Boylan Hall (telephone: 951-5262).

# Counseling and Campus Services 

## Counseling

## Center for Career Development and Internships 1305 James Hall, 951-5696

Free services include career counseling, internship preparation and placement, graduate and professional school preparation and application advisement, and credentials services. Workshops on job search techniques include help with résumé writing; referrals to full-time and part-time jobs, employment recruiters, internships, and alumni advisers; information on the labor market and occupations; and interest assessment. For more information, visit the Web site at http://career.brooklyn.cuny.edu.

Drug and alcohol abuse counseling and information 1303 James Hall, 951-5363
Professional help is provided through individual and group counseling. Free, confidential services are available to students, staff, and faculty members as well as their families.

## Health programs <br> 1115 Plaza Building, 951-4266 or 951-4505

Information is available on student health and wellness issues, student immunization requirements, and health insurance. Emergency medical services are available in 021 Ingersoll Hall Extension (telephone: 951-5858). The Brooklyn College Health Clinic is located in 114 Roosevelt Hall (telephone: 951-5580).

Lay Advocate Program (legal counseling) 139 Ingersoll Hall Extension, 951-5360
The program offers members of the Brooklyn College community basic legal information, counseling by an attorney, and referral to legal-service agencies. Information on College rules and student rights is given by trained undergraduate volunteers supervised by an attorney. Academic credit may be received for lay advocate internship work through urban fieldwork courses (Political Science 75.5 and 75.6).

## Peer counseling programs

Peer counselors are students who are trained and supervised by professional counselors. For information, call the Office of the Dean for Student Life, 951-5352.

## Personal counseling 1303 James Hall, 951-5363

Counseling services include individual and group counseling, short-term therapy, crisis intervention, referrals to off-campus services, and a range of life skills workshops for test anxiety, stress management, and assertiveness training. All services are free and confidential. For more information, visit the Web site at http://pc.brooklyn.cuny.edu.

## Services for international students 1307 James Hall, 951-5696

Counseling and other special services are provided for international students enrolled with F-1, B-1, or B-2 visas, including processing of INS and other forms for status change, travel, employment, practical training, transfer of funds, and spouse/dependent visas. Apply at least one week in advance for processing of these requests. International students should report to this office upon arrival and send notice of any change of address or status. For more information, visit the Web site at http://depthome.brooklyn.cuny.edu/career/ guide.htm.

## Veterans Affairs and Counseling Center 0303 James Hall, 951-5105

The center provides orientation counseling; assistance with admission procedures, academic planning, and tutoring; and liaison with the Veterans Administration and other government agencies. The center also provides information on federal and state benefits. Peer counselors help veterans file applications for the Gl bill and other educational benefits.

## Women's Center 227 Ingersoll Hall Extension, 951-5777

The center provides a variety of services for women: referrals to therapists, lawyers, social service, and counseling agencies; and information about new career opportunities, professional women's networks, scholarships, and grants. Services are available to students, faculty and staff members, and community residents, Monday through Friday, 9 a.m. to 5 p.m.

## Services for Students with Disabilities (SFSWD) Program

## 1303 James Hall, 951-5363

The Services for Students with Disabilities Program serves as the primary program for ensuring the successful integration of students with disabilities into the Brooklyn College community and for making determinations of what will constitute appropriate, reasonable accommodations.

Services for students with disabilities registered in the program include preadmission interviews; priority registration; individual counseling; auxiliary aids (readers, writers, laboratory assistants); individual testing accommodations and arrangements; advocacy; and direct liaison with offices providing college services.
S.O.F.E.D.U.P. (Student Organization For Every Disability, United for Progress) is the campus organization through which motivated students channel their abilities into progressive action.

More information about SFSWD may be found at http://depthome.brooklyn.cuny.edu/career/DISAB.HTM. A guide to accessible campus facilities appears in the chapter "Accessible Facilities for Persons with Disabilities."

## Mamie and Frank Goldstein Resource Center.

 The center offers services for students with disabilities who require adaptive equipment for studying, taking tests, tutoring, and other academic activities. A wide variety of equipment and software is available, including a Dragon dictate speech-recognition system, a scanner with screen-access software, a text-tospeech synthesizer, magnification systems, CCTV systems, seventeen-inch VGA display monitors, braille and large-print keyboards, and a braille printer.Computers allow many documents to be accessible in alternative formats, such as braille print or vocalized text. Documents include job search files, information about the Personal Counseling and Career Services Center, Brooklyn College Bulletins, and other resources of the College.

Students may have access to the center by registering with the Services for Students with Disabilities Program, 1303 James Hall.

## Health Clinic

## 114 Roosevelt Hall, 951-5580

The Brooklyn College Health Clinic provides students the evaluation and treatment of acute and chronic medical conditions, including sore throats, headaches, skin rashes, sexually acquired infections, anemia, and asthma. The clinic also offers gynecological care, including family planning options and colposcopy. Wellness checkups, evaluation and counseling on smoking cessation, blood pressure, nutrition, and other health services are also provided.

Care is delivered by nurse practitioners and physician assistants who have advanced, specialized training in medical diagnosis and treatment. Services are strictly confidential.

There is no charge for visits to the Health Clinic. Several laboratory tests are done on site free of charge; those that require outside analysis are available at greatly reduced fees. Many medications are provided without charge. Oral contraceptives are available for a nominal fee.

## Campus and Community Safety Services

## 0202 Ingersoll Hall <br> Regular services, 951-5511 <br> Emergency services hot line, 951-5444

Patrols. Security personnel patrol the campus twenty-four hours a day, on foot and in security vehicles, to ensure the safety and well-being of all students, faculty and staff members, and visitors on campus and on the streets bordering the campus.

Emergency assistance call stations (EA stations).
Stations for emergency use are located on all floors, in stairwells, and in bathrooms of all buildings on campus. The Office of Campus and Community Safety Services may be contacted directly by following instructions at the EA station. All incidents that occur on campus, including such misdemeanors as thefts and vandalism, should be reported promptly to the office.

Escort service. Escorts (telephone: 951-5511) will be provided by security personnel to campus parking lots and nearby public transportation (bus and subway) for students and faculty and staff members who request them. Requests should be made about twenty or thirty minutes before an escort is needed. Security shuttle service operating on Campus Road provides transportation to and from local bus stops, subway stations, and the municipal parking lot from 7 a.m. to 11:30 p.m. daily. A van is available for students and staff members with disabilities.

Bicycle rack. Security personnel maintain a bicycle rack inside the gate at Campus Road and East 27 Street during the hours that the campus is open. The enclosure may be used by students and faculty and staff members upon presentation of a valid Brooklyn College photoidentification card. There are also two racks outside Ingersoll Hall on Bedford Avenue. This location is not staffed by security personnel. Bicycles must be properly secured to the rack by sturdy chains or locks. Overnight storage of bicycles is not permitted.

Photoidentification. All students and members of the faculty and staff are requested to carry a Brooklyn College photoidentification card on campus and are required to wear it on campus when the College is closed. The card must be displayed in order to gain access to the campus, the library, and the Student

Center. Photoidentification services, located in 0201 James Hall, are open Monday through Thursday, 9 a.m. to 7 p.m.; Friday until 1 p.m.; and for extended periods during registration.

Students who wish to enter or remain on campus after it is closed must obtain written permission from the Office of the Dean for Student Life or have a twenty-four-hour photoidentification card.

Annual security guide. The Office of Campus and Community Safety Services is in compliance with the Jeanne Clery Act (formerly the Campus Security Act of 1990) and publishes an annual security guide prior to October 31. The guide includes campus crime statistics and may be accessed on the Internet at www.brooklyn.cuny.edu/bc/offices/security. A campus log of reported crimes is open to public review in the office.

## Emergency medical service hot line 951-5858

Emergency medical assistance is offered by the Student Volunteer Emergency Medical Squad, 021 Ingersoll Hall Extension. Ambulance facilities are also provided.

## Information Services

## Brooklyn College Web site www.brooklyn.cuny.edu

The college's Web site provides a wealth of useful information for prospective and current students, including course descriptions, schedule of classes, and departmental information. Students may use the Web facilities to view their transcripts and grade reports, find out how many seats are open in course sections, apply for scholarships, calculate GPAs, and view campus news and event calendars as well as a directory of faculty, staff, offices, and Web pages.

## General information line

951-5000
The campus switchboard is in operation Monday through Thursday, 8 a.m. to 7 p.m., and Friday, until 5:30 p.m. During off-hours, an auto attendant guides callers through individual departments. Specific information, including a directory of telephone numbers, may be accessed from menus.

## Information Booth <br> 1139A Boylan Hall, 951-4748

The Information Booth offers assistance to students, staff, and campus visitors. A staff of trained student assistants provides information on campus services, maps of the campus, and directions to campus offices.

The booth is open Monday through Thursday, 8 a.m. to 8 p.m.; Friday, until 4 p.m.; and Saturday and Sunday, until 4:30 p.m.

## Electronic information kiosks

Kiosks are located in nearly all buildings throughout the campus. The computerized kiosks provide access to Web-based information about campus facilities, services, and events.

## E-mail services

E-mail is available to all registered Brooklyn College students. Through the duration of their enrollment, students may send and receive e-mail from classmates, professors, and anyone off campus.

Students may obtain their e-mail address on-line through the Brooklyn College Web site; in person at the Atrium Computer Lab, 1306 Plaza Building; or by calling the support line, 677-6180.

## Housing referral 1305 James Hall, 951-5363

Housing and roommate referrals and information are provided. For more information, visit
http://pc.brooklyn.cuny.edu/housing.htm.

## Office of College Information and Publications 2153 Boylan Hall

The office produces such official college publications as the Brooklyn College Undergraduate Bulletin and Graduate Bulletin, Schedule of Classes, Brooklyn College Magazine, Student Handbook, Faculty Handbook, Core Curriculum Bulletin, Commencement Program, and the student newsletter, Around the Quad, as well as a variety of brochures, flyers, and posters for recruitment, special academic programs, cultural events, and alumni activities. The office maintains the College Web site's Photo Album, covering events on campus.

## Newspapers, literary magazines

Newspapers written and edited by Brooklyn College students may be obtained in the lobbies of campus buildings. Brooklyn Review and Riverrun, literary-arts magazines, are published annually by students in the fine arts degree programs in creative writing.

## WBCR

3302 James Hall, 859-6314
WBCR, Brooklyn College's student radio station, broadcasts weekdays (with occasional weekend scheduling) on campus on 1090 AM and on the Web at www.wbcr.org. WBCR features news, public affairs, sports, and a variety of music, including R\&B, hip-hop, techno, reggae, and metal.

## Campus services

## ATM banking

An automated teller machine (ATM), installed by HSBC Bank, is located adjacent to the Information Booth, 1139A Boylan Hall. Open twenty-four hours a day, the ATM performs all transactions except deposits. The service is free of charge to users with HSBC accounts, but fees are charged to those who have accounts at other banks and whose own bank charges for ATM use.

Three additional Money Marketing ATMs are located in the lobby of Ingersoll Hall and on the first floors of Roosevelt Hall and the Student Center. There is a fee to use these machines, plus an additional fee for those whose bank charges for ATM use.

## Brooklyn College Bookstore 0400 Boylan Hall, lower level, 951-5150; 434-0333

The bookstore stocks new and used required and recommended books; computer software and supplies; greeting cards and magazines; school and art supplies; Brooklyn College clothing; and snacks.

## Food services

College dining facilities are located on the lower level of Boylan Hall. These include cafeteria service, a kosher dairy bar, a gourmet coffee bar, and a buffet service dining room. The main cafeteria offers salads, soups, pizza, a delicatessen, grilled foods, international specialties, beverages, and desserts. Kosher service includes hot and cold foods, desserts, and beverages. The dining room offers salads, soups, cold cuts, hot and cold entrées, desserts, and beverages in a buffet-style environment. Limited food services are available in Plaza Building, the Student Center, and the Library Café.

The cafeteria and kosher dairy bar seat 750 . The dining room seats 180 . Hours of operation extend from morning until evening. Catering is available for receptions and other special events. Vending machines are located in several buildings throughout the campus.

Starbucks. Starbucks, in the Library Café, serves coffee, espresso, and other hot beverages as well as cold drinks, baked goods, and snacks. Starbucks is open Monday through Thursday, 8 a.m. to 7 p.m., and Fridays, until 3 p.m.

## Student Activities

## Student Center

The Brooklyn College Student Center was established to further the educational mission and goals of Brooklyn College and the City University of New York by offering programs and services that provide for the personal, professional, social, and cultural development of students, faculty and staff members, and alumni of Brooklyn College.

The Student Center, on Campus Road and East 27 Street, contains lounges, meeting and conference rooms, a computer lab, game rooms, art displays, study rooms, music rooms, a television room, and a penthouse with a domed skylight. As the center for campus life, the Student Center contains the offices of the Student Center Board, student governments, Inter-Greek Council, Central Depository (the processing center for student activity monies allocated to student organizations), Student Development, and Student Activities and Program Services. The center is open Monday through Thursday, 8:30 a.m. to 11 p.m.; Friday, until 4 p.m.; and Friday nights and weekends when there are scheduled activities.

The center is financed by a student activity fee that students pay each registration. The Student Center Board, consisting of nine students representing each of the three student governments, and a board of directors, composed of Brooklyn College administrators and six student government leaders, determine policy, programs, house rules, budget, and other matters.

The Student Center provides many special services and programs for students. It is the focal point for all cocurricular activities. In addition, the greater Brooklyn community frequently schedules special seminars and meetings in the Student Center. The administrative office is located off the main lobby.

## Club activities

There are about 140 chartered student clubs on the Brooklyn College campus. These organizations present academic, athletic, and social events; sponsor ethnic, cultural, and religious programs; furnish forums for political and societal concerns; provide service to the campus and the wider community; stage performances and exhibitions; and arrange activities for students with special interests. The Inter-Greek Council, 408 Student Center, is an association of fraternities and sororities that have chapters on campus. All chartered student groups may be
contacted through the Central Depository, 314 Student Center; the Offices of Student Development and Student Activities, 302 Student Center; or the appropriate student government, located on the third floor of the Student Center.

For day students, common hours are from 1:30 to 3:30 p.m., Tuesday and Thursday. Generally, no classes are scheduled during these hours, and most organizations meet then. Special lectures, concerts, and other events are also presented during common hours. Several common hours are usually scheduled each term for evening students. The dates, which change each term, are listed in the calendar of special dates in the Schedule of Classes. On common hour evenings, most classes meet for shorter periods than usual.

## Student government

The student governments for the College of Liberal Arts and Sciences, the School of General Studies, and the Division of Graduate Studies are located in 311, 312, and 309 Student Center respectively. Qualified students may seek office. Elections are held annually for membership in the assembly and for president and vice-president of CLAS, SGS, and GSO. Student government meetings are open to all students.

## Student service and volunteer opportunities

The Students Engaged in Responsible Volunteer Action (SERVA) program, Brooklyn College's volunteer registry, provides recognition for students who serve in the community and the College through such programs as Student Activity Volunteer Intern (SAVI), Seeds of Hope, Presidential Ambassadors, Community Building, Communications Council, and the Annual Brooklyn College Volunteers Week. For more information, contact the Office of the Dean for Student Life, 2113 Boylan Hall (telephone: 951-5352; e-mail: Studentlife@brooklyn.cuny.edu).

## Recreational activities

Recreational facilities are open and unstructured, and facilities are available on an individual basis. Schedules for activities are available at the beginning of each semester. The recreational facilities include a fitness center, squash courts, basketball courts, pool, jogging track, racquetball courts, and tennis courts. Basketballs and racquetball equipment are available in the Recreation Center, but students must bring their own tennis racquets. To use the facilities, students must present a valid Brooklyn College identification card in the Recreation Center, 125 Roosevelt Hall (telephone: 951-5366).

## Intercollegiate athletics

The intercollegiate sports program offers a schedule of athletics competition in Division III of the National Collegiate Athletics Association (NCAA). All students are encouraged to take part in the program, which includes men's soccer; men's and women's crosscountry, tennis, basketball, swimming, volleyball, and indoor and outdoor track; and women's softball. Students who are interested in joining a team should visit the Recreation Center, 125 Roosevelt Hall (telephone: 951-5366).

It is the mission of the intercollegiate athletics program to enhance the educational experience by providing opportunities for students to achieve their athletic potential while representing Brooklyn College. The program fosters friendship and sportsmanship; winning and losing are only important as they support the process of learning. Brooklyn College strongly supports a policy of gender equity.

Recognizing that the most important priority for student athletics is academic performance, the Athletics Division supports this goal by limiting the length of the season, number of contests, length of practices, and extent of travel. In accord with NCAA Division III regulations, Brooklyn College does not offer athletic scholarships. There are no revenue-producing sports, and admission to all games is free. Outstanding coaches, trainers, and physicians are assigned to all teams; and facilities and equipment are properly maintained for safety and cleanliness.

## Intramural sports

Intramurals provide structured tournaments in a variety of sports for men, women, and coed teams. The program welcomes all students and faculty and staff members regardless of their athletic abilities. Information may be obtained in the Recreation and Intramurals Office, 125 Roosevelt Hall (telephone: 951-5366).

## Student honor societies

Alpha Sigma Lambda
The Brooklyn College Chapter of Alpha Sigma Lambda, Zeta of New York, is a member of the national honor society for evening colleges. Candidates for undergraduate degrees are elected to membership on the basis of scholarship, leadership, and integrity.

## Phi Beta Kappa

The Brooklyn College Chapter of Phi Beta Kappa, Rho of New York, is a constituent member of the Phi Beta Kappa society, whose purpose is to recognize and encourage scholarship and cultural interests. Members are elected primarily on the basis of broad cultural interest, scholarly achievement, and good character. Only those students whose work has been definitely liberal in character and purpose are considered for election as members. Grades earned in applied or professional courses are not considered in determining eligibility for election to membership.

Weight is given to the breadth of the course program as well as to grades earned. Weight is also given to college-level foreign language study beyond the core requirement. Candidates are expected to show evidence of elective study beyond the core requirements and outside their major in at least two of the three broad areas of the humanities, the social sciences, and the sciences.

All eligible students are considered by the Committee on Admissions; candidates do not apply to Phi Beta Kappa.

## Sigma Xi

Sigma Xi, the Scientific Research Society, encourages original investigation in the natural sciences, pure and applied. The fields of activity of the society include the physical sciences, the life sciences, the earth sciences, and mathematics. The Brooklyn College Chapter elects students to associate membership in the society on the basis of academic excellence and marked aptitude for research in one of the fields listed above.

## National honor societies

National honor societies with chapters on the Brooklyn College campus are Upsilon Pi Epsilon (computer science), Kappa Delta Pi (education), Pi Delta Phi (French), Pi Mu Epsilon (mathematics), Psi Chi (psychology), Alpha Kappa Delta (sociology), Sigma Delta Pi (Spanish), Sigma Alpha Eta (speech), and Golden Key International Honour Society (all disciplines).

## New York Public Interest Research Group, Inc. (NYPIRG)

The New York Public Interest Research Group, Inc. (NYPIRG) is a nonprofit, nonpartisan research and advocacy organization established, directed, and supported by New York State college students. NYPIRG provides the structure through which concerned students may work for social change in such areas as consumer protection, environmental quality, fiscal responsibility, political reform, equal opportunity, and social justice while gaining experience in areas of research, government, and citizenship.

Academic credit may be received for NYPIRG internship work through urban fieldwork courses (Political Science 75.5 and 75.6 ) or through internships arranged with the permission of individual course instructors.

With chapters on nineteen campuses throughout the state, NYPIRG is directed and funded by students through their student activity fees. There is a two-week refund period each term for students who do not want to contribute to the organization; refunds may be requested in Central Depository, 314 Student Center, or in the NYPIRG office, 0302 James Hall (telephone: 859-7177).

## Academic

 Resources and College Facilities
## Libraries

## Brooklyn College Library

The newly expanded and renovated Brooklyn College Library provides integrated information support for College instructional and research programs. The library is technologically the most advanced in the City University of New York as well as one of the largest to be built in the New York City metropolitan area. Occupying the library's 6.5 acres of space are more than 2,300 student seats, 21.5 miles of shelving, twenty-two group study rooms, five computer classrooms, and more than five hundred computers for student and faculty access. Four of every ten seats include either a fixed computer or a net tap to which readers may attach their own laptops.

The new library's double-height windows bring light throughout the building. Art, much of it by Brooklyn artists, fills the building's walls. The library offers students an unusual variety of seating areas, including traditional tables and carrels, lounge chairs, laptop spaces, group study rooms of all sizes, large and small reading rooms-even window seats on each landing of the great octagonal stair tower. Terrazzo, the warmth of wood, and rich colors complete a handsome milieu conducive to study and research.

The physical collections total more than 1,300,000 volumes, 4,200 journals, and about 25,000 audiovisual units (sound recordings, videotapes, and DVDs). The library's substantial digital collections include some 15,000 electronic subscriptions and works of reference as well as several thousand electronic books. The library's collections are represented in CUNY+, the on-line catalog of the City University of New York. The library also houses the Brooklyn College Archives, the New Media Center, and both academic and administrative computing.

The first floor includes the reserve reading room, the circulation and exhibition gallery, the reference collection, the Lily Pond Reading Room, the Archives and Special Collections, and a theater. On the lower level, students and faculty may find the library's extensive collection of periodical literature and government publications. The second floor
accommodates music collections, the New Media Center, and the La Guardia reading room, with its cathedral ceiling and WPA murals, Famous Libraries of the World. Academic Information Technologies is located on the third floor; here faculty can create new technology-assisted teaching tools in the Faculty Training and Development Laboratory. The library's physical collections, student seating, computers, and group study rooms are scattered throughout the building on every floor.

Brooklyn College librarians provide extensive in-person and on-line reference service to faculty and students. An active library instruction program provides training in the use of the library's physical and digital collections. The collections support both undergraduate and graduate study in the humanities, social sciences, and sciences; they are especially strong and researchoriented in history and American and British literature. The library also holds research-level collections in chemistry, biology, and computer science as well as important archival and special collections, among which are the Brooklyniana Collection and the Manuscripts Collection.

## Boyd V. Sheets Memorial Library 4433 Boylan Hall

The library serves as a research and study room for undergraduate and graduate speech-language pathology and audiology majors. It contains textbooks and technical journals, which were donated by students, alumni, staff, and colleagues or purchased through contributions. Students who are interested in using the facility should obtain permission from the Speech and Hearing Center, 4400 Boylan Hall.

## Costas Memorial Classics Library 2405 Boylan Hall

The library contains a noncirculating collection of more than one thousand volumes of Greek and Latin texts and texts on classical topics donated by the late Professor Procope S. Costas and other members of the Classics Department. The library is open to students and faculty members for research whenever classes are in session and the library is not in special use.

## Eugene Scalia Memorial Library 3122 Boylan Hall

The library, located in the Center for Italian American Studies, is a reference library of more than nine hundred volumes.

## Meier Bernstein Art Library 5300 Boylan Hall

Located in a recently renovated suite of rooms in the Art Department, the library contains art books, periodicals, and digital materials as well as computers with Internet access, which may be used for reading, study, reference, research, review of course materials, current information about the art world, looking at pictures, or just browsing. The library sponsors artists in residence and lectures and studio critiques by guest artists and others drawn from the New York art world. The library is named for the painter who established the Meier Bernstein Foundation for the promotion of fine-arts education, from which it receives most of its funding; additional support comes from the Art Department and its faculty and alumni.

## Nathan Schmukler Investment Library 202 Whitehead Hall

The library, donated by alumni, is the site for the extensive tutoring program sponsored by the Economics Department and contains self-tutoring materials that supplement that function.

## Walter W. Gerboth Music Library

Named in memory of its principal founder and first librarian, respected teacher and scholar Walter W. Gerboth, the music library, located on the second floor of the Brooklyn College Library, offers facilities for music study, research, and listening.

The collection comprises scores, collected works, phonograph recordings, tapes, compact discs, music and dance video cassettes, electronic resources, playback equipment for on-site listening, and general and specialized books about music and dance as well as a fine selection of periodicals and yearbooks. Subject strengths lie in American music and performance scores. The collection is complemented by that of the Institute for Studies in American Music, 415 Whitehead Hall.

## Centers and institutes

## Africana Research Center 3107 James Hall, 951-5597

The center promotes research in Africana studies and in political and economic problems of interest to scholars and the African American community.

## Applied Sciences Institute 3238 Boylan Hall, 951-5252

The Applied Sciences Institute (ASI) comprises seven research institutes at the college: Applied Vision, Aquatic Research and Environmental Assessment, Electrochemistry, Feeding Behavior and Nutrition, Neural and Intelligent Systems, Semiconductor, and Surfactant Research. The institute's purpose is to promote significant funded research in a broad range of applied sciences, to promote economic development through interaction with local and regional industry, and to create educational opportunities-including those for women and minorities-that help to increase the technological and scientific workforce needed for the economic health of the city.

The research institutes of the ASI are also involved in a number of major universitywide economic development research programs, including the CUNY Center for Advanced Technology for Ultrafast Photonic Materials and Applications and the Higher Education Applied Technology Program, both of which are funded by New York State.

Directors of the institutes are scientists of international stature who have demonstrated records of attracting substantial grants and contracts from both government and industrial sources. The institutes draw on the skills and efforts of faculty and postdoctoral research associates as well as graduate and undergraduate students at the college.

In addition to the supporting formal institutes, the ASI seeks to promote and encourage other applied research at the college in such fields as information systems and computational science, health and nutrition, and aquaculture, among others.

## Archaeological Research Center 3307 James Hall, 951-5507

The center supports excavations in Europe on sites dating from early Neolithic to medieval times. The center also supports and directs excavations in New York. Evidence is recovered and studied from these and other digs in which members and students participate. The center publishes its findings.

## Center for Child and Adult Development 1105 James Hall, 951-5876

The center is sponsored by the graduate program in school psychology of the School of Education. The center serves the community and professionals in the fields of education and psychology by providing, through conferences and symposia, information on mental health practices and recent research relevant to child and adult development.

## Center for Computer Music 250 Gershwin Hall, 951-5582

The Center for Computer Music, part of the Conservatory of Music, promotes musical and interdisciplinary projects using a variety of computer applications. The focus of the center is on digital audio, synthesis, and digital signal processing. Applications include Protools, MAX-MSP, Kyma, Waves, GRM, Sound Hack, MetaSynth, DP, and others. Annually, the center produces a CD of student and faculty compositions. The center also maintains an active visiting composer series. Its recording studio is equipped with sixteen-track digital recording, with mixdown capabilities. A variety of high-quality microphones, mixers, tape recorders, and signal processors is available. The center's control room is linked to a medium-sized room for solo and chamber music recordings and to a fully equipped five-hundredseat theater for larger ensembles. The conservatory also offers courses in recording technology.

Since 1990, the Center for Computer Music has hosted an International Electroacoustic Music Festival, offering performances of music, video, film, and live electronic works by artists from around the world.

## Center for Diversity and Multicultural Studies 3309 James Hall, 951-5766

The center promotes a dynamic campuswide multicultural academic environment. Diversity policy initiatives, faculty development, public forums, publications, internships, community service, and student clubs, including the Multicultural Action Committee, facilitate the multicultural objectives of the College.

## Center for Health Promotion 4145 Ingersoll Hall, 951-5565 or 951-5026

The Center for Health Promotion develops, coordinates, and centralizes a variety of outreach programs initiated by faculty members. The center organizes workshops, seminars, and conferences on health and nutrition topics. It provides opportunities for students to learn through volunteer work and to serve the community through fieldwork and independent studies on health promotion.

## Center for Human Relations 5309 James Hall, 951-5981

It is the mission of the center to initiate and encourage empirical scientific research and community education concerning current social issues in the area of human and intergroup relations. The work of the center focuses on intergroup conflict, perceived injustice, sexual harassment, sexual objectification, and authentic communication and living skills.

## Center for Italian American Studies <br> 3122 Boylan Hall, 951-5070

The center was established to stimulate interest in Italian American life and explore the social, political, and cultural attitudes and behavior patterns of Italian Americans. Graduate and undergraduate students are welcome to participate in the center's research projects. Counseling and training workshops are among the services offered.

## Center for Latino Studies 1204 Boylan Hall, 951-5563

The center, an extension of the Department of Puerto Rican and Latino Studies, serves students, faculty, and the community by stimulating interest in Puerto Rican and Latino affairs. It sponsors conferences, workshops, lectures, seminars, internships, and noncredit courses. It encourages curricular development and research on topics related to the Latino experience and fosters educational exhibits as well as artistic and cultural expression. The center maintains a facility for special collections, publications, and research.

## Center for Nuclear Theory 2157 Ingersoll Hall, 951-5813

Research in theoretical nuclear physics is supported by the center, whose members serve as mentors for graduate students in the area of nuclear theory.

## Center for the Study of World Television 304 Whitehead Hall, 951-5555

The center is affiliated with the Department of Television and Radio. The goal of the center is to develop a better understanding of the use of national and international policy for the constructive application of television and related media to the social, cultural, political, and economic needs of various countries and regions. The center has conducted and published research, sponsored lectures, developed databases on aspects of international television, and holds symposia in the United Nations in cooperation with the U.N. and the International Council of the National Academy of Television Arts and Sciences.

## Children's Studies Center

## 3602 James Hall, 951-3192

The center, founded in 1997, aims to promote a unified approach to the study and teaching of children and youth across the disciplines in the arts, humanities, natural and social sciences, medicine, and law. It is the mission of the center to participate in national and international research efforts on behalf of children and youth; to help governmental and advocacy agencies, as well as community-based organizations, formulate implementation strategies for helping children and
youth; to initiate interdisciplinary symposia, concerts, broadcasts, exhibitions, and films in partnership with arts institutions; and to develop resource and information materials for assisting undergraduate and graduate students in the exploration of careers related to children and youth services.

## Ethyle R. Wolfe Institute for the Humanities 2231 Boylan Hall, 951-5847

The Ethyle R. Wolfe Institute for the Humanities supports research, writing, teaching, and public discussion in the humanities and human sciences at Brooklyn College. It seeks to promote faculty initiatives and to ensure excellence in scholarship in these areas. Toward fulfillment of this mission, the institute presents public lectures, symposia, and conferences as well as interdisciplinary faculty study and discussion groups; it offers full-year research fellowships in the humanities to Brooklyn College faculty, collaborates with several undergraduate honors programs, and brings to the Brooklyn College campus leading scholars in the humanities and human sciences.

## Infant Study Center 4311 James Hall, 951-5033 or 951-5610

The center conducts grant-supported research studies on visual and perceptual development in infants and young children. Aspects of both normal and abnormal development are studied. A major interest of the center is the development of new methods of assessing visual functioning in infants and young children. Graduate and undergraduate students assist in research.

## Institute for Studies in American Music 415 Whitehead Hall, 951-5655

The Institute for Studies in American Music (ISAM), part of the Conservatory of Music, is a research center dedicated to the study, preservation, and presentation of a wide spectrum of American music, including jazz, popular, folk, and art music.

ISAM sponsors conferences, symposia, and concerts. In recent years, the institute has focused on contemporary composers in the greater New York area and on musical traditions of immigrant communities surrounding the college.

The institute has published more than thirty monographs on various topics in American music as well as bibliographies, discographies, and a semiannual newsletter. Its research collections, including books, periodicals, scores, and recordings, are open to students and scholars by appointment.

## Special facilities

## Art Gallery at Brooklyn College <br> Brooklyn War Memorial, 195 Cadman Plaza West

The gallery, which is associated with the Art Department, mounts several important of national and international art each year as well as exhibitions of folk art, history, and local lore. They benefit the borough as well as the Brooklyn College community and draw visitors from throughout the New York area. Its major source of support is the Donald E., '40, and Edith Peiser Fund.

## Brooklyn Center for the Performing Arts at Brooklyn College (BCBC) 154 Gershwin Hall, 951-4600

Brooklyn Center is a world-class performing arts center that is an invaluable resource for both the campus and the wider community. The center includes the George Gershwin Theater (capacity, 500), Walt Whitman Hall (capacity, 2,500), the Sam Levenson Recital Hall (capacity, 160), and the New Workshop Theater (capacity, 100), a studio facility.

During its annual season, Brooklyn Center offers eight guest artist series and a number of special events representing a wide variety of cultural traditions. Through such series as the World of Dance, Celebrities, Broadway, Virtuoso, L'Chaim, Caribbean Celebration, and FamilyFun, the center presents world-renowned orchestras, soloists, dance companies, musical theater, and popular entertainers. More than forty thousand young people attend the center's popular SchoolTime series each year.

More than three hundred music and theater events are presented at the center, free or for a small fee, throughout the academic year by students and faculty members of the Brooklyn College Conservatory of Music and the Department of Theater. Performances include recitals, concerts by the Conservatory Orchestra and the Conservatory Wind Ensemble, Mainstage productions and thesis productions by the Department of Theater, and fully staged productions by the Brooklyn College Opera Theater.

The center's box office is in the lobby of the George Gershwin Theater. Program information may be obtained by calling the box office, 951-4500, or by visiting the Web site, www.brooklyncenter.com.

## Special facilities <br> for the performing arts

The Conservatory of Music maintains an extensive library of books and scores; playback facilities for records, tapes, compact discs, and CD-ROMs; and a large collection of musical instruments for instructional use. The Center for Computer Music (described above) is one of the best in the United States.

The Theater Department provides facilities containing two stages, three acting studios, a directing studio, makeup rooms, lighting and carpentry areas, a costume construction workshop, and instructional audiovisual equipment as well as a special library and reading room for graduate theater majors.

Rehearsal and practice studios for the Conservatory of Music and theater workshops and classrooms for the Department of Theater are in the Brooklyn Center for the Performing Arts at Brooklyn College. Dance studios are in Roosevelt Hall and Roosevelt Hall Extension.

The Brooklyn College Preparatory Center for the Performing Arts, established in 1978, is the precollege component of the Conservatory of Music and the Department of Theater. The center offers a community program with classes in music, theater, and dance for children three to eighteen years of age and for adults. The Prep Center's Suzuki Program for violin and cello is among the largest and most successful of New York City's Suzuki schools. Student and faculty recitals are held regularly in Sam Levenson Recital Hall. The center offers outreach services to public schools and works with many community-based organizations in Brooklyn. It is open to all who seek high-quality training by professional artist teachers, from beginners to those preparing for college-level work. Information on admission and tuition is available by calling 951-4111.

The Walter W. Gerboth Music Library offers facilities for music study, research, and listening. For more information, see the section "Libraries."

## Center for Assistive Technology 4125 Boylan Hall, 951-3193

The Center for Assistive Technology provides clinical services, including comprehensive identification, evaluation, and treatment, for children and adults with developmental and acquired disabilities who require assistive technology. Through augmentative communication techniques, seating and mobility, and computers, the center helps individuals with severe disabilities to develop communication, writing, and mobility skills. For students majoring in speechlanguage pathology or education, the center provides professional training in clinical practices as well as in the use of state-of-the-art devices, peripherals, adaptations, and software. Facilities at the center include treatment rooms and a demonstration area with one-way vision windows for observation. The center is a collaboration between the Brooklyn College SpeechLanguage Pathology and Audiology Program and Premier HealthCare, a member agency of the Young Adult Institute, which serves individuals with disabilities throughout the New York City metropolitan area.

## Department of English

English-as-a-Second-Language Program, 1414 Ingersoll Hall, 951-5928. This program is for students whose native language is not English. Students are assigned to the program on the basis of the University Skills Assessment Tests in reading and writing. See course descriptions under English in this Bulletin.

## ESL Reading Laboratory, 1408 Ingersoll Hall. The

 laboratory is open to students enrolled in ESL courses.
## Starr Foundation ESL Learning Center, 217

Roosevelt Hall. The center provides individual and small-group tutorial activities to ESL students.

## Information Technology Services Plaza Building <br> Computer Center, 951-5861 <br> Computer Labs, 951-5787

Brooklyn College's computing infrastructure is one of the most advanced in CUNY and is continually updated to keep pace with evolving standards. These systems support applications in all disciplines and are also used to enable students and faculty to easily access critical administrative data. Information Technology Services provides support to the college's students, faculty, and administration through the Help Desk and on site.

All students may use the college's many public-access computer labs, extensive Web and distance learning systems, and network of BCLink digital information kiosks. In addition, every registered student is provided
with an advanced Microsoft Exchange e-mail account that may be accessed on or off campus via the Internet.

Brooklyn College maintains several large-scale publicaccess computing facilities, supplemented by departmental discipline-specific labs and electronic classrooms. Overall, more than one thousand computers are available to students. Facilities include the Atrium and Wolfe computer labs in Plaza Building, the library PC clusters, the Morton and Angela Topfer Library Café in Whitehead Hall, the SUBO Computer Corner, and the Learning Center in Boylan Hall. The Atrium and Wolfe labs, with 275 computers, are open fifteen hours each day, seven days a week. The Library Café, with fifty computers, is open twenty-four hours a day, seven days a week. All campus computers are linked via high-speed networking to campus resources, the Internet, and CUNY's central mainframe facilities.

The College supports various computing platforms, including Windows (Wintel), Apple MAC, and SUN Unix systems linked to Novell, Windows NT, and Unix servers. All of these are available at public-access facilities and are used in various instructional contexts.

Brooklyn College also maintains a sophisticated videoconferencing and multimedia facility that is used in many courses for distance learning and facilitates interaction with students from other CUNY colleges as well. A significant percentage of courses are taught via the Web or use the Web as a major resource.

An extensive inventory of adaptive computer equipment enables students with disabilities to utilize the computer resources. These facilities and associated technical support are concentrated in the Atrium Computer Lab, the library, and the Mamie and Frank Goldstein
Resource Center in the Personal Counseling area.
The Brooklyn College Web site, www.brooklyn.cuny.edu, contains course descriptions, the schedule of classes, departmental information, and a directory of faculty, staff, offices, and Web pages. Students may view their transcripts and grade reports, find out how many seats are open in course sections, apply for scholarships, calculate GPAs, and view campuswide event calendars.

Brooklyn College students and faculty may also use the computing facilities provided by the CUNY/CIS central computing center, 555 West 57 Street, New York, New York. Dial-up and network access to mainframe resources and software applications may be arranged.

## Language Laboratories

4311, 4315, and 4316 Boylan Hall, 951-5231
The language laboratories are part of the Department of Modern Languages and Literatures. Lab I, in 4316 Boylan Hall, is equipped with a library of audiotapes and videotapes. Listening, viewing, and recording facilities are available for use in developing oral and aural language skills. Students use Lab I for course work or independent language study. Audiotapes and videotapes may be borrowed for use outside the lab. The services of Lab I are available to all members of the college community.

Lab II, the Computer Language Lab, 4315 Boylan Hall, is equipped with multimedia computers. Windows and Macintosh platform computers are available for language instruction. All systems are equipped with audio and video capabilities and a wide variety of interactive foreign-language software.

Lab III, in 4311 Boylan Hall, is a classroom equipped with computers and a wide-screen television set for class work.

## Learning Center <br> 1300 Boylan Hall, 951-5821

The Learning Center offers all Brooklyn College students tutoring and technical support for courses across the curriculum. Trained peer tutors work with students on assignments in writing, mathematics, science, and most core and gateway courses, including computer and information science, economics, and foreign languages. Help is available for the mechanics of writing, outlining, revising, and developing a format for essays, term papers, and laboratory reports. Tutors also help students understand lectures and texts, assist in doing research, and suggest methods for studying. Tutors regularly schedule group reviews before midterms and final examinations, and CPE previews are offered each semester to help students prepare for the CUNY Proficiency Examination. Students who visit the Learning Center find a handsome and comfortable environment with computers, reference materials, and worksheets available for their use. The center is open every weekday and some evenings. Students may schedule appointments for regular weekly meetings to work on their writing skills, or they may drop in to work with a tutor either individually or in small groups.

## Office of Research and Program Development 2158 Boylan Hall, 951-5622

The goal of the office is to expand the external funding base of Brooklyn College research, teaching, and public service mission. Support services are provided for faculty and staff who are engaged in sponsored programs or who are seeking external support for special projects. The office identifies funding opportunities for research, training, and other projects; assists in the preparation, review, and submission of proposals; negotiates grant and contract awards; and facilitates the administration of funded projects and interaction between Brooklyn College and the Research Foundation of The City University of New York.

## SEEK Department 2208 Boylan Hall

The SEEK Department conducts the following special programs.

SEEK program, 2208 Boylan Hall. The mission of the SEEK (Search for Education, Elevation, and Knowledge) Program, which is basic to the mission of the City University, is to assist in providing higher educational opportunity to students who otherwise would not have access to a four-year college education.

The department administers SEEK, a City University program that provides academic support, counseling, tutorial assistance, and financial aid for economically and educationally disadvantaged students.

Course listings are described in this Bulletin under the heading "Educational Services."

Counseling, 2207 Boylan Hall, 951-5931. SEEK counselors give students in the department's programs orientation, registration, and financial aid information; academic planning assistance; and information about graduate education and career opportunities. Counselors assess and encourage each student's progress. Students meet individually and in groups to discuss their concerns.

Tutorial Center, 1424 Ingersoll Hall, 951-5135. The center offers SEEK students tutoring and supplemental instruction in basic skills, core courses, and introductory and advanced courses in all majors. It assists students in adapting to the college curriculum. The tutorial center is staffed primarily by professional supplemental instructors and by peer tutors who have demonstrated success in their own academic programs. The center provides services to all SEEK students and offers Macintosh and IBM computer labs for SEEK students.

Reading Laboratory, 2432 Ingersoll Hall, 951-4123.
Faculty members and tutors guide students in improving their comprehension, reading speed, vocabulary, and analytical and test-taking abilities. The laboratory is used by compensatory classes as well as by individual students. Hours are Monday through Friday, 9 a.m. to 4 p.m.

SEEK English-as-a-Second-Language Reading Laboratory, 1438 Ingersoll Hall. The laboratory is open to students enrolled in the SEEK Program.

## Speech and Hearing Center <br> 4400 Boylan Hall, 951-5186

The center provides quality clinical services on a fee-for-service basis for clients with such communication disorders as articulation/phonology, language, voice, fluency, and hearing disabilities. It provides full evaluations and remediation, including the dispensing of hearing aids. Speech-language pathology and audiology majors receive professional training with broad-based clinical experience, well integrated with academic preparation. Facilities include a complex of sound-treated rooms that allow students to observe diagnosis and treatment of clients with communication disorders in observation rooms with one-way vision windows; recording and videotape equipment; and soundproof, double audiometric booths containing the latest instrumentation for audiological testing and research.

## Television Center 018 Whitehead Hall, 951-5585

The center provides television production and postproduction facilities and technical support for the Department of Television and Radio. Studio facilities are also available for rental by private clients. Students enrolled in the department's master of fine arts program are employed by the center as part-time college assistants. They participate in all aspects of television production and provide support for center activities. This blending of the academic experience and the workplace offers invaluable professional career training for students. The center's facilities include a broadcast-quality color studio; professional, nonlinear editing facilities; radio production suites; and broadcast-quality digital field-production equipment.

Morton, '59, and Angela Topfer Library Café First floor, Whitehead Hall, 951-4672
The Library Café, open twenty-four hours a day, seven days a week, features fifty networked computer workstations in both PC and Macintosh environments. Each has the latest versions of multiple software packages and Internet browsers. Notebook computers, plug-ins for personal laptops, and high-quality laser printers are available. There are three group-study rooms and two areas for individual study or reading. Modeled on the style of Internet cafés, the sleek, state-of-the-art facility with comfortable ergonomic seating is a popular site for computing, study, student interchange, or merely having a sandwich, coffee, or soda. Large windows, facing a landscaped courtyard, provide natural light. The snack bar is open from 9 a.m. to 7 p.m.

## Women's Center 227 Ingersoll Hall Extension, 951-5777

The center serves women on campus and in the community. It sponsors noncredit programs, workshops, and lectures on a broad variety of women's issues, including career and life planning. It offers referrals, if requested, to therapists, lawyers, and social service agencies and provides an extensive network of resources for women. The center, which has a drop-in lounge, is open to students, faculty and staff members, and community residents, Monday through Friday, 9 a.m. to 5 p.m.

# Inventory of <br> Registered Programs at Brooklyn College 

The following undergraduate certificate and degree programs and combined undergraduate/graduate degree programs are offered at Brooklyn College. These programs have been approved by the New York State Education Department and listed on the Inventory of Registered Programs. The programs are identified by the appropriate HEGIS (Higher Education General Information Survey) code number.
Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

| HEGIS <br> code | Certificate or program name | Certificate or <br> degree(s) awarded |
| :--- | :--- | :--- |
| 0502 | Accounting | B.S., B.S. (C.P.A. license qualifying) |
| 5002 | Accounting | Certificate |
| 2211 | Africana Studies | B.A. |
| 0313 | American Studies | B.A. |
| 2202 | Anthropology | B.A. |
| 1002 | Art | B.A., B.F.A. |
| 1003 | Art History | B.A. |
| 0401 | Biology | B.A., B.S. |
| 0401.01 | Biology Teacher | B.A. |
| 0506 | Broadcast Journalism (See Television and Radio.) | B.S. |
| 0308 | Business, Management, and Finance | dual major only; degree awarded |
|  | Caribbean Studies | depends on primary major |
| 1905 |  | B.A., B.S. |
| 1905.01 | Chemistry | B.A. |
| 1504 | Chemistry Teacher | B.A. |
| 0701 | Classics | B.S. |
| 0799 | Computer and Information Science | B.S.-M.P.S. |
| 5101 | Computer and Information | Certificate |
| 1701 | Science and Economics | B.S. |
|  | Computers and Programming | B.A. |
| 2204 | Computational Mathematics | B.S.-M.P.S. |
| 0799 | Creative Writing (See English.) | B.A. |
|  | Economics | Computer and Information Science |
| 0802 | and Economics | B.A. |
| 0802 | Education* | B.F.A. |
| 0802 | Early Childhood Education Teacher (birth-grade 2) | B.A. |
|  | Childhood Education Teacher (grades 1-6) | B.A. |
| 1501 | Childhood Bilingual Education Teacher (grades 1-6) | B.A. |
| 1501.01 | Adolescence Education and Special Subjects |  |
| 1507 | (See individual programs by subject listing.) | B.A. |
| 0602 | English | English Teacher (7-12) |

[^0]| HEGIS code | Certificate or program name | Certificate or degree(s) awarded |
| :---: | :---: | :---: |
| 1505 | Linguistics | B.A. (major and dual major; for dual major, degree awarded depends on primary major) |
| 4999 | Environmental Studies | B.A. |
| 1010 | Film | B.A. |
| 5008 | Film Production | Certificate |
| 1102 | French | B.A. |
| 1102.01 | French Teacher | B.A. |
| 1914 | Geology | B.A., B.S. |
| 1299 | Health and Nutrition Sciences | B.A., B.S. |
| 2205 | History | B.A. |
| 1104 | Italian | B.A. |
| 1104.01 | Italian Teacher | B.A. |
|  | Journalism (See English.) |  |
| 0309 | Judaic Studies | B.A. |
|  | Linguistics (See English.) |  |
| 1701 | Mathematics | B.A., B.S. |
| 1701 | Computational Mathematics | B.S. |
| 1701.01 | Mathematics Teacher | B.A. |
| 1005 | Music | B.Mus. |
| 1004.10 | Composition | B.Mus. |
| 1004 | Performance | B.Mus. |
| 0832 | Music Education (all grades) | B.A. |
| 1509 | Philosophy | B.A. |
| 0835 | Physical Education | B.S. |
| 0835 | Physical Education Teacher (all grades) | B.S. |
| 1902 | Physics | B.A., B.S. |
| 1902.01 | Physics Teacher | B.A. |
| 2207 | Political Science | B.A. |
| 2001 | Psychology | B.A., B.S. |
| 0308 | Puerto Rican and Latino Studies | B.A. |
| 1510 | Religion: Program of Studies in Religion | dual major only; degree awarded depends on primary major |
| 1106 | Russian | B.A. |
| 2201.01 | Social Studies Teacher | B.A. |
| 2208 | Sociology | B.A. |
| 1105 | Spanish | B.A. |
| 1105.01 | Spanish Teacher | B.A. |
| 1506 | Speech | $B . A$. |
| 1220 | Speech-Language Pathology, Audiology, Speech and Hearing Science | B.A. |
| 0603 | Television and Radio | B.A. |
| 0605 | Broadcast Journalism | B.S. |
| 1007 | Theater | B.A., B.F.A. |
| 4903 | Women's Studies | B.A. |

## Programs of Study

## The core curriculum

Brooklyn College's college-wide core curriculum must be completed by all candidates for a baccalaureate degree. The core curriculum consists of interrelated courses called "Core Studies" courses plus a foreign language requirement. Core Studies courses vary in size and design.

The faculty has established the courses in the core curriculum according to the following criteria:

They are foundation courses designed for nonspecialists and suitable for nonmajors, but each is planned so as to introduce material of fundamental and lasting significance.

They aim to broaden awareness, cultivate the intellect, and stimulate the imagination, rather than to provide specific career preparation. They are intended to develop mental skills, rather than vocational skills. In these respects they constitute the best long-term preparation for any career.

They offer both substantive knowledge and insight into the way knowledge is acquired. Emphasis varies, some courses stressing the approaches to knowledge, others concentrating more on what are taken to be definitive human achievements.

Their purpose is to give the student a perspective, an overall view of a subject or branch of learning, and a substantial amount of information, which together with other core courses will provide a broad background in the liberal arts and sciences.

They stress the quality of exposure, rather than breadth of coverage, drawing on the power of specialists addressing themselves to general concerns.

## Core Studies courses

## Core Studies 1 The Classical Origins of Western Culture

3 hours; 3 credits
Introduction to Greco-Roman literature and literary genres, social and political institutions, and philosophical concepts of ethics and education that have contributed to European thought and continue to influence contemporary debate in American society. Core Studies 1 offers practice in close reading and in communication by means of critical writing, class discussion, and other methods, such as collaborative group work.
Core Studies 1 is administered by the Department of Classics.

## Core Studies 2 Introduction to Art;

## Introduction to Music

### 2.1 Introduction to Art

## 2 hours; 2 credits

Introduction to art emphasizing visual literacy in an historical context. How we see art and how art teaches us to see the world are explored through the examination of major works of art and architecture drawn from various cultures and periods from ancient times to the present. Texts, readings, and syllabi may vary somewhat among sections. (Not open to students who are enrolled in or have completed Art 1.1 or 1.3 or 2.3 or 2.4.)
Core Studies 2.1 is administered by the Department of Art.

### 2.2 Introduction to Music <br> 2 hours; 2 credits

Introduction to music through the study of works representing different times, places, and peoples. Recorded, concert, and classroom performances. (Not open to students who are enrolled in or have completed Music 11.1.)
Core Studies 2.2 is administered by the Conservatory of Music.

## Core Studies 3 People, Power, and Politics

## 4 hours; 4 credits

Introduction to the social sciences through the study of power, authority, and social organization in American society. Emphasis on gaining insight into American society in broad terms, as well as in terms of such specific issues as social class, race, gender, community, equality, and opportunity. The unifying theme of the course is an understanding of the nature of power (social and political). A major goal of the course is an understanding of contemporary issues and controversies involving power in America.
Core Studies 3 is administered jointly by the Departments of Political Science and Sociology.

## Core Studies 4 The Shaping of the Modern World

 3 hours; 3 creditsEuropean and American civilization since 1700 in its global context. Effects of revolution, nationalism, and industrialization on economic, political, social, and cultural life. The everyday experiences of women and men. Introduction to historical analysis and argument.
Core Studies 4 is administered by the Department of History.

### 5.1 Introduction to Computer Science

1 hour lecture, 1 hour laboratory; $1^{1 / 2} 2$ credits
The nature, power, and limits of the computer and computing. The components of the computer. Computer networks. Information representation. Introduction
to algorithms, problem solving, and computer programming. (Not open to students who are enrolled in, or have completed, any course in Computer and Information Science numbered 1.10 or higher with a grade of C or higher, or who have completed Core Studies 5.)

Prerequisite: A high school course in intermediate algebra or Course 2 of the New York State Sequential Mathematics Curriculum, or Mathematics 0.35 or 0.44 with a grade of at least C-, or Mathematics 0.36 or 0.04 , or the equivalent.

### 5.2 Thinking Mathematically

1 hour lecture, 1 hour laboratory; $11 / 2$ credits
Problem solving and applications of mathematical thinking in the real world and in the ideal world of mathematics. Elementary number theory and public key cryptography. Integers, rational numbers, real numbers, and the sizes of various infinite sets. Additional topic chosen from: computational geometry, elementary topology, chaos and fractals, probability. The laboratories will involve the use of manipulatives and also simulations using special software. Written reports required. (Not open to students who are enrolled in or have completed Core Studies 5 or any mathematics course numbered 3 or higher.)
Prerequisite: two years of Sequential Mathematics or the equivalent.

## Core Studies 6 Landmarks of Literature

3 hours; 3 credits
Emphasis on English and American literature; works of European and non-Western cultures. Examples drawn from fiction, drama, and poetry. (Students whose native language is not English may delay taking this course until after having completed 96 credits.) (Not open to students who have completed both English 51 and 52.)
Prerequisite: English 1, 1.2, or 1.7.
Core Studies 6 is administered by the Department of English.

## Core Studies 7 Science in Modern Life I

### 7.1 Science in Modern Life: Chemistry

A total of 23 hours lecture and 14 hours laboratory per term; 2 credits
Study of basic concepts in chemistry and their implications in modern life. (Not open to students who are enrolled in or have completed Integrated Science 2 or any college course in chemistry, except Chemistry 0.7 or 1.1.)

Prerequisite: Mathematics 0.02 or 0.22 or equivalent or a passing grade on the CUNY Mathematics Skills Assessment Test.

### 7.2 Science in Modern Life: Physics

A total of 23 hours lecture and 14 hours laboratory per term; 2 credits
Study of basic concepts in physics and their implications in modern life. (Not open to students who are enrolled in or have completed Physics 0.1 or 1 or 1.2 or 1.5 or 1.6 or Integrated Science 1.)

Prerequisite: Course 2 of the New York State Sequential Mathematics Curriculum or Mathematics 0.04 or a grade of at least $C$ in Mathematics 0.35 or 0.36 or 0.44 , or a passing grade in Core Studies 5 , or placement in any Mathematics course numbered 2.9 or higher.
Core Studies 7 is administered jointly by the
Departments of Chemistry and Physics.

## Core Studies 8 Science in Modern Life II 8.1 Science in Modern Life: Biology

A total of 23 hours lecture and 14 hours laboratory per term; 2 credits
Study of basic concepts in biology and their implications in modern life. (Not open to students who are enrolled in or have completed Biology 1 or 3.)

### 8.2 Science in Modern Life: Geology

A total of 23 hours lecture and 14 hours laboratory per term; 2 credits
Study of basic concepts in geology and their implications in modern life. (Not open to students who are enrolled in or have completed Geology 1.)
Core Studies 8 is administered jointly by the Departments of Biology and Geology.

## Core Studies 9 Comparative Studies in

 African, Asian, Middle Eastern, and Latin American Cultures3 hours; 3 credits
A multidisciplinary, team-taught course, with two instructors, interrelating two areas of the world; a comparative geographical overview of the two areas, followed by thematic treatment of each area and comparative analysis.
Core Studies 9 is administered by the Core Studies 9 course coordinator under the direction of the Dean of Undergraduate Studies.

## Core Studies 10 Knowledge, Existence, and Values

 3 hours; 3 creditsPhilosophy's distinctive ways of understanding and thinking about perennial human questions: "What can I know?"; "What is real?"; "What should my values be?" Contemporary and traditional examples of philosophic analysis and criticism. (Not open to students who are enrolled in or have completed Philosophy 1.1.)
Core Studies 10 is administered by the Department of Philosophy.

## Foreign language requirement

As part of the core curriculum, all baccalaureate students are required to complete one course in a foreign language at Level 3 (the third semester of study at the college level) or to demonstrate an equivalent proficiency by examination, except as modified below.

1. Students who have successfully completed three years of one language in high school and have passed the Regents Level 3 are exempted from the core language requirement.
2. The foreign language requirement presupposes two years of secondary school language study. Students who offer only one year of foreign language study (or none at all) are required to take one or two semesters of college study (Levels 1 and/or 2) before they can take Level 3. A student who has studied a language in high school for at least two years and wants to study a different language at the college level may do so, but this student must complete a minimum of two terms of the new language at the college level to fulfill the core requirement.
3. Students whose native language is not English may be exempted from this requirement by passing one of the competency examinations administered by the Department of Modern Languages and Literatures.
4. Neither blanket nor equivalent credits will be given for introductory courses in a foreign language from which a student has been exempted by examination.

Students who have completed part of the language requirement in high school are strongly advised to continue further language study in the first year.

## Core sequence: Planning a program

Full-time students will normally complete the core studies over two or three years of college study. All Core Studies courses should be completed by the time a student has earned 90 credits. Students are encouraged to lay out programs of study in advance, consulting with a college adviser at any time, and bearing in mind any special requirements of possible major fields.

## Substitutions for core courses

The core curriculum is a common-experience core. Students are excused from core courses only by virtue of completing a stipulated, more comprehensive or more advanced course or set of courses in the same area. Such courses must be completed within the time period specified for the core courses.

Substitutions for certain core courses are permitted only as follows:

For Core Studies 1: Core Studies 1.1 and 1.2.
For Core Studies 2.1: Art 1.3.
For Core Studies 2.2: Music 9.1 and 9.2; or 11.1.
For Core Studies 5.1: Computer and Information Science 0.1 or 1.5

For Core Studies 5.2: Mathematics 2.9 or 2.92 or any mathematics course numbered 3 or higher.

For Core Studies 6: English 51 and 52.
For Core Studies 7.1: Chemistry 1 or 1.2 or 5.
For Core Studies 7.2: Physics 1 or 1.2 or 1.5 or 1.6 or 2.3.

For Core Studies 8.1: Biology 1 or 3.
For Core Studies 8.2: Geology 1.
For Core Studies 10: One course from Philosophy 11.1, 11.2, 12.1, 12.2, or 12.3 and one course from Philosophy 6, 20, 21, 22, 23, 24, 25, 26, 27, or 28; or completion of a major in philosophy.

Students registered in Brooklyn College study abroad programs (see the section on "Special Programs" in this Bulletin) may have up to seven credits earned in such programs applied to their core curriculum requirements according to the "General guidelines on core equivalents for transfer and readmitted students" rather than "Substitutions for core courses."

Students who have completed three years of language study (Regents Level 3) or who demonstrate an equivalent proficiency are exempted from the core foreign language requirement of one course at Level 3.

A different set of equivalents applies to transfer students. These will be found below in the section "Transfer students."

## Retroactive pass option

A student may elect to have grades in any two previously passed Core Studies courses changed from an ordinary passing grade ( D - through $\mathrm{A}+$ ) to a grade of $P$ (pass). This option must be exercised no later than the tenth week of the semester following that in which students complete their ninety-sixth credit. Once this option has been utilized it may not be rescinded, nor may the courses to which the grade of $P$ has been assigned be changed. For purposes of this regulation, Core Studies 2.1, 2.2, 7.1, 7.2, 8.1, and 8.2 are considered separate and distinct courses.

Courses deemed to be substituted for, or equivalent to, Core Studies are not eligible for the retroactive pass option.

## Adult degree programs

Students in the Special Baccalaureate Degree Program for Adults, a program that has its own structured core curriculum, continue to fulfill the curricular requirements of that program and are exempt from Core Studies 1 through 10. Students in the Small College Program take the college-wide Core Studies sequence in a special format designed for this program. Students must satisfy the language requirement of the college (see "Foreign language requirement" in this Bulletin). Students must also satisfy any additional requirement stipulated by the department of their major. Further information about these programs may be obtained from the office of Special Degree Programs for Adults, 3227 Boylan Hall (telephone: 780-5262, 780-5525).

## Native speakers of languages other than English

Native speakers of languages other than English are given additional flexibility in the sequence and number of core courses to be taken a term. The choice is based on the student's academic preparation in specific subject areas.

## Readmitted students

Students who take a leave of absence and are then readmitted to the college must complete the core curriculum/core equivalency requirements at Brooklyn College. If they have taken courses at another institution after matriculation at Brooklyn College, and feel that certain of these courses may apply towards the core, they must file a request to use these with the Office of Academic Advisement.

Readmitted students who earned 80 credits or more at Brooklyn College prior to 1983 may graduate under either the core curriculum or the degree requirements stated in the 1979-1981 Undergraduate Bulletin.

## Transfer Students

The college has established equivalencies regarding the fulfillment of core requirements by transfer students as listed below. These equivalencies refer only to courses completed at another college before entering Brooklyn College.

It is University policy that students with an Associate of Arts or Associate of Science degree from a CUNY college are required to take only one additional general education course at a CUNY senior college. A student who transfers to Brooklyn College with an A.A. or A.S. degree from another CUNY school therefore needs only one Core course at Brooklyn in a subject or discipline that was not included in their Associate degree curriculum.

This policy does not apply to students with an A.A.S. degree from CUNY or with an Associate degree from outside CUNY.

## General guidelines on core equivalents for transfer students only

Core Studies 1: A course of at least three credits in Greek and Roman civilization, literature, philosophy, or history that includes readings in translation of ancient texts representing a minimum of three of the literary genres included in the Core Studies 1 syllabus. The same three credits may not be offered in fulfillment of Core Studies 10.

Core Studies 2.1: A course of at least two credits in art history or introduction to art.

Core Studies 2.2: A course of at least two credits in music history or music literature or introduction to music.

Core Studies 3: A course in sociology and a course in political science totaling at least four credits
or
at least two credits in political science and a Brooklyn College sociology course
or
at least two credits in sociology and a Brooklyn College political science course.

Core Studies 4: A broad survey course of at least three credits in world history after 1700 or the history of Western civilization after 1700.

Core Studies 5.1: A course of at least one-and-onehalf credits in computing.

Core Studies 5.2: A course for which the student receives at least one and one-half transfer credits in mathematics.

Core Studies 6: A course of at least three credits that focuses substantially on English and/or American literature and that has been taken after at least one term of college-level English composition.

Core Studies 7 (both 7.1 and 7.2): At least four credits in physics and/or chemistry, at least one credit of which is for laboratory work.

Core Studies 7.1 (only): A course of at least two credits in chemistry, at least one-half credit of which is for laboratory work.

Core Studies 7.2 (only): A course of at least two credits in physics, at least one-half credit of which is for laboratory work.

Core Studies 8 (both 8.1 and 8.2): At least four credits in biology and/or geology, at least one credit of which is for laboratory work.

Core Studies 8.1 (only): A course or courses of at least two credits in biology, at least one-half credit of which is for laboratory work.

Core Studies 8.2 (only): A course or courses of at least two credits in geology, at least one-half credit of which is for laboratory work.

Core Studies 9: A course or courses of at least three credits devoted to at least two of the following areas: African, Asian, Latin American, and Pacific cultures.

The student who has a course in one of these areas may fulfill these requirements by taking either Core Studies 9 or a course in one other area.

Core Studies 10: A philosophy course of a least three credits that includes at least two of the following three areas: epistemology, metaphysics, ethics. The same three credits may not be offered in fulfillment of Core Studies 1.

## Language requirement for transfer students

It is recommended that transfer students entering Brooklyn College during the academic years 1981-82 and 1982-83 fulfill a foreign language minimum of one course at Level 3 or an equivalent proficiency.

Students majoring in the humanities and performing arts departments are required, as of September, 1981, to meet at least the new college-wide requirement of level-3 language. These students are also advised to consult departmental language requirements, which in some areas exceed the college-wide minimum.

As of September, 1983, all transfer students are required to meet the college-wide language requirement.

## For additional information

Students who have questions about the core curriculum should consult a counselor in the Academic Advisement Center, 3207 Boylan Hall.

## Africana Studies

Department office: 3105 James Hall
Telephone: 951-5597, 951-5598
Chairperson: Lynda Day
Deputy Chairperson, SGS: Bert J. Thomas
Deputy Chairperson, Division of Graduate Studies:
Bert J. Thomas
Professors: Cunningham, Latortue, Thomas;
Associate Professor: Day;
Assistant Professors: Cumberbatch, Green.

## Core curriculum

The Department of Africana Studies participates in the college's core curriculum through Core Studies $3,4,6$, and 9.

## B.A. degree program in Africana studies

HEGIS code 2211
Department requirements (45 credits)
Two courses chosen from Africana Studies 0.12 through 0.9.
Four courses chosen from one of the groups a), b), or c):
a) History and political science: 10 through 19.
b) Literature, culture, and the arts: 20 through 29.
c) Society and the economy: 30 through 59.
d) Special topics: 60.1.

Two courses from groups other than the one chosen above.
One seminar or independent study course chosen from Africana Studies 70.1 through 88.
Eighteen credits of advanced courses in any department or program plus any prerequisite of the courses.

## Department recommendation

Students should consult a department counselor for help in planning a course of study. Majors are advised to include a methods course among the eighteen credits of advanced electives in another department or program offered for the completion of the major.

## B.A. degree program in adolescence education: social studies teacher <br> HEGIS code 2201.01; SED program code 26754

See the "Social Studies" and "Education" sections in this Bulletin.

Requirements for a minor in African American studies
A program of 15 credits, nine of which must be advanced electives in Africana studies. Each course must be completed with a grade of C or higher. Students must complete 1 and 2 below.

1. Africana Studies 12.5 or 12.6 .
2. Twelve additional credits selected from Africana Studies
12.5, 12.6, 23, 23.1; Africana Studies 24.1 or English 64.2; Africana Studies 24.2 or English 64.3; Africana Studies 24.3 or Music 10.1; Africana Studies 24.4; Africana Studies 24.5 or Theater 41.4; Africana Studies 25.2 or American Studies 20.2; Africana Studies 41, 43, 44, 44.6, 54; Economics 40.5; History 41.3; Music 20.4; Political Science 38; Sociology 26, 26.1, 26.4, 61.4.

## Requirements for a minor in Africana studies

A program of 15 credits of advanced electives. Each course must be completed with a grade of C or higher. Students must complete 1 and 2 below.

1. Africana Studies 11.2 or History 55.2.
2. Twelve credits chosen from the following: Africana Studies
11.1 or History 55.1; Africana Studies 11.3, 11.5, 12.1;

Africana Studies 12.4 or Political Science 49.2; Africana
Studies 23.1, 24.7, 24.8, 28; Anthropology 53; Art 16.02.

## Requirements for a minor in literatures of the African diaspora

A program of 15 credits of advanced electives. Each course must be completed with a grade of C or higher. Students must complete 1, 2 , and 3 below.

1. Africana Studies 24.2 or English 64.3.
2. One of the following: Africana Studies 23, 23.1, 24.7.
3. Nine credits chosen from the following: Africana Studies 23, 23.1; Africana Studies 24.1 or English 64.2; Africana Studies 24.3 or Music 10.1; Africana Studies 24.5 or Theater 41.4; Africana Studies 24.7; Africana Studies 24.8 or Comparative Literature 32.2; Africana Studies 25.2 or American Studies 20.2; Africana Studies 27 or English 64.4; Africana Studies 28.5 or English 50.13 or Comparative Literature 50.13; Africana Studies 29 or Comparative Literature 38.3 or Puerto Rican and Latino Studies 38; French 48.1; Spanish 49.

## Division of Graduate Studies

The Africana Studies Department offers graduate courses for students in other fields. For information, students should consult the department chairperson. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Introductory courses

### 0.12 Introduction to Contemporary Africa

## 3 hours; 3 credits

Historical, cultural, religious, social, educational, and economic background of the African continent. (Not open to students who have completed Africana Studies 0.1.)

### 0.2 Introduction to African American Studies

## 3 hours; 3 credits

Growth and development of social, political, economic, cultural, and religious institutions of the African American community.

### 0.4 Introduction to Research Studies of African Americans <br> 3 hours; 3 credits

Research methods and procedures for study of phenomena characteristic of the Black community. Development of the young Black child. Interviewing techniques, participant observation, historiography, quantitative methods and computer applications.

### 0.5 Introduction to the Caribbean

3 hours; 3 credits
Study and analysis of peoples, forces, institutions, and cultures of the Caribbean. African, European, United States, and Western Hemisphere influences on Caribbean development. (Not open to students who have completed Africana Studies 17.)

## History and political science

11.1 Africa to 1800

3 hours; 3 credits
Exploration of themes in the history of Africa south of the Sahara from earliest times to 1800. Salient themes include trans-Saharan linkages in classical times, Sudanic empires, forest states, Kongo, Ndongo, east African coastal city-states, Mwenemutapa dynasty. Origins, development, and consequences of the Atlantic slave trade; abolition. This course is the same as History 55.1. (Not open to students who have completed Africana Studies 18.1.) Prerequisite: one of the following: Core Studies 4 or 9, History $1,2,3,4,41.8$, or 41.9 , or permission of the chairperson.

### 11.2 Africa from 1800

3 hours; 3 credits
Themes include the Islamic revolutions, Mfecane, rise of legitimate trade, intrusion of European missionaries and explorers, Ashanti wars, political developments in interlacustrine East Africa, imperialism, colonial experience, nationalist independence movements, and Pan-Africanism. Selections reflect the experience of all regions of the continent south of the Sahara from 1800 to the present. This course is the same as History 55.2. (Not open to students who have completed Africana Studies 18.2.)
Prerequisite: one of the following: Core Studies 4 or 9, History $1,2,3,4,41.8$, or 41.9 , or permission of the chairperson.

### 11.3 Africa in Antiquity

3 hours; 3 credits
Survey of cultures and civilizations of Egypt, Ethiopia, Nubia, Kush, and Nok to the rise of Islam.
Prerequisite: one of the following: Africana Studies $0.1,0.11$, $0.12,0.3$; Core Studies 1, 9.

### 11.5 Southern Africa

3 hours; 3 credits
History of racial discrimination in southern Africa. Major political, economic, and social developments in the 19th and 20th centuries. (Not open to students who have completed Africana Studies 11.6.)
Prerequisite: one of the following: Africana Studies 0.1, 0.11 , 0.12 , or Core Studies 9 .

### 12.1 The African Diaspora

3 hours; 3 credits
Creation and history of the African diaspora. Economic, political, and sociocultural interrelationships of Africa and the African diaspora.
Prerequisite: one of the following: Africana Studies 0.3, Core Studies 4 or 9 .

### 12.4 Political Systems of Africa

## 3 hours; 3 credits

Political developments in the African states. Patterns before and after independence. Development of nationalism. Political integration, institution building, one-party systems, role of the military, and protest movements. Problems of regional and African unity. This course is the same as Political Science 49.2.

Prerequisite: one of the following: Political Science 1, 1.5, 5, Core Studies 3, Africana Studies $0.1,0.11$, or 0.12 .

### 12.5 African American History to 1860

3 hours; 3 credits
African Americans from the era of the Atlantic slave trade to the beginning of the Civil War. Topics include the African origins of African Americans, defining African Americans, the slave trade, free Blacks in antebellum America, origins of the Black church, slavery, and abolitionism.
Prerequisite: Core Studies 4 or 9, or permission of the chairperson.

### 12.6 African American History from 1860

3 hours; 3 credits
African Americans since the beginning of the Civil War. Topics include Blacks and Reconstruction, Blacks and Redemption, "The Nadir," emigration and colonization, Black cowboys, the Great Migration, Blacks in World Wars I and II, Marcus Garvey, Blacks and the Great Depression, and the Civil Rights and Black Power movements. (Not open to students who have completed Africana Studies 12.7.)
Prerequisite: Core Studies 4 or 9 , or permission of the chairperson.

### 14.3 The Struggle for Liberation

3 hours; 3 credits
Analysis of Black protest and liberation movements from the slave revolts to recent urban rebellions. Immediate underlying causes of specific events. Such major trends as the civil rights movement, Black nationalism, Pan-Africanism, and the Third World movement.
Prerequisite: one of the following: Core Studies 3, 4, 9, Sociology 5, Political Science 1 or 1.5, or Social Science 1 or 2, or Africana Studies 0.12 or 0.2.

### 17.3 Caribbean Societies in Perspective

## 3 hours; 3 credits

Emergence of Caribbean societies during the era of indentured servants in the islands. Imported institutions and their changing character in the new environment.

### 17.4 Caribbean Political Systems

3 hours; 3 credits
Comparative approach to the government and politics of the contemporary Caribbean. Major states in the Caribbean: Cuba, Haiti, Dominican Republic, the Commonwealth Caribbean; and selected members of other territories. The political economy of these societies and the growth of mass movements. Foreign policies of various Caribbean states. This course is the same as Political Science 49.8.
Prerequisite: one of the following: Core Studies 3, 9, Africana Studies 17, 17.3, Political Science 1.5.

### 17.5 Haitian Heritage

3 hours; 3 credits
Creation and development of the Haitian experience as shaped by the African connections. Analysis of the societal forces impinging on Haiti as the first Black independent republic in the New World.
Prerequisite: one of the following: Africana Studies 0.5, 17, 17.3, 17.4, or permission of the chairperson.

## Literature, culture, and the arts <br> 23 African American Folklore <br> 3 hours; 3 credits

African American oral tradition and African American culture. Survival of the African culture. Oral history, spirituals, folktales, blues, toasts, dozens, etc. Uses of the oral tradition in literature. This course is the same as English 24.5.

### 23.1 African Religion and Culture in the New World

 3 hours; 3 creditsAfrican religious and philosophical beliefs as they have shaped cultural practices, language, social organization, material culture, music, visual arts, and religion of African people in the diaspora. Considers reinterpreted African cultural practices in African American, Caribbean, and Latin American societies. Historical and contemporary patterns of creolization. (Not open to students who have completed Africana Studies 14.)

### 23.2 Contemporary African American Culture and Criticism <br> 3 hours; 3 credits

Race and representation in contemporary culture. An interdisciplinary examination of African American culture from the "Black Arts Movement" to the present. Novels, poetry, films, and music as cultural texts; and political discourses as cultural texts. Topics may include: the Black Aesthetic Movement, Malcolm X, Afrocentricity, multiculturalism, body politics, and the intersection of race and gender. (Not open to students who completed Africana Studies 60.1 in fall, 1993.) Prerequisite: one of the following: Africana Studies 23, 24, 24.1, 24.2; English 64.1, 64.2, permission of the chairperson.

### 24.1 African American Literature to 1930

## 3 hours; 3 credits

Literature from the colonial period through the Harlem Renaissance. Slave narratives, rhetoric of abolition, formal and vernacular aesthetics. Such writers as Phillis Wheatley, David Walker, Frederick Douglass, Harriet Jacobs, Booker T. Washington, Paul L. Dunbar, Charles W. Chesnutt, James Weldon Johnson, W.E.B. Du Bois, Countee Cullen, Jean Toomer, Claude McKay, Sterling Brown, Zora Neale Hurston, Langston Hughes. This course is the same as English 64.2.
(Not open to students who have completed Africana Studies 24.)
Prerequisite: one of the following: English 2, 2.4, 3.4, 4.4, or 10.3, Core Studies 1 or 6.

### 24.2 Modern African American Literature

3 hours; 3 credits
Literature from 1930 to the present. Naturalism and protest, the Black Aesthetic, women's literature. Such writers as Richard Wright, Ralph Ellison, Gwendolyn Brooks, Robert Hayden, James Baldwin, Amiri Baraka, Audre Lorde, Alice Walker, Toni Morrison. This course is the same as English 64.3.
Prerequisite: one of the following: English 2, 2.4, 3.4, 4.4, or 10.3, Core Studies 1 or 6 .

### 24.3 African American Music

3 hours; 3 credits
African American music from its African roots to the present. Synthesis of tradition and distinct African elements in American musical culture. This course is the same as Music 10.1.

### 24.35 History of Jazz

3 hours; 3 credits
Origin, early development, and history of jazz to the present.
Required reading and listening. This course is the same as Music 20.4.
Prerequisite: Core Studies 2.2 or permission of the chairperson.

### 24.4 African American Art

3 hours; 3 credits
Historical survey of the contributions of Black art to American culture. Study of the Black experience through works of art. This course is part of the joint program in elementary education with a specialization in African American studies and is open to all students.

### 24.5 Black Theater

3 hours; 3 credits
Lectures, studies, and workshops in Black theater. Liaison with professional and community theater. This course is the same as Theater 41.4.

### 24.8 African Literature

3 hours; 3 credits
Survey of twentieth-century fiction, drama, poetry of subSaharan Africa. Works by such authors as Achebe, Ekwensi, Emecheta, Ngugi, Oyono, Laye, Dadie, Clark, Sembene, Senghor, Soyinka. This course is the same as Comparative Literature 32.2.

### 25.2 Reading Race

3 hours; 3 credits
Race and American political and literary culture from the American Revolution to urban modernism. The South as a paradigm of American culture, constructions of "race," tensions between democratic ideals and elaborate race and class distinctions. Readings from Thomas Jefferson, slave narratives, Herman Melville, Uncle Tom's Cabin, Mark Twain, Uncle Remus, Charles Chesnutt, and others. Cultural legacies and entanglements of minstrelsy, the blues, and jazz. This course is the same as American Studies 20.2.

## 27 Black Women's Fiction

3 hours; 3 credits
Identity of the modern Black woman novelist as seen in the works and lives of African American women novelists. Some cross-cultural comparisons with African and Caribbean women novelists. Readings of selected essays in Black feminist criticism. A research paper is required. This course is the same as English 64.4 and Women's Studies 46.
Prerequisite: one of the following: Africana Studies 24, 24.1, 24.2, 44.6; English 1, 1.2, 1.7; Core Studies 1, 6; Women's Studies 10.7, 12, 33.

### 28.5 Introduction to Postcolonial Literature and Theory

 3 hours; 3 creditsLiterary works and theoretical paradigms relating to the culture of European imperialism and its aftermath. Diversity of works from many parts of the formerly colonized world to introduce the global significance of postcolonialism. Topics include: race and representation, Orientalism and the production of knowledge, Empire and exoticism, gender and nationalism, and multiculturalism and diasporic identities. This course is the same as English 50.13 and Comparative Literature 50.13 .
Prerequisite: English 1.

## 29 Caribbean Literature

3 hours; 3 credits
Black culture and writings in the Caribbean. Reflections on alienation and independence. Literary liberation movements, Negrism, Indigenism, and Negritude as the first step towards emancipation from a European cultural vision. Writers from the English-, French-, and Spanish-speaking countries will be examined. All readings will be in English. This course is the same as Puerto Rican and Latino Studies 38 and Comparative Literature 38.3. (Not open to students who have completed Puerto Rican and Latino Studies 54.)

## Society and the economy

## 33 Black Entrepreneurship in America

3 hours; 3 credits
History and development of African American business enterprise and entrepreneurs from Booker T. Washington and the National Negro Business League to the present. Topics include political philosophy of "black capitalism"; small and large businesses and the Black community; the impact of governmental programs on business development; case studies of successful African American businesses. (Not open to students who have completed Africana Studies 34.)
Prerequisite: one of the following: Africana Studies $0.11,0.2$, 0.4 , or Core Studies 3.

## 41 The Black Urban Experience

3 hours; 3 credits
An interdisciplinary study of African Americans and urban life. Drawing on the methodological approaches of history, literature, and folklore primarily, although not exclusively, this course will examine the African American experience in United States cities in the 19th and 20th centuries. Where appropriate, comparisons will be made with non-United States cities such as Rio de Janeiro, Johannesburg, or London.
Topics chosen from: urban slavery, free blacks in Northern cities, race riots, "great migration," Caribbean migration, urban economics, urban politics, the urban novel, the black family in the city, the blues, contemporary urban folklore.
Prerequisite: two of the following: Core Studies 3, 4, and 9, or their equivalents.

## 43 Blacks and the Law

3 hours; 3 credits
Examination of the relationships between the American judicial system and the socioeconomic status of Blacks. The role of law in the systematic subordination of Black rights. The use of law to ease the burden of racism.
Prerequisite: one of the following: Africana Studies 0.2, Political Science 1.5, Core Studies 3, 4, or 9, or an equivalent course.

### 43.2 Blacks in the American Criminal Justice System

 3 hours; 3 creditsExploration of the relationship between African Americans and the criminal justice system. Sociological theory and methods of collecting and understanding information. Assessment of the political, social, and economic institutions of American society as they frame race, crime, and punishment. Ways that the American criminal justice system has operated both to maintain and ameliorate a racially oppressive society. This course is the same as Sociology 51.41.

## 44 The Black Family

3 hours; 3 credits
The Black family as a social unit in the experience of Black Americans from slavery to the present. Comparison with African family patterns past and present.
Prerequisite: one of the following: Africana Studies $0.11,0.12$, or 0.2, Core Studies 3.

### 44.3 Community Studies

3 hours; 3 credits
Goals, structures, and administration of community development programs and poverty programs past and present. Field trips to day care centers, youth programs, and adult learning centers. Practice in program design. (Not open to students who have completed Afro-American Studies 30.)

### 44.5 Caribbean Communities in North America

## 3 hours; 3 credits

Analysis of the factors responsible for the movement of Caribbean peoples to mainland North America; achievements, frustrations, and contributions of Caribbean communities to the host country; linkages between Caribbean-Americans and the Caribbean.
Prerequisite: Africana Studies 0.5 or 17.

### 44.6 The Black Woman in America

3 hours; 3 credits
Interpretation and critical evaluation of the history, role, and image of the Black woman in America; emphasis on the burdens of racism, sexism, the economy, the Black "matriarch," health care, feminism and womanism, and contemporary issues. This course is the same as Women's Studies 44.
Prerequisite: one of the following: Africana Studies 0.2 or 27, Core Studies 3 or 9, Women's Studies 10.7.

### 44.9 African Women and Feminism

3 hours; 3 credits
Women's power, activism, and inequality on the basis of gender in the African continent. Explorations of gender-based inequality and the way African women exercise formal power. African women scholars' and activists' theoretical and practical analyses of feminism and the consequences of such analyses on gender relations in the continent. Theoretical readings and case studies. Course may have a national, regional, or continental focus. This course is the same as Political Science 78.35 and Women's Studies 49.
Prerequisite: Core Studies 3 or 9 , or Political Science 1.51 or 1.7, or Africana Studies 0.12 , or Women's Studies 10.7 or 12, or permission of instructor.

## 54 The Black Child and the Urban Education System

 3 hours; 3 creditsStudy and evaluation of school curricula from preschool through high school in terms of their historical background and contribution to the development of Black children. Finding and writing bibliographical materials relevant to the curricula.

## Special topics

60.1 Special Topics in Africana Studies

3 hours; 3 credits
Study of selected topics in Africana studies. Students may take this course for credit twice, but may not repeat topics.
(Not open to students who have completed Africana Studies 84.5 or Anthropology 84.5.)

Prerequisite: completion of an approved program of advanced courses and permission of the chairperson.

## Seminars

### 70.1 Seminar in Humanities

3 hours; 3 credits
Study of a topic in Africana studies related to the humanities. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: completion of an approved program of advanced courses and permission of the chairperson.

## 71 Seminar in Social Sciences

3 hours; 3 credits
Study of a topic in Africana Studies related to the social sciences. Students may take this course twice, but may not repeat topics.
Prerequisite: completion of an approved program of advanced courses and permission of the chairperson.

## 73 Summer Seminar

6 hours; 6 credits
Lectures, research, and study in selected historical, political, economic, and social aspects of life in a selected country or in a region of the United States. Lectures by Brooklyn College and host-country scholars, in cooperation with a university in Africa, the Caribbean, South America, or the United States may be supplemented by field work and library and empirical research. Course may not be taken more than once. Consult department for locale of a specific offering.
Prerequisite: Africana Studies 0.11 , or permission of the chairperson.

## Honors course

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the course described below. Students may not register for more than six credits in honors courses in the department in one term.

## 88 Independent Study

Minimum of 9 hours conference and independent work§; 3 credits
Reading of advanced material supervised by a faculty member. Written report or final examination.
Prerequisite: completion of an approved program of advanced Africana Studies Department courses and permission of the instructor and the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 24.7 African Oral Literatures

37.2 Caribbean Economics

45 Foundations of Africana Research Methods

## American Studies Program

An interdisciplinary major
Program office: 415 Whitehead Hall
Telephone: 951-5655
Director: Ray Allen
Faculty: Allen, Music; Beatty, Anthropology and Archaeology; Cumberbatch, Africana Studies; Cunningham, Africana Studies; Gerardi, History (emeritus); Hirsch, English; Napoli, History; Schlissel, English (emerita); Washington, Music; and additional faculty from the departments of the college.

## B.A. degree program in American studies

HEGIS code 0313
Program requirements (39-42 credits)
American Studies 10.
Five of the following: American Studies 20.1, 20.2, 20.3, 50, 51, 52, 60, 61, 62, 63, 64.1, 66, 67, 68, 71, 83.
Two of the following: History 41.1, 41.2, 41.3, 41.4, 41.6, 41.7, 43.14, 43.16, 43.2, 44, 44.1, 69.2.

Two of the following: English 25.3, 50.41, 62.11, 62.21, 62.31, 62.41, 63.1.

Either a) or b):
a) American Arts and Letters: three of the following:

Africana Studies 23, 24.2; Art 16.10, 16.30; English 18.17; Film 24; Music 10.1, 20.4, 50; Television and Radio 6.5; Theater 41.1, 41.4; Women's Studies 10.8, 32.
b) American Society: three of the following:

Africana Studies 12.5, 12.6, 12.7; Anthropology 37, 37.5; Judaic Studies 47, 48.5; Philosophy 48; Political Science 26.1, 28, 38, 54, 59; Puerto Rican and Latino Studies 1.1, 32, 32.5; Sociology 8, 9, 43.1, 61.4; Women's Studies 10.7, 36.

## B.A. degree program in adolescence education: social studies teacher <br> HEGIS code 2201.01; SED program code 26754

See the "Social Studies" and "Education" sections in this Bulletin.

## American studies concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in American studies must complete at least 30 credits in the Program in American Studies with a grade of $C$ or higher in each course. Students must meet with a program adviser to declare their intention to complete this sequence.

## Concentration requirements:

American Studies 10.
Two of the following courses: American Studies 20.1, 20.3, 64.1.
Two of the following courses: American Studies 20.2, 50, 51, 61, 63, 67; American Studies 60 or 71.
Two of the following courses: History 41.1, 41.2, 41.3, 41.4, 41.6, 41.7, 43.14, 43.16, 43.2, 44, 44.1, 69.2.

Two of the following courses: English 25.3, 50.41, 60.1, 62.11, 62.21, 62.31, 62.41, 63.1 .

## Requirements for a minor in American studies

Fifteen credits in advanced electives in American studies, each completed with a grade of C or higher, as follows:
American Studies 10.
One of the following: American Studies 20.1, 20.3, 64.1. One of the following: American Studies 20.2, 50, 63, 67. Two of the following: any American studies advanced electives.

## Honors in American studies

Students with an index of 3.5 may earn honors in the program by completing an interdisciplinary project or a critical essay. The proposal must be filed with the program director in the student's junior year, the work concluded in American Studies 83 and graded by the two faculty mentors in different departments.

## Program recommendation

Students should consider the many courses related to
American studies offered in the college. A list is available in the program office.

## Courses

$\dagger$ Students may take no more than three credits of mini-courses in this program.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 10 Introduction to the American Experience

3 hours; 3 credits
The beliefs that have shaped our identities as Americans: the self-made man/woman; the land of plenty; the rise from rags to riches. Material culture and how it has marked American life. The American Dream as it is constructed by political realities and racial inequalities. Introduction to the methodologies of American studies and to the process of connecting disciplines in order to understand how the American heritage has been formed.

### 20.1 Hard Times: The Great Depression

## 3 hours; 3 credits

Reexamination of the American Dream. Effect of the national experience of poverty and "failure" of the Puritan ethic. The dust bowl and migration of Okies; rise of proto-fascist factions; bread lines; Hollywood films.

### 20.2 Reading Race

3 hours; 3 credits
Race and American political and literary culture from the American Revolution to urban modernism. The South as a paradigm of American culture, constructions of "race," tensions between democratic ideals and elaborate race and class distinctions. Readings from Thomas Jefferson, slave narratives, Herman Melville, Uncle Tom's Cabin, Mark Twain, Uncle Remus, Charles Chesnutt, and others. Cultural legacies and entanglements of minstrelsy, the blues, and jazz. This course is the same as Africana Studies 25.2.

### 20.3 The American Frontier

3 hours; 3 credits
Native Americans and the impact of European expansion from the colonies to California; homesteaders, speculators, ranchers, railroadmen, cowboys and outlaws; women and the frontier; the land as wilderness and as property; Spanish territorial and water rights; the Gold Rush; issues of the contemporary West; the development of hydroelectric and nuclear power. This course is the same as History 43.13. (Not open to students who completed History 43.9 in spring, 1988.)

## 50 Music of the United States

## 3 hours; 3 credits

Music in the United States from a historical perspective, including folk, popular, jazz, and concert hall traditions. Emphasis on the interaction of European, African, and various ethnic styles in America. The relationship of music to select movements in American theater, dance, and art. This course is the same as Music 50.

## 51 Music in New York City

2 hours lecture, 3 hours fieldwork; 3 credits
Exploration of music performance in the music institutions and diverse cultural resources of New York City. Students will attend musical performances and carry out field documentation of a local music culture or institution. This course is the same as Music 3.
Prerequisite: Core Studies 2.2 or permission of the director.
52 North American Indians: Traditional and Contemporary 3 hours; 3 credits
Patterns of American Indian cultures north of Mexico; cultural and linguistic diversity; cultural adaptations and developments; contemporary Native Americans. This course is the same as Anthropology and Archaeology 52.
Prerequisite: American Studies 20.3; or Anthropology 1 or 2.1; or Core Studies 1 or 3 or 9 ; or six credits in social science courses; or permission of the program director.

## 60 Special Topics in the American Experience

3 hours; 3 credits each term
Exploration of an aspect of American cultural experience. Topics vary from term to term. Course description may be obtained in the program office before registration. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: sophomore or junior or senior standing.

## 61 New York City Folklore

3 hours; 3 credits
Folklore of the streets and neighborhoods of New York City. The urban environment as a region generating its own folklore and traditions. Customs, language, and symbols of urban life, past and present. Introduction to problems of fieldwork and methods of collecting urban folklore. This course is the same as English 25.4.
Prerequisite: sophomore or junior or senior standing.

## 62 Religious Experience in America

3 hours; 3 credits
Development of the major American traditions of Protestantism, Catholicism, and Judaism. Puritanism and its legacy; the Great Awakening; Christianity, slavery and the Civil War; the religious experience of Black Americans. Interaction between religious thought and such other aspects of American culture as ethnicity, social change, sexual mores, intellectual life. This course is the same as History 43.11.
Prerequisite: Core Studies 4 or permission of the program director.

## 63 Private Lives: American Autobiography

3 hours; 3 credits
Autobiography and its special importance to the process of defining the self in America. Examination of the theme of the New World and the "new" man and the "new" woman. The relation between the private identity and national character as revealed in the autobiographical writings of immigrants, workers, and plainfolk. This course is the same as English 61. Prerequisite: English 2.

### 64.1 Decade in Crisis: The 1960s

## 3 hours; 3 credits

Counterculture and its challenge to traditional values. The Beat Generation, its poetry, literature, and music. Political papers, autobiographies, documentary film. (Not open to students who have completed American Studies 71, spring, 1989, or spring, 1991.)
Prerequisite: sophomore, junior, or senior standing; or permission of the program director.

## 66 American Folklore

3 hours; 3 credits
Myths, legends, tales, proverbs, riddles, songs, dances, beliefs, rituals, celebrations, and folk art of American folk groups. Ethnic, regional, and occupational folklore. The relationship of oral folk culture to popular expression and written literature. Independent work in collecting folklore. This course is the same as English 25.3.
Prerequisite: one of the following: English 1, or 1.2, or 1.7.

## 67 The Immigrant Experience in Literature, Film,

 and Photography3 hours; 3 credits
The experience of immigrant groups as recorded in autobiography, folklore, and fiction. Becoming an American as recorded in photographs and film. Exploring relationships between text and image. This course is the same as English 67. (Not open to students who have completed American Studies 70.)
Prerequisite: one of the following: English 1, or 1.2, or 1.7.

## 68 American Popular Culture

3 hours; 3 credits
Introduction to the history and interpretation of American popular arts and culture. Popular music, theater, radio, film, television, and advertising. Popular expressions as shapers and reflectors of American ideas about nationalism, class, gender, ethnicity/race, region, and generation. This course is the same as History 43.18.
Prerequisite: one of the following: English 1, or 1.2, or 1.7.

## 71 Seminar

3 hours; 3 credits
Special problems of interdisciplinary research and writing. Topics vary from term to term. Course descriptions may be obtained in the program office before registration. A student completing the course with distinction is recommended for honors in the program.
Prerequisite: six credits of American studies courses or permission of the instructor and the director of the program.

## 83 Independent Research

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member on an approved topic. The project must involve research in more than one field and show potential for creative work. A student completing the course with distinction is recommended for honors.
Prerequisite: junior or senior standing, nine credits of American studies courses, permission of the program director and of the sponsoring faculty member.

The following courses are inactive and will be offered only if there is sufficient demand:

5 Mini-Course in Selected Topics on American Life 5.1 Mini-Course in Selected Topics on North American Indians<br>5.2 Mini-Course in Selected Topics on Contemporary American Life

## Anthropology and Archaeology

Department office: 3307 James Hall
Telephone: 951-5507, 951-5508
Chairperson: H. Arthur Bankoff
Professor: Bankoff;
Associate Professors: Antoniello, Gustav, Perdikaris; Assistant Professor: Sharman.
The Department of Anthropology and Archaeology offers courses in cultural anthropology, archaeology, physical anthropology, and linguistics. Anthropology represents the integration of scientific and humanistic approaches to the study of humans, their societies, and cultures.

## Core curriculum

The Department of Anthropology and Archaeology participates in the college's core curriculum through Core Studies 9.
The department recommends Anthropology 1 for students who have not yet had the opportunity to take the core sequence.

## B.A. degree program in anthropology <br> HEGIS code 2202

Department requirements (32-37 credits)
Anthropology 1 and 30.5 W .
One field or laboratory course chosen from: Anthropology 24.1, 24.2, 70.1, and 72.1.

Twenty-four additional elective credits; 18 credits must be in courses numbered 10 and above.
B.A. degree program in adolescence education: social studies teacher
HEGIS code 2201.01; SED program code 26754
See the "Social Studies" and "Education" sections in this Bulletin.

Anthropology and archaeology concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in anthropology and archaeology must complete at least 30 credits in the Anthropology and Archaeology Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

Anthropology and Archaeology 1, 2.2, 2.4, and 30 or 34.
One of the following courses: Anthropology and Archaeology 24.1, 24.2, 70.1 .

An additional 12 to 15 credits chosen from anthropology and archaeology courses numbered 10 and above.

## Requirements for a minor in anthropology and archaeology

Twelve credits of advanced electives in anthropology and archaeology with a grade of C or higher in each course.

## Requirements for an interdisciplinary minor in law and society

Courses in anthropology and archaeology presented for this minor may not be counted toward the anthropology major.
Twelve credits chosen from the courses of two or more
departments as specified below. Each course must be completed with a grade of C or higher.
Africana Studies 43, 43.2; Anthropology 34, 35; Classics 34; Political Science 21, 22, 26.2, 45.1; Sociology 43.5, 51.4.

## Program recommendations

The following courses are strongly recommended:
Art 13.30, 13.40.
Biology 25, 62.5 .
Chemistry 53.
Classics 15.
Comparative Literature 33.1, 42.1.
Computer and Information Science 21, 45, 48.
Geology 11, 12, 13.53, 17.01, 17.11, 25.1.
History 24.9.
A statistics course in any department.
Foreign language courses in addition to those required.

## Department recommendations

Anthropology and archaeology majors are encouraged to complete all of the following: Anthropology and Archaeology 2.2, 2.3, 2.4. Students should take Anthropology and Archaeology 30.5 W as soon as possible after completing Anthropology and Archaeology 1. Majors are strongly urged to consult a department counselor each year in planning their programs.

## Recommendations for prospective graduate students

To facilitate evaluation of prospective graduate students, a seminar or independent studies course in anthropology and archaeology is strongly recommended. The department also strongly recommends that prospective graduate students take Anthropology 71.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 24 credits in advanced courses for majors in this department.
$\dagger$ Students may take no more than three credits of minicourses in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Introductory and general courses

$\dagger^{\star} 0.3$ Mini-Course in Selected Topics in Anthropology 1 hour; 1 credit
Lectures and discussions on selected topics in anthropology. Seven, two-hour, sporadically scheduled meetings and a final examination. Course descriptions and reading lists are available in the Anthropology and Archaeology Department office before registration. Students may take this course twice, but may not repeat topics.

[^1]
### 2.2 Introduction to Archaeology

3 hours; 3 credits
Survey of major techniques and methods of archaeology.
Reconstruction of social and subsistence patterns from material remains. Methods and procedures in excavation, classification, and evaluation of finds. This course is the same as Classics 26. (Not open to students who are enrolled in or have completed Anthropology 20 or Classics 2.2 or 19 or 26 or 60.)

### 2.3 Introduction to Anthropological Linguistics

 3 hours; 3 creditsLanguage as a human universal. Problems of collection and analysis of language data, especially from nonliterate societies. Linguistic diversity, dialects, social usages, change. Relationships among race, language, and culture. (Not open to students who are enrolled in or have completed Linguistics 1.)

### 2.4 Introduction to Physical Anthropology

3 hours; 3 credits
Description and classification of humans. Comparison with other primates. Direct and indirect evidence of processes of evolution. Relationship of culture and cultural evolution to human evolution. Humans today: group and individual variation.

### 2.21 Archaeology Laboratory

4 hours; 2 credits
Analysis techniques in archaeology; recording and analysis of artifacts and features from a site in New York. (Students who have completed Anthropology 70.1 may take this course only with permission of the chairperson.) With the chairperson's permission, students may take this course for credit twice, but may not repeat topics.
Prerequisite or corequisite: Anthropology 2.2 or Classics 2.2 or 26 and permission of the instructor.

## 5 Anthropology of Race

3 hours; 3 credits
Role of anthropology in scientific revolt against racism, race prejudice, racist theories. Relationship of human biological variation to cultural variation. History of the concept of race. Critical evaluation of contemporary theories. Facts and fallacies of race.
Prerequisite: One of the following: Anthropology 1 or 2.4, Core Studies 8.1 or 9 , or permission of the chairperson.

## 6 Anthropological Perspectives on Sexual Behavior

 3 hours; 3 creditsSexual behavior as a cultural universal. Role and function of sex viewed cross-culturally. Sexual practices in non-Western societies.

## 7 Great Discoveries in Archaeology

3 hours; 3 credits
Survey of the most important archaeological discoveries of the past two centuries. Introduction to world archaeology through the study of famous archaeological monuments and sites. Basic archaeological concepts and techniques.

### 7.5 Archaeology in Biblical Lands

3 hours; 3 credits
Major archaeological discoveries in the lands of the Bible, from the Neolithic through Roman periods. Interpretation of excavations at major sites with reference to Biblical events.

## 10 Special Topics in Anthropology

3 hours; 3 credits
Subjects of interest in any of the four fields of anthropology that are not treated systematically in the regular curriculum. Topics may include violence, complex societies, archaeology of Mesopotamia. Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: Anthropology *1 or Core Studies 1, or 3, or 4, or 9 or permission of the chairperson.

## 11 Special Topics in Peoples and Cultures of Selected Areas

3 hours; 3 credits
Study of culture groups; institutions, historical influences, and effects of outside contact on specific areas within the larger regions described in existing course offerings.
Ethnographic and theoretical analyses of culture groups.
Cultural adaptations and retentions. Contemporary issues and problems. Selected area will vary each semester.
Students may take this course for credit twice, but may not repeat areas.
Prerequisite: Anthropology *1 or Core Studies 1, or 3, or 4, or 9 , or permission of the chairperson.

## 12 Anthropological Perspectives on Intercultural Communication <br> 3 hours; 3 credits

Concepts of cross-cultural interaction; verbal and nonverbal interaction; the relationship between cultural context and communication; proxemics and pragmatics. Examples drawn from cross-cultural interactions between the United States and Asian, Middle Eastern, Latin American, and other industrialized and nonindustrialized cultures.
Prerequisite: Core Studies 9 or a course in cultural anthropology or permission of the department chairperson.

## 13 People, Nature, and Culture

3 hours; 3 credits
The ways in which people's traits, values, and institutions interact with their environment.
Prerequisite: Anthropology *1 or Core Studies 3, or 8.1, or 9, or permission of the chairperson.

## 14 Anthropology of Health and Disease

3 hours; 3 credits
Health beliefs and health behaviors of various groups of people; the history of diseases; the training and practices of health specialists; the unrecognized effects on both physical and mental health of sociocultural factors; the relationship between human health and environment.
Prerequisite: Anthropology *1 or Anthropology 2.4, or Core Studies 8.1 or Health Science 6.1 , or Biology 1 or 3 or 13.5 or permission of the chairperson.

## 16 Primate Behavior

3 hours; 3 credits
Field studies of Prosimians, Old and New World Monkeys, Great Apes. Comparative studies of ecology, social organization, territoriality, dominance, communication. Appraisal of current research. (Not open to students who have completed Anthropology 25.)
Prerequisite: Anthropology *1 or *2.1 or 2.4, or Core Studies 8.1 or Psychology 10, or Biology 25, or permission of the chairperson.

## Archaeology <br> 21 Approaches to Archaeological Theory <br> 3 hours; 3 credits

Historical and current trends in archaeological theory. Methodology and techniques of anthropology, classics, art history, and the physical sciences relevant to archaeological studies. This course is the same as Classics 27. (Not open to students who have completed Classics 21.)
Prerequisite: one of the following: Anthropology 2.2, 20, Classics 26, permission of the chairperson.

## 22 World Prehistory

3 hours; 3 credits.
Survey of prehistoric archaeology; human origins in Africa; Paleolithic hunter/gatherers of the Old and New Worlds; the earliest food-producers; the rise of civilizations in the Near East, Mesoamerica, and South America. (Not open to students who have completed Anthropology 22.1.)
Prerequisite: Anthropology *1 or 7 with a grade of B or better, or Core Studies 1 or 9 , or permission of the chairperson.

### 22.1 Old World Archaeology

3 hours; 3 credits
Introductory survey of the development of human culture in the Old World. Study proceeds from the earliest pebble tools through the period of domestication and urbanization to the dawn of written history.
Prerequisite: Anthropology 2.2 or permission of the chairperson.

## 23 Urban Archaeology

3 hours; 3 credits
This course will begin at the formation of the first cities in the Middle East, and move on to the Polynesian chiefdoms in the South Pacific and the Viking presence and voyages across the North Atlantic. Historical sites from eighteenthand nineteenth-century Europe and U.S. will also be examined to trace continuity and change in the character of commercialization and urbanization through time.
Prerequisite: Anthropology 1 or Anthropology 2.2 or permission of the chairperson.

### 23.5 Soils, Sediments, and Cultural Landscape History

 3 hours; 3 creditsPrinciples of soil and sediment stratigraphy in a variety of cultural landscapes; site formation and sediment accumulation in settlements; early arable land management; historical dimensions of grazing pressure and land degradation; landscapes of inheritance and settlement. (Not open to students who have completed Anthropology 11, Spring 2001 or Spring 2003.)
Prerequisite: Anthropology 2.2.

## Physical anthropology

### 24.1 Human Osteology

2 hours lecture, 2 hours laboratory; 3 credits
Functional aspects of the human skeleton with reference to evolution, race, age, sex. Intensive analysis of skeletal populations. Understanding biological and environmental influences in determining skeletal differences.
Prerequisite: Anthropology 2.4 or Core Studies 8.1, or Physical Education 22.71 and 22.75; or Health Science 22.7; or Health Science 22.71 and 22.75; or Biology 24.1; or permission of the chairperson.

### 24.2 Introduction to Zooarchaeology

2 hours lecture, 2 hours laboratory; 3 credits
Study of animal remains from archaeological sites, methods of recovery, identification, and analysis. Special emphasis placed on natural and social environments, formation processes, subsistence strategies and paleoenvironments.
Prerequisite: one of the following: Anthropology 24.1 or Biology 24.1 or Physical Education and Exercise Science 22.75 , or permission of the chairperson.

### 26.1 Human Paleontology

## 3 hours; 3 credits

Mechanisms of evolutionary change, paleontological and archaeological evidence bearing on the phylogenic history of humans, evaluation of the numerous interpretations of that evidence.
Prerequisite: Anthropology 2.4 or Core Studies 8.1 or 8.2 or Geology 9 or Biology 24.1 or permission of the chairperson.

### 26.2 Human Variation

2 hours lecture, 2 hours laboratory; 3 credits
Range of variation and change due to growth, age, sex, race, constitutional differences. Techniques by which such differences are determined.
Prerequisite: Anthropology 2.4 or Core Studies 8.1 or Biology 2; or Physical Education 22.71 and 22.75 ; or Health Science 22.7; or Health Science 22.71 and 22.75 ; or permission of the chairperson.

## Cultural anthropology

30 Comparative Social Systems
3 hours; 3 credits
Cross-cultural approach to analysis of social relations and institutions. Kinship, marriage, and the family. Descent groups, associations, class, caste. Theoretical approaches.
Prerequisite: Anthropology *1 or permission of the chairperson.

### 30.5W Ethnographic Theory and Methods

3 hours lecture; 2 hours laboratory; 4 credits
Major schools of anthropology; their distinctive approaches, concepts, and methods in the context of engaging in fieldwork. Techniques of fieldwork and analysis; ethnographic recording, participant observation, and focused interviewing. Analysis of information collected. Writing-intensive section. (Not open to students who have completed Anthropology and Archaeology 70.3, 71, or 71.3.)
Prerequisite: Anthropology 1, and 2.2 or 2.3 or 2.4; or permission of the chairperson; English 2.

## 31 Women: Anthropological Perspectives

## 3 hours; 3 credits

Cross-cultural analysis of women's lives. Problems of nature and nurture, gender stereotyping and self-images, the position of women in all cultural spheres, and changes over the life cycle.
Prerequisite: Anthropology *1 or Core Studies 1 or 3 or 9 or permission of the chairperson.

## 34 Political Anthropology

3 hours; 3 credits
Political and legal institutions in cross-cultural perspective. Problems of political boundaries, allocation of authority, resolution of conflict. Impact of modern nation-states on other societies.
Prerequisite: Anthropology *1 or Core Studies 3 or permission of the chairperson.

## 35 Anthropology of Law and Order

3 hours; 3 credits
The use of force by individuals and governments. Nature of law. Cross-cultural perspectives on crimes, terrorism, and police and military organizations. Case studies from various cultures at band, tribe, chiefdom, and complex industrial levels of organization. (Not open to students who have taken Anthropology 10 in Fall, 1992, or Spring, 1994.)
Prerequisite: Anthropology 1 or Core Studies 3 or 9.

## 36 Psychological Anthropology

## 3 hours; 3 credits

Cross-cultural exploration of the cultural and psychological dimensions of human behavior emphasizing nonliterate and traditional societies. Cultural context of personality formation, cognition, illness and curing, altered states of consciousness. Research techniques, theory, contemporary issues.
Prerequisite: Anthropology 1 or Psychology 1 or 2, or Core Studies 9, or permission of the chairperson.

## 37 Urban Anthropology

3 hours; 3 credits
Cross-cultural study of adaption to the urban milieu. Sociocultural influences on urban life, effects of migration experience, social stratification, class structure. Ethnicity and the organization of multiethnic societies. Methods and problems in the analysis of urban systems. (Not open to students who are enrolled in or have completed Anthropology and Archaeology 37.5.)
Prerequisite: Anthropology *1 or Core Studies 3 or 4 or permission of the chairperson.

### 37.5 The American Urban Experience: Anthropological Perspectives

3 hours; 3 credits
Study of the diversity of American urban life and modes of analyzing sociocultural scenes, communities, and urban institutions.
Prerequisite: two of the following: Core Studies 3, 4, and 9, or their equivalents.

## 41 Anthropology of Visual and Performing Arts

 3 hours; 3 creditsAnthropological study of visual and performing arts in cultural contexts; conceptions of art and aesthetics in other cultures; analysis of performance, performers and creators of art; various approaches to the study of the arts: functional, psychological, symbolic, structural.
Prerequisite: Anthropology *1 or permission of the chairperson.

## 42 Anthropology of Religion

3 hours; 3 credits
Study of religions in their cultural contexts; magic and witchcraft as aspects of religion; myths, rituals, and symbols; priests and shamans. Change in religions. Theoretical approaches.
Prerequisite: Anthropology *1 or Core Studies 1 or 9 or Studies in Religion 1.1 or 1.2 or permission of the chairperson.

## 43 Cult, Occult, and Secret Societies

3 hours; 3 credits
Cross-cultural perspectives on cults and secret societies in Western and non-Western cultures. Concepts of the supernatural outside of formalized religion. Similarities between religious and secular groups with similar ideologies. (Not open to students who completed Anthropology 0.1 in Spring, 1992, or Fall, 1993.)
Prerequisite: Anthropology 1 or Core Studies 3 or permission of the chairperson.

## 44 Folklore

3 hours; 3 credits
Oral literature of nonliterate peoples including tales, myths, proverbs, riddles, poetry, songs. Folklore as an aspect of culture. Problems of collection and analysis of materials. Case studies.
Prerequisite: Anthropology *1 or Core Studies 1 or 6 or 9 or permission of the chairperson.

## Peoples and cultures

## 50 The Pacific

3 hours; 3 credits
Peoples and cultures of the Pacific Islands, New Guinea, and Australia; prehistory, history and influence of geography; culture changes and problems of development.
Prerequisite: Anthropology 1 or Core Studies 1 or 3 or 9 or six credits in social science courses, or permission of the chairperson.

## 51 Peoples and Cultures of Japan

3 hours; 3 credits
The prehistory and various peoples of Japan; their linguistic affiliations and social structures; cultural patterns of traditional and contemporary Japan. (Not open to students who have received credit for this topic in Anthropology 11.)
Prerequisite: Anthropology 1 or Core Studies 1, 3 or 9, or six credits in social science courses, or permission of the chairperson.

## 52 North American Indians: Traditional and Contemporary

## 3 hours; 3 credits

Patterns of American Indian cultures north of Mexico; cultural and linguistic diversity; cultural adaptations and developments; contemporary Native Americans. This course is the same as American Studies 52.
Prerequisite: Anthropology *1 or Core Studies 1 or 3 or 9 or six credits in social science courses, or permission of the chairperson.

## 61 The Middle East and North Africa

3 hours; 3 credits
Similarities and differences in cultures throughout the area; villagers, nomads, and urban peoples; the role of Islam.
Prerequisite: Anthropology *1 or Core Studies 1 or 3 or 9 or six credits in social science courses, or permission of the chairperson.

## 68 Latin America

3 hours; 3 credits
Pre- and post-Conquest peoples and cultures of Mesoamerica, South America, and the circum-Caribbean; development and decline of the Aztec, Maya, and Inca civilizations; contemporary life in the traditional folk village, Amazon rain forest, and Latin American city. This course is the same as Puerto Rican and Latino Studies 20.
Prerequisite: Anthropology *1 or Core Studies 1 or 3 or 9 or six credits in social science courses, or permission of the chairperson.

## Theory and method

70.1 Summer Archaeological Field School
(Intensive Program)
3 hours lecture, 6 hours supervised fieldwork; 6 credits
Intensive instruction in field methods and techniques of archaeology through participation in every aspect of an excavation; training in archaeological mapping, excavation techniques, and methods of archaeological laboratory analysis. This course is the same as Classics 29. (Not open to students who have previously received credit for archaeological field work.)
Prerequisite: permission of the chairperson and one of the following: Anthropology 2.2, Classics 26, Core Studies 1, 2.1, 9, Judaic Studies 12, a course in archaeological theory and methodology.

### 70.15 Intersession Archaeological Field School

1 hour lecture, 6 hours supervised fieldwork; 3 credits Intensive instruction in field methods and techniques of archaeology through participation in all aspects of an excavation; training in archaeological mapping, excavation techniques, and methods of archaeological laboratory analysis. (Not open to students who have completed Anthropology 70.1 or who have previously received credit for archaeological fieldwork.)
Prerequisite: Anthropology 2.2 and permission of the chairperson.

### 70.2 Archaeological Field School: Site Supervision

 6 hours supervised fieldwork; 3 creditsTechniques and practice of supervision on an archaeological excavation. Students will be responsible for direction of a trench crew and maintenance and checking of documentation during a session of the Summer Archaeological Field School.
Prerequisite: Anthropology and Archaeology 70.1 or Classics 29 or equivalent archaeological field experience, and permission of the chairperson.

### 72.1 Summer Ethnographic Field School

 3 hours lecture, 6 hours supervised fieldwork; 6 credits Instruction and practice in organization of interviews, participant observation, data collection, analysis of data in a field situation. Lectures on methods, techniques, and culture of the area in which the field school is being held. Prerequisite: Anthropology 1 plus nine credits in Anthropology and Archaeology Department courses numbered 10 and higher, and permission of the chairperson.
## Seminars

75.1, 75.2 Seminar I, II

2 hours and independent work§; 3 credits
Course description may be obtained in the department office before registration. Report or final written examination. Students may not repeat seminar topics completed in Anthropology 84.1, 84.2, 84.3, 84.4, and 75.1.
Prerequisite: the appropriate introductory course (Anthropology *1 or 2.2 or 2.3 or 2.4 ) plus nine credits in Anthropology and Archaeology Department courses numbered 10 and higher, or permission of the chairperson.

## 76 Seminar in Museum Techniques

2 hours and independent work $\$ 3$ credits
Introduction to museology. Practical experience in cooperation with museums in New York City.
Prerequisite: the appropriate introductory course (Anthropology *1 or 2.2 or 2.3 or 2.4 ) plus nine credits in Anthropology and Archaeology Department courses numbered 10 and higher, or permission of the chairperson.

## 77 Seminar in Anthropological Theory

2 hours and independent work§; 3 credits
Reading of significant works. Course descriptions may be obtained in the department office before registration. Report or final written examination.
Prerequisite: the appropriate introductory course
(Anthropology*1 or 2.2 or 2.3 or 2.4) plus nine credits in Anthropology and Archaeology Department courses numbered 10 and higher, or permission of the chairperson.

## 78 Preprofessional Internships

9 hours fieldwork; 3 credits
Supervised participation in professional activities in cooperation with museums, government agencies, and similar institutions. Specific student programs will vary with each project. Students will arrange for their programs in cooperation with a faculty adviser. In addition to successfully fulfilling the institution's requirements, the student will submit a written report on the internship to the faculty adviser.
Prerequisite: six credits in Anthropology and Archaeology Department courses numbered 10 and higher, and permission of the chairperson during the semester prior to registration.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83.1, 83.2 Independent Research I, II

Minimum of 9 hours conference and independent work§; 3 credits each term
Independent research supervised by a faculty member. Approved topic. Periodic conferences. Report. Not primarily for department honors.
Prerequisite of 83.1: completion of an approved program of advanced Anthropology and Archaeology Department courses and permission of the chairperson.
Prerequisite of 83.2: Anthropology 83.1.

### 85.3 Colloquium in Psychological Anthropology

Minimum of 9 hours conference and independent work§; 3 credits
Critical review of recent studies in personality and culture. Appraisal of current research techniques and methodologies. Course description may be obtained in the department office before registration. Report or final written examination.
Prerequisite: completion of an approved program of advanced Anthropology and Archaeology Department courses and permission of the chairperson.

## 88 Independent Study

Minimum of 9 hours conference and independent work§; 3 credits
Independent study supervised by a faculty member. Approved reading. Periodic conferences. Final written examination.
Prerequisite: completion of an approved program of advanced Anthropology and Archaeology Department courses and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 0.1 Special Topics

0.2 Mini-Course in Selected Topics on

North American Indians
17 Historical Linguistics
18 Sociolinguistics
19 Language and Culture
45 Animals and Monsters
53 Africa South of the Sahara
63 Europe

## Art

Department office: 5306 Boylan Hall
Telephone 951-5181, 951-5182
Chairperson: Michael Mallory
Deputy Chairperson, Division of Graduate Studies: Jennifer McCoy
Art History Program Adviser: Mona Hadler
Studio Art Program Adviser: Ronaldo Kiel
Professors: Anderson, Bier, Carlile, D'Alessandro, Flam, Hadler, Mainardi, Mallory, Navin, Williams;
Associate Professors: Comerford, Giusti, Jacoff, McCoy, Murphy;
Assistant Professor: Kiel.
The Department of Art offers the following degree programs: B.A. in art history, B.A. in art, B.F.A. in art, and B.A., art teacher ( $\mathrm{K}-12$ ).

## Core curriculum

The Department of Art participates in the college's core curriculum through Core Studies 2.1.

## B.A. degree program in art history HEGIS code 1003

Department requirements (29-30 credits)
Art 1.3 or Core Studies 2.1 or, with permission of the chairperson, Art 1.4.
Art 15.20 and 25.11.
Art 25.12 or 26.11.
(Art 27.21 is strongly recommended.)
Eighteen credits in advanced art history chosen from at least three of the following subject areas:
a) Ancient and medieval art
b) Early European art
c) Modern European art
d) Art of Africa, Oceania, and the Americas
e) Art of Asia
f) Architecture

Fulfillment of the foreign language requirement of the college in French or German. Another language may be substituted with permission of the chairperson.

## Requirements for a minor in art history

Twelve credits of advanced art history electives. All courses must be completed with a grade of C or higher.

## B.A. degree program in art <br> HEGIS code 1002

Department requirements (38-39 credits)
Art 1.3 or Core Studies 2.1.
All of the following: Art 15.20, 25.11, 25.12.
Three additional credits in an advanced course in art history.
Twenty-four credits in advanced courses in studio art chosen
from at least four of the following subject areas:
a) Drawing: Art 26.11, 26.12, 26.21, 26.22, 26.30, 26.40.
b) Painting: Art 26.51, 26.52, 26.53, 27.11, 27.21, 27.22.
c) Sculpture: Art $30.11,30.12,31.11,31.12,32.11,32.12$, 33.11, 33.12.
d) Printmaking: Art $35.11,35.12,35.21,35.22,35.30$.
e) Photography: Art 45.10, 45.20, 45.30, 45.60.
f) Design and computer arts: Art 46.11, 47.10, 47.20, 48.11, 48.12, 48.13, 48.14, 48.15.

Special topics and honors courses in the above subject areas may count toward the fulfillment of the subject-area requirements with permission of the instructor and the chairperson.

## B.F.A. degree program in art <br> HEGIS code 1002

## Admission

Admission to the B.F.A. degree program should be obtained prior to the completion of 26 credits in studio art. An art portfolio is required. Consult the department for procedures.
Department requirements (65-66 credits)
Art 1.3 or Core Studies 2.1.
All of the following: Art 15.20, 25.11, 25.12.
Nine additional credits in advanced courses in art history.
Forty-five credits in advanced courses in studio art subject to the following:

1) At least 21 of these credits must be completed after admission to the B.F.A. degree program.
2) At least three credits must be chosen from each of the following subject areas:
a) Drawing: Art 26.11, 26.12, 26.21, 26.22, 26.30, 26.40 .
b) Painting: Art 26.51, 26.52, 26.53, 27.11, 27.21, 27.22.
c) Sculpture: Art 30.11, 30.12, 31.11, 31.12, 32.11, 32.12, 33.11, 33.12.
d) Printmaking: Art 35.11, 35.12, 35.21, 35.22, 35.30.
e) Photography: Art 45.10, 45.20, 45.30, 45.60.
f) Design and computer arts: Art 46.11, 47.10, 47.20, 48.11, 48.12, 48.13, 48.14, 48.15.

Special topics and honors courses in the above subject areas may count toward the fulfillment of the subject-area requirement with permission of the instructor and the chairperson.
Exhibition of the student's art work, following approval by a department committee. (The exhibition will normally be held during the semester preceding graduation.)

## Art concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher grades 1-6

The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in art must complete at least 31 to 32 credits in the Art Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

Core Studies 2.1 or Art 1.3.
Core Studies 2.2.
Art 25.11, 25.12, 45.10, and 48.11.
Three of the following courses: Art 15.12, 15.20, 15.30, 15.40, 15.60, 16.01, 73.10.

Two of the following courses: Art 26.11, 16.51, 30.11, 35.11.

## Recommendation for prospective graduate students

Prospective graduate students interested in art history should consult the art history program adviser and prospective graduate students interested in studio art should consult the deputy chairperson, Division of Graduate Studies, when planning their undergraduate program.

## Division of Graduate Studies

The Art Department offers the following graduate degree programs: M.A. in art history, M.F.A. in art, and M.A., art teacher ( $\mathrm{K}-12$ ). Some courses may be creditable toward the CUNY doctoral degree. For information about the art history and doctoral programs, students should consult the art history program adviser. For information about the studio art and teacher education programs, students should consult the deputy chairperson, Division of Graduate Studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Courses in art history

## Ancient and medieval art

### 12.50 Art of Egypt and the Ancient Near East

3 hours; 3 credits
Near Eastern art and architecture from 3000 B.C. to the death of Alexander the Great. Emphasis on ancient Egypt under the Pharaohs and the contributions of the Sumerians, Babylonians, Assyrians, Hittites, and Persians. (Not open to students who have completed Art 12.5.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 12.60 Aegean and Greek Art

3 hours; 3 credits
Art and architecture of Bronze Age Crete and Mycenae and of historic Greece to the end of the Hellenistic period, with emphasis on great sites and sanctuaries and such artists as Polykeitos, Myron, and Praxiteles. Works of art are examined in the context of Greek myth, literature, and history. (Not open to students who have completed Art 12.1.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 12.70 Etruscan and Roman Art

3 hours; 3 credits
Art and architecture of the Etruscans and of the Romans through the late Empire. Domestic art and imperial monuments, including the Colosseum, the Pantheon, and the paintings of Pompeii, in their cultural contexts. (Not open to students who have completed Art 12.2 or 12.21.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 13.30 Art of the Middle Ages

## 3 hours; 3 credits

Major developments in Western Europe and Byzantium from the third century through the fourteenth. Emphasis on formation of new kinds of sacred art, interaction of classical and barbarian traditions, imagery of political authority, and emergence and evolution of the art of the book. (Not open to students who have completed Art 11.2 or 11.3 or 11.4 or 11.6.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 13.40 Jewish Art

3 hours; 3 credits
Survey of Jewish art from antiquity to the present. Biblical archaeology, design and decoration of the synagogue, illuminated manuscripts, ceremonial art, nineteenth- and twentieth-century painting and sculpture. (Not open to students who have completed Art 11.5.)
Prerequisite: Art 1.3 or Core Studies 2.1.

## Early European art

14.61 Early Renaissance Art in Northern Europe 3 hours; 3 credits
The New Realism in painting and sculpture and its relationship to devotional practices, political policies, and social life in the Netherlands, France, and Germany from the fourteenth to the fifteenth centuries. Major artists: the Limbourg Brothers, Van Eyck, Van der Goes, Sluter. Major works: the Très Riches Heures, the Ghent Altarpiece, and the Arnolfini Wedding. (Not open to students who have completed Art 19.3 or 19.6.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.62 Later Renaissance Art in Northern Europe

 3 hours; 3 creditsPainting, the graphic arts, and sculpture in the Netherlands, Germany, and France from 1500 to 1600 , studied in the context of religious, cultural, and social upheavals and the emergence of secular subjects. Major artists: Bosch, Breugel, Dürer, Holbein. (Not open to students who have completed Art 19.6 or 19.8.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.71 Early Renaissance Art in Italy

3 hours; 3 credits
Art and architecture of Florence, Siena, and the surrounding area from the mid-thirteenth century to the end of the fifteenth century. Consideration of major works of art in relation to the social and religious climate. Major artists: Giotto, Duccio, Masaccio, Brunelleschi, Donatello, Ghiberti, Piero della Francesca, Botticelli. (Not open to students who have completed Art 19.5.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.72 Later Renaissance Art in Italy

3 hours; 3 credits
Painting and sculpture of sixteenth-century Florence, Rome, and Venice. Evaluation of such concepts as "High Renaissance" and "Mannerism" in relation to the broader cultural currents of the period. Major artists: Leonardo da Vinci, Giorgione, Michelangelo, Raphael, Titian. Major works: The Last Supper, the paintings in the Sistine Chapel, and the Vatican "Stanze." (Not open to students who have completed Art 19.7.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.81 Baroque Art in Italy

3 hours; 3 credits
Italian architecture, sculpture, and painting of the late sixteenth century and seventeenth century assessed in relation to the counter-Reformation, a resurgent Catholic Church, and the taste of the courts of France and Spain. Major artists: Caravaggio, the Carracci, Bernini, Borromini, Poussin, and Velásquez. (Not open to students who have completed Art 13.1.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.82 Baroque Art in Belgium <br> 3 hours; 3 credits

Emergence of realist style in Antwerp in the seventeenth century; developments in the service of the church and state. The rise of new secular subjects considered in relation to the social and economic realities to which they refer. Major artists: Rubens and his school, van Dyck, Jordaens, Brouwer. (Not open to students who have completed Art 19.9 or 19.92.) Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.83 Baroque Art in Holland

3 hours; 3 credits
Development of Dutch art during the seventeenth century in relation to the culture, economy, and politics of the emergent Dutch Republic. Major artists: Rembrandt, Hals, Vermeer. (Not open to students who have completed Art 19.9 or 19.91.) Prerequisite: Art 1.3 or Core Studies 2.1.

### 14.84 Baroque Art in France

3 hours; 3 credits
Painting, sculpture, and architecture from the reign of Henry IV to the death of Louis XIV. Emphasis on urban planning, the Louvre, Versailles and the Baroque palace, art theory and the Academy. Major artists: La Tour, Poussin, Lorrain. Art forms considered in social, economic, political, and cultural contexts. Prerequisite: Art 1.3 or Core Studies 2.1.

## Modern European art

15.12 Realism, Impressionism, and Post-Impressionism 3 hours; 3 credits
Major artists and themes in European art, mainly French, during the second half of the nineteenth century. Art and literature and new optical theories of color and light. Major artists: Courbet, Manet, Degas, Monet, Renoir, Cézanne, Van Gogh, Gauguin. (Not open to students who have completed Art 16.5.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 15.20 Modern Art

3 hours; 3 credits
The art of the first half of the twentieth century, its precedents, and its political and cultural context. The rise of abstraction, the liberation of color, and the interest in the subconscious. Major artistic movements in Europe: Fauvism, Cubism, Futurism, Surrealism. Major artists: Picasso, Matisse, Mondrian, Kandinsky. (Not open to students who have completed Art 15.2.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 15.30 Contemporary Art

3 hours; 3 credits
Twentieth-century art since World War II from Abstract Expressionism to the present. Contemporary art exhibited in New York City galleries and museums. Major movements: Pop Art, Minimalism, Conceptual Art, Post-Modernism. Major artists: Pollock, de Kooning, Johns, Warhol. (Not open to students who have completed Art 15.3.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 15.40 Modern Sculpture

3 hours; 3 credits
Art of various European and American sculptors from the late nineteenth century to the present. Major sculptors: Rodin, Brancusi, Degas, Matisse, Picasso. (Not open to students who have completed Art 15.4.)
Prerequisite: Art 1.3 or 26.2 or Core Studies 2.1.

### 15.60 Women in Modern Art

3 hours; 3 credits
Exploration of the changing image and role of women in nineteenth- and twentieth-century art. Major artists: Delaunay, Modersohn-Becker, Kollwitz, Kahlo, O'Keeffe. Issues of gender will be considered. (Not open to students who have completed Art 15.6.)
Prerequisite: Art 1.3 or Core Studies 2.1 or Women's Studies 10.8.

## Art of Africa, Oceania, and the Americas

16.10 American Art from the Colonial Period through the Civil War

## 3 hours; 3 credits

Painting, sculpture, architecture, and the graphic and decorative arts from the seventeenth century through the mid-nineteenth century, viewed in social context and in light of English and Continental sources. Major artists: West, Copley, Cole. (Not open to students who have completed Art 16.1.)
Prerequisite: Art 1.3 or Core Studies 2.1.

## Architecture <br> 20.30 Architecture from the Medieval Period to the Late Baroque Era <br> 3 hours; 3 credits

Architecture and planning from medieval times to the late Baroque era. Medieval cities; the Renaissance, with focus on Brunelleschi, Alberti, Bramante, Michelangelo, and Palladio; the Baroque, with focus on Bernini and Borromini; the spread of Renaissance and Baroque principles throughout Europe. Cultural context and distinctive features of major monuments. (Not open to students who have completed Art 14.1 or 14.5.)
Prerequisite: Art 1.3 or Core Studies 2.1

### 20.40 Architecture from the Industrial Revolution to the Art Nouveau Movement

3 hours; 3 credits
Major developments in the architecture of Europe and the United States from the time of the Industrial Revolution to the end of the nineteenth century. Engineering, expositions, Neoclassicism, Gothic Revivalism, social utopian ideals, expansion of cities and suburbs, arts and crafts, and the Art Nouveau movement. (Not open to students who have completed Art 14.2 or 14.6.)
Prerequisite: Art 1.3 or Core Studies 2.1.

### 20.50 Architecture from 1900 to 1939

## 3 hours; 3 credits

Major personalities and developments in the architecture of Europe and the United States. Major architects: Wright, Gropius, Mies van der Rohe, Taut, Le Corbusier, Aalto. Major movements: Functionalism, Futurism, Constructivism, Expressionism, the Bauhaus movement, de Stijl.
Prerequisite: Art 1.3 or Core Studies 2.1.

### 20.60 Architecture from World War II to the Present

 3 hours; 3 creditsMajor personalities and developments in the architecture of Europe, Asia, and the United States. Major architects: Mies van der Rohe, Wright, Le Corbusier, Aalto, Kahn, Isozaki, Gehry. Major movements: the new Brutalism, Metabolism, utopian visions, Venturi, Post-Modernism, Rationalism, Deconstructionism.
Prerequisite: Art 1.3 or Core Studies 2.1.

## Special topics and seminars <br> 70.10 Special Topics in Art History

## 3 hours; 3 credits

Topic is selected by the instructor. Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics. Students may not earn more than a total of six credits in Art 70.10.
Prerequisite: Art 1.3 or Core Studies 2.1; and six credits in advanced art history courses.

### 71.10 Seminar: Methods in Art History

 3 hours; 3 creditsApplicable art historical methodologies will be used for an in-depth study of a topic or an individual artist. Student participation in, and presentation of, research. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: Art 1.3 or 1.4 or Core Studies 2.1; and three credits in an advanced art history course.

### 72.10, 72.20 Internships in the Visual Arts I, II

 Minimum of 9 hours conference and independent work§; 3 creditsInternships in artistic vocations and in public service agencies in the arts.
Prerequisite of 72.10 : permission of the chairperson. Prerequisite of 72.20: Art 72.10.

### 73.10 Art Theory and Criticism

3 hours; 3 credits
Through readings, writing, museum visits, class discussion, and student presentations, students learn to interpret and analyze works of art through the different approaches of art history, art criticism, and art theory. Exploration of multiple perspectives on art across cultures and periods, including new materials and definitions of contemporary art. Topics include biography, formal analysis, iconography, social history, gender, race, psychoanalysis, modernism, poststructuralism. Prerequisite: Core Studies 2.1 or Art 1.3; and three additional credits in art history.

## Honors courses in art history

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one semester.
83.10, 83.20 Independent Research in Art History I, II Minimum of 9 hours conference and independent work§; 3 credits
Independent research, supervised by a faculty member, on an approved topic. Weekly conference. Thesis or report. (Art 83.10 is not open to students who have completed Art 83.) Prerequisite of 83.10: twelve credits in advanced courses in art history, including at least three credits in the subject area (e.g., early European art) in which the student proposes to work, and permission of the instructor and the chairperson. Prerequisite of 83.20: Art 83 or 83.10, and permission of the instructor and the chairperson.

## Courses in studio art

## Introductory courses

## *25.11 Basic Design, Drawing, and Color

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Introduction to basic studio materials and elements of design, drawing, and color. Analysis of perception and visual expression for the general student and the art major. (Not open to students who have completed Art 20.1 or 21 or 25.)
Prerequisite or corequisite: Art 1.3 or Core Studies 2.1.

## *25.12 Basic Three-Dimensional Design

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Introduction to the elements of three-dimensional design in a basic workshop. Development of expressive forms in various materials and the use of hand tools for the general student and the art major. (Not open to students who have completed Art 27 or 51.)
Prerequisite or corequisite: Art 1.3 or Core Studies 2.1.

## Drawing

*26.11 Drawing I
1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Representation of forms and pictorial expression in line, value, and texture. Development in perceptual and creative skills with a variety of drawing materials and techniques. (Not open to students who have completed Art 26.)
Prerequisite: Art 25 or 25.11.

### 26.12 Drawing II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 26.11. Abstract and figurative expression and composition. (Not open to students who have completed Art 33.6 or 33.7.)
Prerequisite: Art 26 or 26.11.

### 26.21 Figure Drawing I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Methods of drawing the human figure with reference to historical and contemporary modes of expression. (Not open to students who have completed Art 34 or 34.3.)
Prerequisite: Art 26 or 26.11.

### 26.22 Figure Drawing II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Continuation of Art 26.21. Media-expressive interpretation of the human figure using selected drawing materials. (Not open to students who have completed Art 34.4.)
Prerequisite: Art 26.21 or 34.3.

### 26.30 Artistic Anatomy

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Study of drawing conventions within the Western figurative tradition. Recommended for students strongly motivated toward structural and aesthetic knowledge of human form. (Not open to students who have completed Art 34.2.)
Prerequisite: Art 26 or 26.11.

## Painting

### 26.51 Painting I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Introduction to techniques of oil or acrylic painting. Development in painting expression, composition, and dynamics of color. (Not open to students who have completed Art 40.1 or 42.1.)
Prerequisite: Art 25 or 25.11.

### 26.52 Painting II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 26.51. Development of problems and ideas in painting. Analysis of modern and historical masterworks and techniques. (Not open to students who have completed Art 40.2.)
Prerequisite: Art 26.51 or 40.1 .

### 26.53 Painting III

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 26.52. Advanced problems and concepts in painting. (Not open to students who have completed Art 40.3.) Prerequisite: Art 26.52 or 40.2.

### 27.11 Workshop in New Materials

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Creative and technical experimentation with a variety of non- traditional materials for selected workshop projects. (Not open to students who have completed Art 43.)
Prerequisite: Art 25.11 or 26 ; and 25.12 or 27.

## Sculpture

### 30.11 Sculpture I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Introduction to creative sculpture practice and techniques; to include plaster and clay. (Not open to students who have completed Art 51.1.)
Prerequisite: Art 25.12 or 27.

### 30.12 Sculpture II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Continuation of Art 30.11. Advanced projects in creative sculpture and theory. (Not open to students who have completed Art 52.1.)
Prerequisite: Art 30.11 or 51.1.

### 31.11 Wood Sculpture I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Sculptural form in wood. Use of hand and machine tools. Development of craftsmanship and structural ingenuity.
(Not open to students who have completed Art 54.1.)
Prerequisite: Art 25.12 or 27.

### 31.12 Wood Sculpture II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Continuation of Art 31.11. Advanced sculptural techniques and concepts. Creative development of figurative and non- figurative sculptural form in wood. (Not open to students who have completed Art 54.2.)
Prerequisite: Art 31.11 or 54.1.

### 32.11 Metal Sculpture I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Exploration of form and space using the special characteristics of metal. Methods of joining and forming. (Not open to students who have completed Art 55.1.) Prerequisite: Art 25.12 or 27.

### 32.12 Metal Sculpture II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Continuation of Art 32.11. Advanced concepts of form and space. Creative development of representational and abstract form in metal. (Not open to students who have completed Art 55.2.)
Prerequisite: Art 32.11 or 55.1.

### 33.11 Ceramics

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Studio practice in techniques and aesthetics of ceramic form, to include pottery design, firing, and glazing methods. (Not open to students who have completed Art 53.1.)
Prerequisite: Art 25.12 or 27.

### 33.12 Ceramics II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 33.11. Advanced ceramics projects and firing and glazing techniques. (Not open to students who have completed Art 53.2.)
Prerequisite: Art 33.11 or 53.1 .

## Printmaking

### 35.11 Printmaking: Relief and Woodcut

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Creative development of visual form using relief and planographic techniques of monoprint, linoleum, and woodcut. (Not open to students who have completed Art 67.1.) Prerequisite: Art 25 or 25.11.

### 35.12 Printmaking: Lithography

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 35.11. Creation of images using advanced relief and planographic techniques, including lithography. (Not open to students who have completed Art 67.2.)
Prerequisite: Art 35.11 or 67.1 .

### 35.21 Printmaking: Etching I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Creative development of visual form using all etching techniques. (Not open to students who have completed Art 66.)
Prerequisite: Art 25.11 or 26.

### 35.22 Printmaking: Etching II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 35.21. Creative development of etching and engraving concepts. Experimentation in color. Thematic and nonthematic development of ideas. (Not open to students who have completed Art 66.1.)
Prerequisite: Art 35.21 or 66.

### 35.30 Edition Printing

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
The techniques of printing an edition of fine art prints for an artist. Students will produce suites of lithographs, etchings, and woodcuts.
Prerequisite: Art 35.11 or 35.21 or 66 or 67.1 or permission of the chairperson.

## Photography

### 45.10 Photography I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Photography as a creative art. Use of camera. Exposure, developing, and printing. Students must supply their own cameras. (Not open to students who have completed Art 45.1.)
Prerequisite: Art 25 or 25.11.

### 45.20 Photography II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Continuation of Art 45.10. Further development of visual perception. Advanced training in handling photographic material. Analysis of main trends in contemporary photography. (Not open to students who have completed Art 45.2.)
Prerequisite: Art 45.1 or 45.10.

### 45.30 Photography III

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Continuation of Art 45.20. Development of a photography project relating to the history of photography and the work of selected master photographers. (Not open to students who have completed Art 45.3.)
Prerequisite: Art 45.2 or 45.20 .

### 45.60 Workshop in the History of Photography

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits
Survey of the history and evolution of photography. Analysis of the work of significant photographers. (Not open to students who have completed Art 45.6.)
Prerequisite: Art 45.1 or 45.10 .

## Design and computer arts

### 48.11 Electronic Image I

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Introduction to computer-imaging techniques. The methods by which a computer looks at an image and conveys it into conventional graphical formats. Exploration of the role of computer-imaging techniques in the creative process.
(Not open to students who have completed Art 29.)
Prerequisite: Art 25 or 25.11; and 27 or 25.12.

### 48.12 Electronic Image II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent computer laboratory work§; 3 credits
Continuation of Art 48.11, with focus on complexities of black-and-white techniques in producing images, line art, and gray scale. Screen technology. (Not open to students who have completed Art 30.)
Prerequisite: Art 29 or 48.11.

### 48.13 Electronic Image III

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent computer laboratory work§; 3 credits
Continuation of Art 48.12, with focus on the complexities of color in graphic design; techniques for scanning and color separation. (Not open to students who have completed Art 31.) Prerequisite: Art 30 or 48.12.

### 48.14 Advanced Media I

1 hour lecture, 1 hour recitation, a minimum of 4 hours independent work§; 3 credits
Studio techniques of modeling and rendering computer design-media into formats for file exchange among existing applications. Storyboards, timeline, modeling, and rendering along a production ladder. Perception and theory of visual structures as applied to culturally accepted values studied as aesthetic values.
Prerequisite: all of the following: Art 25.12 or 27, 26.11 or 26, 48.13 or 31 ; Core Studies 5 or Computer and Information Science 1.10.

### 48.15 Advanced Media II

1 hour lecture, 1 hour recitation, a minimum of 4 hours independent work§; 3 credits
Continuation of Art 48.14. Emphasis on refinement of studio techniques of modeling and rendering computer-design media into formats for file exchange among existing applications. Storyboards, timeline, modeling, and rendering along a production ladder. Advanced techniques, including transfer to such output systems as print and video tape.
Prerequisite: Art 48.14.

## Special topics

70.12 Summer Archaeological Field School in Israel 3 hours lecture, 6 hours supervised fieldwork; 6 credits Intensive instruction in field methods and techniques of archaeology through participation in every aspect of an excavation; training in archaeological mapping, excavation techniques, and methods of archaeological laboratory analysis. This course is the same as Judaic Studies 70.1. (Not open to students who have previously received credit for archaeological fieldwork.)
Prerequisite: permission of the chairperson and one of the following: Art 2.1, Anthropology 2.2, Classics 26, Judaic Studies 12, Core Studies 1, 2.1, 9, a course in archaeological theory and methodology.

### 70.20, 70.21 Special Topics in Studio Art I, II

1 hour recitation, 1 hour lecture, 2 hours laboratory, a minimum of 4 hours independent work§; 3 credits Topics vary and reflect the interests of students and faculty. Emphasis on specialized techniques and art media or creative projects not otherwise covered in the regular curriculum. Prerequisite of 70.20: permission of the chairperson. Prerequisite of 70.21: Art 70.20.

### 72.10, 72.20 Internships in the Visual Arts I, II

 Minimum of 9 hours conference and independent work§; 3 creditsInternships in artistic vocations and in public service agencies in the arts.
Prerequisite of 72.10 : permission of the chairperson. Prerequisite of 72.20: Art 72.10.

### 73.10 Art Theory and Criticism

3 hours; 3 credits
Through readings, writing, museum visits, class discussion, and student presentations, students learn to interpret and analyze works of art through the different approaches of art history, art criticism, and art theory. Exploration of multiple perspectives on art across cultures and periods, including new materials and definitions of contemporary art. Topics include biography, formal analysis, iconography, social history, gender, race, psychoanalysis, modernism, post-structuralism.
Prerequisite: Core Studies 2.1 or Art 1.3; and three additional credits in art history.
73.11, 73.12 Special Problems in the Visual Arts I, II Minimum of 9 hours conference and independent work§; 3 credits
Independent work in a visual arts medium or a project agreed on by the student and the instructor and not covered in the regular curriculum.
Prerequisite of 73.11: permission of the instructor and the chairperson.
Prerequisite of 73.12: Art 73.11 and permission of the instructor and the chairperson.

## Honors courses in studio art

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one semester.

### 86.10, 86.20, 86.30, 86.40 Honors Workshop in

Creative Art I, II, III, IV
Minimum of 9 hours conference and independent work§; 3 credits
Individual development through traditional and experimental studio-art media. Students may not earn more than a total of twelve credits in the Art 86 sequence.
Prerequisite of 86.10: eighteen credits in advanced courses in studio art, including at least six credits in the subject area (e.g., sculpture) in which the student proposes to work, and permission of the instructor and the chairperson.
Prerequisite of 86.20: Art 86.1 or 86.10, and permission of the instructor and the chairperson.
Prerequisite of 86.30: Art 86.2 or 86.20, and permission of the instructor and the chairperson.
Prerequisite of 86.40: Art 86.3 or 86.30 , and permission of the instructor and the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

| 1.3 | Masterpieces of Western Art |
| :--- | :--- |
| 1.4 | Masterpieces of Non-Western Art |
| 14.90 | Rococo to Revolution |
| 15.11 | Neoclassicism and Romanticism |
| 15.80 | History of Photography |
| 16.01 | Traditional Art of Africa, Oceania, and the Americas |
| 16.02 | African Art |
| 16.30 | American Art from the Civil War to the Present |
| 18.40 | Art of Ancient China |
| 18.50 | Art of Japan |
| 20.20 | Architecture from the Neolithic to the Fall of the |
| 47.10 | Roman Empire |
| 47.20 | Visual Communication I |
| 62.10 | Image and Word in Western Culture |

## Biology

Department office: 200 Ingersoll Hall Extension
Telephone: 951-5396, 951-5397, 951-5398
Chairperson: Ray H. Gavin
Deputy Chairperson, CLAS and SGS: David R. Franz Professors: Blamire, Eckhardt, Franz, Gavin, McGowan; Associate Professors: Eshel, Forest, Nishiura; Assistant Professors: Basil, He, Polle.

## Core curriculum

The Department of Biology participates in the college's core curriculum through Core Studies 8.1.

## B.A. degree program in biology HEGIS code 0401

Department requirements (42-49 credits)
To enroll in any of the following laboratory courses: Biology 17.1, 29.1, 45.1, and 52.2, students must have completed a minimum of three lecture courses with a grade of C - or better. A student who receives a grade of $D$ or lower in any biology course applied toward fulfillment of department requirements must repeat the course until the grade of C - or higher is earned, or offer another course of equal or higher rank. Any substitution of courses must be approved by the chairperson. All of the following: Biology 17, 29, 34.1, 38, 45, 52, 58. All of the following: Biology 17.1, 29.1, 45.1, 52.2.
One of the following: Biology 15, 16.1, 21.2, 23.1 and 23.2, $24.2,25,26,27.5,32.1,39.1,42.1$ and 42.2, 55.1, 55.2, 57 , 59, 63.
One of the following chemistry sequences, a), b), or c):
a) Chemistry 5 and 50
b) Chemistry 2 and 50
c) Chemistry 1 , or 1.1 and 1.2, 2, 51, and 52.

Mathematics 3.3.

## Department recommendations

Chemistry 51 and 52 and Physics 1 and 2 are required for some preprofessional programs and are strongly recommended for prospective graduate students in biology. Students who anticipate majoring in biology must see a departmental adviser before the end of the sophomore year in order to plan their programs.

| B.S. degree program in biology |
| :--- |
| HEGIS code 0401 |
| Department requirements ( $51-53$ credits) |
| To enroll in any of the following laboratory courses: Biology |
| 17.1, $29.1,45.1$, and 52.2 , students must have completed a |
| minimum of three lecture courses with a grade of C- or better. |
| A student who receives a grade of D or lower in any biology |
| course applied toward fulfillment of department requirements |
| must repeat the course until a grade of C- or higher is |
| earned, or offer another course of equal or higher rank. Any |
| substitution of courses must be approved by the chairperson. |
| All of the following: Biology $17,29,34.1,38,45,52,58$. |
| All of the following: Biology 17.1, 29.1, 45.1, 52.2 . |
| Two of the following: Biology $15,16.1,21.2,23.1$ and 23.2 , |
| $24.2,25,26,27.5,28,32.1,39.1,42.1$ and $42.2,43.3,55.1$, |
| $55.2,57,59,63,73.1,83.1$. |
| All of the following: Chemistry 1 , or 1.1 and $1.2,2,51,52$. |
| Mathematics 3.3 . |

## Department recommendation

Students who anticipate majoring in biology must see a departmental adviser before the end of the sophomore year in order to plan their programs.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in biology must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Biology Department. These 24 credits must be completed at Brooklyn College with a grade of C - or higher in each course. Specific course requirements for a B.S. degree are described above.
The following courses may be applied toward the 60 credits in science and mathematics:
A) All courses in the departments of biology, chemistry, computer and information science, geology, mathematics, physics, and psychology.
B) Courses marked with a ( $\cdot$ ) symbol in the Department of Health and Nutrition Sciences.
C) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3.

Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2. Economics 30.2, 30.3, 31.1, 31.2. Philosophy 13, 33, 42. Physical Education 22.71, 22.75, 23, 30, 51. Sociology 77.1.

## B.A. degree program in adolescence education: biology teacher <br> HEGIS code 0401.01; SED program code 26814

The School of Education and the Department of Biology jointly offer a program for students who plan to teach biology in grades 7 through 12. Additional information may be obtained from the School of Education or the Department of Biology. Students should consult a counselor as early as possible to plan their program.
Program requirements ( $63-70$ credits):
All of the following: Biology 17, 29, 34, 38, 45, 52, 58.
All of the following: Biology 17.1, 29.1, 45.1, 52.2.
One of the following: Biology 15, 16.1, 21.2, 23.1, 23.2, 24.1, $25,26,27.5,32.1,39.1,42.1,42.2,55.1,55.2,57,62.5$.
One of the following chemistry sequences, $a$ ), or b), or c):
a) Chemistry 5 and 50 .
b) Chemistry 2 and 50 .
c) Chemistry 1 or 1.1 and 1.2 ; Chemistry 2, 51, 52 . Mathematics 3.3.
The following pedagogical courses: Education 16, 34, 64.1, $69,71.04$, and 72.04. These courses are described in the "Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree program for biology teacher.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

## Requirements for a minor in biology

All of the following required courses: Biology 17, 29, 34, 17.1, 29.1.

Any two of the following elective courses: Biology 15, 25, 38, 45 , 52, or 58.
Each course must be completed at Brooklyn College with a grade of C - or higher.

## Recommendation for prospective graduate students

Many graduate programs in biology require reading competence in two of the following languages: French, German, Russian. Prospective graduate students who studied one of the languages for two years in high school should study another of these languages through course 2 in college. Proficiency in a computer language may be substituted for one of the foreign languages.

## Undergraduate research participation

The department encourages students to participate in research programs with faculty members, without credit. This work may begin as early as feasible and continue throughout the student's academic program. Qualified students may enroll in Biology Department courses numbered 73.1, 73.2 or 83.1 through 83.4.

## Department honors

To be eligible for graduation with honors in biology, a student should have an average of 3.50 or higher in biology courses and complete a Biology Department course numbered 83.1 through 83.4 with distinction.

## Division of Graduate Studies

The Biology Department offers master of arts degree programs in biology, applied biology, and biology teacher (grades 7 through 12). Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *3 General Biology I

1 hour recitation, 2 hours lecture, 3 hours laboratory; $41 / 2$ credits
Nature, functioning, and interrelationships of communities and organisms within the biosphere. Evolution, structure, and function of plants and animals. (Not open to students who are enrolled in or have completed Biology 2 or 6.1 or 6.2 .)

## *4 General Biology II

1 hour recitation, 2 hours lecture, 3 hours laboratory; $41 / 2$ credits
Continuation of Biology 3. Cell structure, physiology, and genetics. Interrelationships of form and function in metabolism and embryonic development. (Not open to students who are enrolled in or have completed Biology 1.)

To enroll in biology courses not marked (*), biology majors must earn a grade of C or higher in each biology course completed, unless excused from this requirement by the chairperson.

## 15 Field Studies in Botany

30 hours lecture, 60 hours fieldwork and laboratory work; 4 credits
Field trips to observe associations in typical plant habitats. Laboratory consideration of the characteristics, evolutionary relationships, and geography of flowering plants. Summer session.
Prerequisite: Biology 11 or 11.5 or 29.

## *17 Molecular Biology

2 hours; 2 credits
Principles and problems of the structure and functions of cell components. Emphasis will be placed on the molecular composition of cells and on methods of research. (Not open to students who have completed Biology 35.)

### 17.1 Laboratory in Eukaryotic Cell Biology and Physiology <br> 4 hours; 2 credits

Experiments designed around fundamental questions in eukaryotic cell biology and physiology with a strong emphasis on contemporary sophisticated cell and molecular biology techniques. Computer simulations and prerecorded video disks will supplement the experiments. (Not open to students who have completed Biology 35.)
Prerequisite: Biology 17 and any two of the following: 29, 34, 45, 52, 58.

### 19.5 Biology Topics Workshop: A Virtual Tour of Research Laboratories in Biology

4 hours laboratory; 2 credits
Independent exploration of Internet resources under the supervision of a faculty member. Current research topics in top biology laboratories around the world. Preparation for higher-degree studies. Asynchronous use of Internet resources and relevant literature. Preparation of a research proposal in the form of an application to a research laboratory.
Prerequisite: Biology 17 and 17.1 and permission of the chairperson.

## 21 Invertebrate Zoology

2 hours lecture, 4 hours laboratory; 4 credits
Structure, life histories, and phylogeny of the most important invertebrate forms.
Prerequisite: Biology 2 or completion of Biology 1 with a grade of B or higher; or Biology 4.

### 24.1 Developmental Anatomy

2 hours lecture, 4 hours laboratory; 4 credits
Introduction to structure, development, and phylogeny of vertebrates.
Prerequisite: Biology 2 or 4 or permission of the chairperson.

## 25 Field Studies in Zoology

30 hours lecture, 60 hours fieldwork and laboratory work; 4 credits
Field studies of animals in their natural environments. Laboratory work. Summer session.
Prerequisite: Biology 2 or 4 or 29.1.

### 27.5 Molecular Biology of Development

1 hour recitation, 3 hours lecture; 4 credits
Experimental and biochemical analysis of development of echinoderm, molluscan, and amphibian embryos. Biochemical analysis is primarily related to the replication, transcription, and translation of nucleic acids. Analysis of experimental design and interpretation of work in current literature with emphasis on experimental designs for future work.
Prerequisite: Biology 4 or 17.1 and Chemistry 50 or 51. The chairperson may waive Chemistry 50 or 51 as a prerequisite of Biology 27.5 for students who received a grade of $B$ or higher in Chemistry 2.

## 29 Organismic Biology I, Botany

## 2 hours; 2 credits

Concepts in the structure, diversity, growth, and development of plants and related organisms. (Not open to students who have completed Biology 11.5.)

### 29.1 Plant Form and Function Laboratory

## 4 hours; 2 credits

Experiments and examination of the structure, diversity, growth, and development of plants and related organisms. (Not open to students who have completed Biology 11.5.)
Prerequisite: Biology 29 and any two of the following: 17, 34, 38, 45, 52, 58.

## 34 Animal Physiology

2 hours; 2 credits
Lecture survey of how basic physiological processes are influenced and controlled by the nervous and endocrine systems. The relationships between structure and function will be emphasized. A comparative approach using examples from different groups of vertebrate animals. Those physiological processes that do not come under direct neuroendocrine control will be contrasted with those that do. (Not open to students who have completed Biology 31.)
Prerequisite: Biology 17 and 29.

### 34.1 Comparative Physiology

## 2 hours lecture; 2 credits

Physiological processes will be compared at the cellular and whole organism levels among a broad variety of organisms ranging from bacteria, plants, and fungi, to animals, including humans.

## Prerequisite: Biology 17 and 29.

## 35 Cell and Molecular Biology

3 hours; 3 credits
Introduction to the biology of the cell with emphasis on molecular aspects of biology. Ultrastructures, molecular composition, functions of the cell. Emphasis on cellular energetics, information storage and transfer, protein synthesis, growth, reproduction, and functional integration of cellular organelles and inclusions. (Not open to students who have completed Biology 38 or Biology 39.)
Prerequisite: Biology 2 or 4; and Chemistry 2.

### 36.3 Plant Physiology - Lecture

2 hours lecture; 2 credits
Basic topics in plant physiology, including water household, mineral nutrition, respiration, photosynthesis, nitrogen and sulfur fixation, plant hormones and development, plant molecular biology, genetic engineering, and environmental physiology. (Not open to students who have completed Biology 36, 36.1, or 36.2.)
Prerequisite: Biology 17, 29, 34.1, and Chemistry 1.

### 36.4 Plant Physiology - Laboratory

4 hours laboratory; 2 credits
Experiments designed to gain better understanding of fundamental questions encountered in plant physiology, covering topics such as water household, transport, photosynthesis, respiration, nitrogen fixation, and secondary metabolism.
Prerequisite: Biology 36.3.

## 38 Evolution

2 hours; 2 credits
Introduction to the major ideas and models of evolution; emphasis on natural selection and other processes in explaining structures and functions of individuals and populations; current ideas to account for the biodiversification of life on earth. (Not open to students who have completed Biology 50.)
Prerequisite: Biology 17 and 29; Biology 58 recommended.

### 42.1 Medical Microbiology

3 hours; 3 credits
Microbes as disease agents. Examination of host-microbe interactions, the immune response, nature and mechanisms of infectious diseases, chemotherapy, drug resistance, and epidemiology. (Not open to students who have completed Biology 42.)
Prerequisite: Biology 40.1 or 41 or 52.1 or 52.2 , or permission of the chairperson.

## 45 Organismic Biology II, Zoology

2 hours; 2 credits
Key concepts in the structure and development of animals with special reference to those species used as models in contemporary developmental biology. (Not open to students who have completed Biology 21 or 24.1.)
Prerequisite: Biology 17 and 29.

### 45.1 Animal Form and Function Laboratory

4 hours; 2 credits
Dissection and microscopic examination of the structure and development of animals. (Not open to students who have completed Biology 21 or 24.1.)
Prerequisite: Biology 45 and any two of the following: 17, 29, 34, 38, 52, 58.

## 50 Ecology and Evolution

## 3 hours; 3 credits

Introduction to ideas and models of evolutionary ecology. Emphasis on natural selection and other processes in explaining structures and functions of populations, communities, ecosystems. (Not open to students who have completed Biology 57 or 62.)
Prerequisite: Biology 2 or 4.

## *52 Microbiology

2 hours; 2 credits
Microbiology as a science, structure and function of microbes, microbial interrelationships, microbial metabolism, mechanisms of recombination, and microbes as agents of disease. (Not open to students who have completed Biology 40.1 or 41.)
Prerequisite: Biology 3 and 4, or 17 and 29.

### 52.1 Microbiology Laboratory for Health Sciences

 4 hours; 2 creditsStudy of bacteria, molds, and yeasts in relation to human welfare. (Does not count towards the major in biology.) (Not open to students who have completed Biology 40.1 or 41 .)
Prerequisite: Biology 3 and 4, and permission of the chairperson of Biology or Health and Nutrition Sciences. Prerequisite or corequisite: Biology 52.

### 52.2 Microbiology Laboratory

## 4 hours; 2 credits

Techniques for isolation, cultivation, and characterization of bacteria and the use of microbes as experimental organisms. (Not open to students who have completed Biology 40.1 or 41.) Prerequisite: Any two of the following: Biology 17, 29, 34, 38, 45, 58.
Prerequisite or corequisite: Biology 52.

### 53.5 Genetics

3 hours; 3 credits
Principles and problems of heredity. (Not open to students who have completed Biology 53.)
Prerequisite: Biology 1 or 4; and Chemistry 2.

### 55.1 Recombinant DNA Technology

2 hours lecture, 1 hour recitation; 3 credits
Introduction to recombinant DNA technology. Application to current biological research. Basic biological understanding that supports recombinant DNA laboratory technology.
Prerequisite: Biology 17 or 35 and 41 or 52.2 and 53.5 or 58 ; or permission of the chairperson.

## 58 Genetics

2 hours; 2 credits
Principles and problems of heredity, including gene transmission, mutation, recombination, and function. (Not open to students who have completed Biology 53.5.)
Prerequisite: Biology 17 and 29.

## 59 Biotechnology of Algae

2 hours lecture; 2 credits
Phylogeny, evolution, habitats, growth cycles, and genetic engineering of algae; biosynthetic pathways of algal products and their metabolic regulation; interdisciplinary topics such as designing bioreactors and nutritional sciences including values of natural products. The economic aspect of patent law and management of companies dealing with algae will be covered.
Prerequisite: Biology 29 and Chemistry 1.

### 62.5 Ecology

2 hours lecture, 4 hours laboratory and supervised fieldwork; 4 credits
Populations of plants and animals, their relationships to environments and each other. Natural communities, their functions and utilizations. Field and laboratory methods in ecology. Five all-day field trips. (Not open to students who have completed Biology 62.)
Prerequisite: Biology 38 or 50 .

## 63 Principles of Ecology

3 hours lecture, 3 credits
Introduction to the principles of ecology; biology of populations, communities, and ecosystems; basic issues of biodiversity. Prerequisite: Biology 29, 29.1, 34, 45, and 45.1.

### 63.1 Field and Laboratory Methods in Ecology

4 hours laboratory including supervised fieldwork; 2 credits Introduction to field and laboratory methods in ecology, with focus on nearby ecosystems, including Jamaica Bay. One weekend all-day field trip required. Students work as a research team on field and laboratory projects. Grades based on individual student reports on team projects. (Students registering for Biology 63.1 must take Biology 63 concurrently.) (Not open to students who have completed Biology 62.5.)
Prerequisite: Biology 29, 29.1, 34, and 45.
Prerequisite or corequisite: Biology 45.1.

## 73.1, 73.2 Research I and II

Minimum of 9 hours conference and independent work§; 3 credits each term
Independent research in an approved area supervised by a faculty member. (Not open to students who are enrolled in Biology 83.1-83.4.)
Prerequisite of 73.1: one of the following: Biology 11, 11.5, 12, 21, 24.1, 31, 35, 41, 50, 53, 53.5; or any one of the following: Biology 17.1, 29.1, 45.1, 52.2; and permission of the sponsoring faculty member and department chairperson. Prerequisite of 73.2: Biology 73.1 and permission of the sponsoring faculty member and department chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.
83.1, 83.2, 83.3, 83.4 Independent Research I, II, III, IV Minimum of 9 hours conference and independent work§; 3 credits each term
Independent research supervised by a faculty member. Weekly conference. Thesis or report.
Prerequisite of 83.1: Biology 4; completion of at least two advanced Biology Department electives with a grade of A or B in each; or any two of the following: Biology 17.1, 29.1, 45.1, 52.2 with a grade of A or B in each; and permission of the instructor and the chairperson.
Prerequisite of 83.2: Biology 83.1 and permission of the instructor and the chairperson.
Prerequisite of 83.3: Biology 83.2 and permission of the instructor and the chairperson.
Prerequisite of 83.4: Biology 83.3 and permission of the instructor and the chairperson.

### 85.1 Colloquium

Minimum of 9 hours recitation, conference, and independent work§; 3 credits each term
Intensive reading in and group discussion of a special field. Students should consult department bulletin boards for current offerings. A term report or examination may be required.
Prerequisite: completion of an approved program of advanced Biology Department courses and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand.

## 5 The Biology of Aging

6 Philosophy of Biology
7 Ecological Principles and Environmental Problems
8 Human Embryology
9 Laws and Theories in Biology
10 Mini-Course in Special Topics in Biotechnology
12.5 Light and Life Process

14 Plants and Man
24.2 Advanced Vertebrate Anatomy and Phylogeny

37 Metabolism
39.1 Cell Culture Techniques

44 Experimental Protozoology
52 History of Biology
54 Experimental Genetics
55.2 Recombinant DNA Laboratory

57 Evolution

## Caribbean Studies Program

An interdisciplinary dual major
Program office: 3107 James Hall
Telephone: 951-4596, 951-5597
Director: Bert J. Thomas
Faculty: from the Departments of Africana Studies, History, Modern Languages and Literatures, Political Science, Puerto Rican and Latino Studies, and Sociology.

## B.A. degree program for Caribbean studies dual major HEGIS code 0308

Program requirements (18 credits plus a major in any department of the college)
Students must also complete parts 1 through 4.

1. Caribbean Studies 1.1.
2. Nine credits from the courses listed below, plus any prerequisite of the courses. The courses must be in three different participating departments.
Africana Studies 0.5 or 17
Africana Studies 17.4/Political Science 49.8
Africana Studies 17.5
Africana Studies 29/Comparative Literature 38.3/
Puerto Rican and Latino Studies 38
Africana Studies 37.2
Africana Studies 44.5
History 51.5
History 51.6
Political Science 49.6/Puerto Rican and Latino Studies 56
Puerto Rican and Latino Studies 18
Puerto Rican and Latino Studies 35 or Spanish 48 Spanish 49
3. Six additional credits in Caribbean studies chosen either from the courses listed above or approved by the program director. Students may use credits in relevant special topics courses and/or seminars toward satisfying this requirement. Such courses are offered by the Departments of Africana Studies, History, Political Science, and Puerto Rican and Latino Studies. Some seminars offer opportunities for field study in Caribbean countries. However, students must complete 12 credits in Caribbean studies before enrolling in a seminar.
4. A major in any of the departments of the college. Courses taken to satisfy requirements in the primary major may not be used to satisfy dual major requirements in the Caribbean Studies Program.

## Requirements for a minor in Caribbean studies

A program of twelve credits of advanced electives in Caribbean studies, as defined above in part 1 of the description of the Caribbean Studies Program, including one seminar, each course completed with a grade of C or higher.

## Course

### 1.1 Major Themes in Caribbean Studies

## 3 hours; 3 credits

Major factors that have shaped the Caribbean: discovery, slavery, colonialism, imperialism, "foreign" ideologies, and neo-colonialism. Comparative description of plantation societies in the Caribbean.

## Chemistry

Department office: 359 Ingersoll Hall Extension
Telephone: 951-5458, 951-5459
Chairperson: Malgorzata Ciszkowska
Deputy Chairperson, CLAS: James Howell
Deputy Chairperson, Division of Graduate Studies:
Richard Magliozzo
Professors: Davenport, Howell, Labianca, Levine;
Associate Professors: Ciszkowska, Magliozzo;
Assistant Professors: Greer, Huang, Kobrak, Koide.

## Core curriculum

The Department of Chemistry participates in the college's core curriculum through Core Studies 7.1.

## Courses for reentering students

A student who completed courses in chemistry at Brooklyn College that are no longer offered and who wants to take additional courses in chemistry, must consult a department counselor to determine which courses in the present numbering system are equivalent to those for which credit has already been given. Without clearance, credit may be denied.

## Choosing a first course in chemistry

Chemistry 1 and 1.1 are intended for students planning a career in any of the following: the physical, chemical, or biological sciences; engineering; geology; medicine; dentistry; pharmacy; or physical therapy.
Students who have taken one year of high school chemistry and who have taken or are enrolled in Mathematics 2.9 or its equivalent should take Chemistry 1 . Students who are not prepared for Chemistry 1 but who have completed intermediate high school algebra or its equivalent should take Chemistry 1.1.
Chemistry 5 is intended for students who plan a career in such health-related fields as occupational therapy, nursing, or nutrition. Students in health and nutrition sciences should consult with their department counselor before choosing a chemistry course.

## American Chemical Society Certification

The American Chemical Society recommends a program of study for students planning a career in chemistry. Chemistry majors who complete the curriculum described for the B.S degree in chemistry and who have taken selected courses, including instrumental analysis (Chemistry 42) and inorganic chemistry (Chemistry 76.1), may receive American Chemical Society certification. Students who will graduate in 2005 or after must also have taken biochemistry (Chemistry 57 or 57.1 ) in order to receive certification. Certified graduates are eligible to become members of the society; other chemistry graduates may become associate members of the society and members after three years of professional experience in chemistry. Interested students should consult the department counselor.

## B.S. degree program in chemistry <br> HEGIS code 1905

This program is intended for students planning a professional career in chemistry or biochemistry.
Department requirements ( $67-70^{1} / 2$ credits)
Chemistry 1 or both Chemistry 1.1 and 1.2.
All of the following: Chemistry 2, 41, or 41W, 51, 52, 61, 62.
At least nine credits chosen from the following: Chemistry 42, $53,55,57,58,58.1,64,72,76.1$, either 78 or 79 ; Biology 17 and 17.1.

One of the following physics sequences a) or b) or c):
a) Physics 1 and 2 .
b) Physics 1.5 and 2.5 .
c) Physics 1.5 and 2.

Computer and Information Science 1.10, 1.20, or 1.5.
One of the following mathematics sequences a) or b):
a) Mathematics 3.3 and 4.3 and 5.3.
b) Mathematics 3.20 and 4.20 and 4.31 and 5.3.

A college-wide minimum of 24 credits in advanced courses in one department must be completed at Brooklyn College with a grade of C - or higher in each course.

## Department recommendations

Physics 1.5 and 2.5.
Chemistry 62 should be completed by the end of the junior year.
One of the following languages through level 3: French, German, Russian.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in chemistry must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Chemistry Department. These 24 credits must be completed at Brooklyn College with a grade of C- or higher in each course. Specific course requirements for a B.S. degree are described above.
The following courses may be applied toward the 60 credits in science and mathematics:
A) All courses in the departments of biology, chemistry, computer and information science, geology, mathematics, physics, and psychology.
B) Courses marked with a $(\cdot)$ symbol in the Department of Health and Nutrition Sciences.
C) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3.
Core Studies 5, 5.1, 5.2, 7.2, 8.1, 8.2.
Economics 30.2, 30.3, 31.1, 31.2.
Philosophy 13, 33, 42.
Physical Education 22.71, 22.75, 23, 30, 51. Sociology 77.1.

## B.A degree program in chemistry

HEGIS code 1905
This program is intended for premedical and predental students and for others for whom a broad background in chemistry is desirable.
Department requirements (49-531/2 credits)
Chemistry 1 or both Chemistry 1.1 and 1.2.
All of the following: Chemistry 2,41 or $41 \mathrm{~W}, 51,52,60.1$ or 61 . At least five credits chosen from the following: Chemistry 42, $53,55,57,58,58.1,62,64,72,76.1$, either 78 or 79; Biology 17 and 17.1.
One of the following physics sequences a) or b) or c):
a) Physics 1 and 2 .
b) Physics 1.5 and 2.5 .
c) Physics 1.5 and 2.

The following mathematics sequence:
Mathematics 3.3 and 4.3.

## Department recommendation

Chemistry 60.1 or 61 should be completed by the end of the junior year.

## B.A. degree program in adolescence education: chemistry teacher HEGIS code 1905.01; SED program code 26813

The School of Education and the Department of Chemistry jointly offer a program for students who plan to teach chemistry in grades 7 through 12. Additional information may be obtained from the School of Education or the Department of Chemistry. Students should consult a counselor as early as possible to plan their program.
Program requirements ( $70-74^{1} / 2$ credits):
Chemistry 1 or Chemistry 1.1 and 1.2.
All of the following: Chemistry 2, 41, 51, 52, 60.1 or 61.
At least five credits chosen from the following: Chemistry 42, $53,55,57,58,58.1,62,64,72,76.1$, either 78 or 79 ; Biology 17 and 17.1.
One of the following physics sequences, a), or b), or c):
a) Physics 1 and 2.
b) Physics 1.5 and 2.5 .
c) Physics 1.5 and 2 .

The following mathematics sequence: Mathematics 3.3 and 4.3. The following pedagogical courses: Education 16, 34, 64.1, $69,71.04$, and 72.04. These courses are described in the "Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree program for chemistry teacher.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

## Requirements for a minor in chemistry

A program of 12 credits of advanced electives in chemistry, each completed with a grade of C- or higher. Each course must be completed at Brooklyn College and must have 3 or more credits.

## Requirements for a minor in biochemistry

Biology 17; Chemistry 1, or both 1.1 and 1.2; Chemistry 2; Chemistry 41 or 41 W, or Biology 17.1; Chemistry 51, 52, 57; Chemistry 58 or 58.1 .

## Division of Graduate Studies

The Chemistry Department offers master of arts degree programs in chemistry, and chemistry teacher (grades 7 through 12). Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the department's deputy chairperson for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majorsin this department for the B.A. degree or 24 credits for the B.S. degree.
§Independent work means not less than three additional hours each week per credit of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *0.5 Chemistry and Society

3 hours lecture; 3 credits
Role of chemistry in contemporary life. Topics may include consumer products, foods, drugs, energy sources, and
environmental problems. Recommended for nonscience majors. Prerequisite: Core Studies 7.1.

## *1 General Chemistry I

1 hour recitation, 3 hours lecture, 3 hours laboratory; 5 credits
Principles of chemistry. Emphasis on the facts, theories, and laboratory techniques needed for further courses in the sciences. Intended for students planning a career in any of the following: the physical, chemical, or biological sciences; engineering; geology; medicine; dentistry; pharmacy; physical therapy. (Not open to students who are enrolled in or have completed Chemistry 1.1.)
Prerequisite: a passing grade in high school chemistry.
Prerequisite or corequisite: Mathematics 2.9 or 2.92 ; or assignment by the Department of Mathematics to Mathematics 3.3.

## *1.1 General Chemistry IA

3 hours lecture; 2 credits
Introduction to the principles of chemistry with more introductory material than is covered in Chemistry 1. Chemistry 1.1 and 1.2 constitute a two-term sequence intended for students who are not prepared for Chemistry 1. (Not open to students who are enrolled in or who have completed Chemistry 1.)
Prerequisite: a passing grade in intermediate high school algebra or a grade of C - or higher in Mathematics 0.47 .

## *1.2 General Chemistry IB

3 hours lecture, 3 hours laboratory; $3^{11 / 2}$ credits
Continuation of Chemistry 1.1. (Not open to students who are enrolled in or who have completed Chemistry 1.)
Prerequisite: Chemistry 1.1.

## *2 General Chemistry II

1 hour recitation, 3 hours lecture, 3 hours laboratory; 5 credits
Continuation of Chemistry 1.
Prerequisite: Chemistry 1 or 1.2.

## *5 General Chemistry for Health-related Professions

1 hour recitation, 3 hours lecture, 3 hours laboratory; 5 credits
Principles of chemistry with applications to biological systems and processes. Intended for students in nursing or other health-related fields. (Not open to students who have completed Chemistry 1 or 1.2 or the equivalent.)
Prerequisite: one year of high school algebra or Mathematics 0.22 .

## 41 Analytical Chemistry

3 hours lecture, 4 hours laboratory; 5 credits
Theory and practice of classical and modern analytical chemistry. Laboratory emphasizes quantitative methods. (Not open to students who are enrolled in or have completed Chemistry 41W.)
Prerequisite: Chemistry 2.

## 41W Analytical Chemistry

3 hours lecture, 4 hours laboratory, 1 hour writing workshop; 5 credits
Theory and practice of classical and modern analytical chemistry. Laboratory emphasizes quantitative methods. Writing-intensive section. (Not open to students who are enrolled in or have completed Chemistry 41.)
Prerequisite: Chemistry 2 and English 2.

## 42 Instrumental Analysis

2 hours lecture, 6 hours laboratory; 5 credits
Principles and applications of modern instrumentation in analytical chemistry including basic electronics, electroanalytical methods, chromatography, and spectroscopic methods.
Prerequisite: Chemistry 41 or 41 W ; and Physics 2 or 2.5.

## *50 Organic Chemistry for Health-related Professions

1 hour recitation, 3 hours lecture, 3 hours laboratory; 5 credits
Survey of fundamental classes of organic compounds, and principles of organic chemistry as applied to aliphatic, aromatic, and biologically important compounds. Emphasis on structure, properties, and preparative methods. Intended for students in nursing or other health-related fields. Not intended for chemistry majors. (Not open to students who are enrolled in or have completed Chemistry 51.)
Prerequisite: Chemistry 1 or 1.2 or 5 .

## 51 Organic Chemistry I

1 hour recitation, 2 hours lecture, 4 hours laboratory; 5 credits
Structure and properties of fundamental classes of organic compounds. Emphasis on reactivity, reaction mechanisms, synthesis, stereochemistry, and applications to allied fields. Chemistry 51 and 52 are required for admission to medical and dental schools. (Students who have taken Chemistry 50 will lose credit for Chemistry 50 upon successful completion of this course.)
Prerequisite: Chemistry 2.

## 52 Organic Chemistry II

1 hour recitation, 2 hours lecture, 4 hours laboratory; 5 credits Continuation of Chemistry 51.
Prerequisite: Chemistry 51.

## 53 Advanced Organic Laboratory Techniques

2 hours lecture, 6 hours laboratory; 5 credits Elucidation of the structures of organic compounds by spectrometric methods. Separation, purification, and identification of the components of mixtures. Synthesis of compounds utilizing modern methods.
Prerequisite: Chemistry 41 or 41 W , and 52.

## 55 Advanced Organic Chemistry

3 hours lecture; 3 credits
Intensive study of organic reaction mechanisms including topics of current interest.
Prerequisite: Chemistry 52.

## 57 Biochemistry I

3 hours lecture, 4 hours laboratory; 5 credits
Properties and reactions of compounds of biological importance. Oxygen-transport proteins. Enzyme kinetics and mechanisms. Basic immunology. Biological membranes. DNA replication, mutation, and repair. Transcription and the Genetic Code. Protein biosynthesis. Laboratory work emphasizes basic biochemical skills. (Not open to students who are enrolled in or have completed Chemistry 57.1.)
Prerequisite: Chemistry 41 or 41W, or Biology 17.1; and Chemistry 52.

### 57.1 Biochemistry I Lectures

3 hours; 3 credits
This course is the same as Chemistry 57, but without laboratory work. (Not open to students who are enrolled in or have completed Chemistry 57.)
Prerequisite: Chemistry 52.

### 58.1 Biochemistry II Lectures

3 hours; 3 credits
This course is the same as Chemistry 58, but without laboratory work. (Not open to students who are enrolled in or have completed Chemistry 58.)
Prerequisite: Chemistry 57 or 57.1.

### 60.1 Physical Chemistry for the Health Professions

 3 hours lecture; 3 creditsPhysical chemistry with applications to biochemical processes.
Topics include thermodynamics, chemical and physical equilibria, transport phenomena, kinetics, and quantum chemistry. Not recommended for students who intend to take graduate courses in chemistry or biochemistry. Students who complete Chemistry 60.1 may take Chemistry 61 , but must forfeit three credits of Chemistry 60.1. (Not open to students who are enrolled in or have completed Chemistry 61.)
Prerequisite: Chemistry 2; and Mathematics 4.3.
Prerequisite or corequisite: Physics 2 or 2.5 .

## 61 Physical Chemistry I

3 hours lecture, 4 hours laboratory; 5 credits
Thermodynamics, including nonelectrolyte and electrolyte solutions, reaction equilibria, and phase equilibria. Laboratory emphasizes physicochemical measurements. Students who complete Chemistry 60.1 may take Chemistry 61 , but must forfeit three credits earned for Chemistry 60.1.
Prerequisite: Chemistry 41 or 41 W; and Mathematics 5.3; and Physics 2 or 2.5.

## 62 Physical Chemistry II

3 hours lecture, 4 hours laboratory; 5 credits
Continuation of Chemistry 61. Chemical kinetics; transport properties; quantum mechanics; atomic and molecular structure; spectroscopy; statistical mechanics. Laboratory emphasizes synthesis and physical characterization of inorganic compounds.
Prerequisite: Chemistry 61.

## 64 Quantum Chemistry

3 hours lecture; 3 credits
Application of quantum mechanics to molecular electronic structure, including the Schrödinger equation, operators, angular momentum, variation and perturbation methods, electron spin, Pauli principle, many-electron atoms, application of molecular-orbital and valence-bond theories to diatomic and polyatomic molecules.
Prerequisite or corequisite: Chemistry 62

## 73.1, 73.2, 73.3 Research I, II, III

Minimum of 6 hours conference and independent work§; 2 credits each
Planning and carrying out a research problem under supervision of a faculty member. Weekly conference. Written and oral reports. Students may not receive credit for more than three terms of undergraduate research in the Chemistry 73 and 83 sequences.
Prerequisite of 73.1: Chemistry 41 or 41W, and 52 and permission of the instructor and the chairperson.
Prerequisite of 73.2: Chemistry 73.1 and permission of the instructor and the chairperson.
Prerequisite of 73.3: Chemistry 73.2 and permission of the instructor and the chairperson.

### 76.1 Inorganic Chemistry

3 hours lecture; 3 credits
Atomic and molecular structure. Chemical bonding. Solids.

Proton transfer and electron transfer reactions. Chemistry of the transition elements.

## Prerequisite: Chemistry 62.

## 78 Environmental Chemistry

3 hours lecture; 3 credits
Principles of chemistry applied to problems of the environment. Sources, reactions, effects of chemical species on the environment. General and specific problems of analysis, interpretation of results, and pollution control. Methods and impact of energy production.
Prerequisite: Chemistry 41 or 41 W , and 52.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83.1, 83.2, 83.3 Independent Research I, II, III

Minimum of 9 hours conference and independent work§; 3 credits each
Independent research supervised by a faculty member. Weekly conference. Written and oral report. Students may not receive credit for more than three terms of undergraduate research in the Chemistry 73 and 83 sequences.
Prerequisite of 83.1: Chemistry 41 or $41 \mathrm{~W}, 52$, an index of 3.30 or higher in chemistry, and permission of the instructor and the chairperson.
Prerequisite of 83.2: Chemistry 83.1, an index of 3.30 or higher in chemistry, and permission of the instructor and the chairperson.
Prerequisite of 83.3: Chemistry 83.2, an index of 3.30 or higher in chemistry, and permission of the instructor and the chairperson.

## 84.1, 84.2, 84.3 Seminar I, II, III

Minimum of 3 hours conference and independent work§; 1 credit each
Presentation and discussion of current topics.
Prerequisite: completion of an approved program of advanced courses and permission of the chairperson.

## 85.1, 85.2 Colloquium I, II

Minimum of 9 hours recitation, conference, and independent work§; 3 credits
Intensive reading and group discussion of a special field. A term report or examination may be required. Students should consult the department bulletin board for current offerings. Colloquium topics may include: statistical mechanics, polymer chemistry, interfacial phenomena, neurochemistry, physical biochemistry, spectroscopy, separation methods, solid-state, modern electrochemical methods. Students and faculty may suggest colloquium topics to the chairperson.
Prerequisite: completion of an approved program of advanced courses and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

## 58 Biochemistry II

70 Introduction to Research
72 Mathematical Methods of Chemistry

## Children's Studies Program

An interdisciplinary minor
Program office: Children's Studies Center, 3602 James Hall Telephone: 951-3192

Director: Gertrud Lenzer
Faculty: From the departments of the college.

## Program requirements for a minor in children's studies

Fifteen credits as follows (note that some of the listed courses have prerequisites):
One of the following:
Children's Studies 20, 30
Two of the following:
Children's Studies 25
Children's Studies 32
English 65 or Speech 14.4 or 31
Health and Nutrition Sciences 36
Psychology 20
Sociology 40.2
Two of the following:
Africana Studies 54
Children's Studies 31
Education 34
History 30.4
Puerto Rican and Latino Studies 40
All courses must be completed with a grade of $C$ or higher. A minimum of nine credits must be completed at Brooklyn College.
Children's studies minors should consult with the program director to plan an appropriate sequence of courses and declare their minor with the program director.

Children's studies concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in children's studies must complete at least 30 credits in the Children's Studies Program with a grade of $C$ or higher in each course. Students must meet with a program adviser to declare their concentration.
Concentration requirements:
Children's Studies 20.
Two of the following courses:
Children's Studies 30, History 30.4 Sociology 40.2.
Three of the following courses: Psychology 20, 22, 24.5; Speech 31.
Three of the following courses: Africana Studies 54; Health and Nutrition Sciences 31, 36; Puerto Rican and Latino Studies 40; Sociology 40.1. English 65 or Speech 14.4.

## Courses

The Schedule of Classes published each term lists under Children's Studies all courses offered in the program. Not all courses are offered each term.

## 20 Perspectives on Childhood

3 hours; 3 credits
Childhood viewed from the perspectives of health science, history, literature, psychology, sociology, and the arts. The history of childhood; autobiography as inquiry into the child's selfhood; the child's imagination; child development and health; adolescence as life-stage and perceptions of adolescence; the child in relation to the family, school, and community; children's experiences of personal, social, and political problems; social, economic, and educational policies affecting children; children's rights and international policy. May be team-taught. (Not open to students who have completed Children's Studies 1.)
Prerequisite: Core Studies 1, 3, or 4 and English 1; or permission of program director.

## 25 Special Topics: Issues in Children's Studies

 3 hours; 3 creditsEmerging issues, policies, and research in rapidly developing areas relating to children and youth. Topics vary from term to term. (Not open to students who have completed Children's Studies 5.)

## 30 The Human Rights of Children: A Transnational Development

3 hours; 3 credits
Development of the human rights of children movement nationally and internationally. Central documents, data bases, national and international legislation in the area of children and youth rights, the U.N. Convention on the Rights of the Child of 1989, and its implementation, Children Ombudsmen in other countries, UNICEF activities, and more. Rights of children to full development, to education, health care, culture, and with such topics as street children, child abuse, child prostitution, discrimination on the basis of sex, race, and religion, child soldiers, and child labor.
Prerequisite: Core Studies 3 or 4, and English 1; or permission of the program director.

## 31 Children in Crisis

## 3 hours; 3 credits

Focus on children in extreme situations of social, cultural, political, and familial disruption. Examination of such global and domestic situations as war, natural disaster, famine, poverty, abuse, and terrorism which can lead to starvation, disfigurement, slavery, forced prostitution, child soldiers, forced employment, separation, homelessness, and even high incidents of infanticide. Children and September 11, 2001; other conditions faced by children, including foster care, displacement, detention and intra-family abuse; effects of violence and crisis situations on children and educational experience. Focus on preventative measures and alleviation of children's suffering. (Not open to students who have taken Children's Studies 25, Special Topics, during the spring 2002 or fall 2002 semesters.)
Prerequisite: Core Studies 3 or 4, or permission of the program director.

## 32 The Professional Performing Child: <br> Past and Present Issues

## 3 hours; 3 credits

Examination of the stage child in western history with particular emphasis on the last one hundred and thirty years. Focus will be on the performer in society, rather than on the dramatic character. Emphasis on contemporary issues and diversity. Construction of popular views of the stage child through an examination of the regulations, laws, and mores applied at various junctures. Issues in children's employment such as health and safety, education, professional training and prospects, the role of organized labor, long-term psychosocial adjustment. Venues in which children work today. Regulation of these professional children through state laws and union work rules. Scholarly studies and individual histories of professional performing children. (Not open to students who have taken Children's Studies 25, Special Topics, during the spring 2000 or spring 2001 semesters.) Prerequisite: Core Studies 1, or 3, or 4, or permission of the program director.

## Classics

Department office: 2408 Boylan Hall
Telephone: 951-5191, 951-5192
Chairperson: Edward M. Harris
Deputy Chairperson: Craig Williams
Professors: Clayman, Dunkle, Hansen, Harris, Van Sickle;
Associate Professors: Smith, Williams, Wilson;
Assistant Professor: Barnes.
The Classics Department offers a major and minor in classics.

## Core curriculum

The Department of Classics participates in the college's core curriculum through Core Studies 1.

## Placement in classical language courses

Students may continue study of Latin or Greek begun in high school or may begin study of Latin or Greek at Brooklyn College.
Students who want to continue study of Latin or Greek begun in high school should consult the chairperson.
Students who take a Latin course at a level below the level reached in high school receive no credit for that course unless they are assigned to it by the department. Assignment is made on the basis of a proficiency examination or an interview with the chairperson or designee. However, no credit is given for Latin 1.1 taken by a student who studied Latin in high school, even if the student is assigned to the course by the department.
Students who want to begin classical language study at Brooklyn College should follow these guidelines for registration.
a) Basic courses in classical Greek can be taken in two different tracks:
i. Greek 1, 2, 12, and 14.
ii. Greek 1.9.

In track i , each course is the prerequisite of the next. Greek 14 or 1.9 is a prerequisite of all advanced Greek courses. Some advanced courses have additional prerequisites.
b) Basic courses in Latin can be taken in four different tracks:
i. Regular track: Latin 1, 2, 11, and 12.
ii. Special skills acquisition track: Latin 1.1, 1.2, 2.1, 2.2, 11, and 12.
iii. Accelerated track: Latin 1.5, 11, and 12.
iv. Intensive track: Latin 1.9.

In tracks i, ii, and iii, each course is the prerequisite of the next. Latin 12 or 1.9 is a prerequisite of all advanced Latin courses. Completion of any track qualifies a student for all advanced work in Latin.
For specific information on course content and prerequisites, students should see individual course listings. Students should consult a counselor in the Classics Department about questions concerning course placement, appropriate track, and registration.

## B.A. degree program in classics

HEGIS code 1504
Department requirements (30-39 credits)
Classics 16 and 18.
Six courses chosen from the following: Greek 14 or 1.9, Latin 12 or 1.9, or any Classics, Greek, or Latin course numbered 13 or higher. (Greek 36 and Latin 36 each count as two courses for the fulfillment of this requirement.)
Two of the following: Art 12.60, 12.70, Comparative Literature 42.1, English $50.2,50.5,50.7$, History 21.4, 21.5, Philosophy 11.1.

Students wishing to earn departmental honors should register for Classics 85 or Greek 85 or Latin 85 . Students considering a major or minor in classics should speak with a department counselor to help design an individual course of study.
The classics major is intended for students interested in a career in law, medicine, publishing, communications, the arts, or education, along with those who plan to pursue graduate study in classics. Classics majors can complete their course work in English translation but are encouraged to fulfill the college language requirement in Greek or Latin.
The study of Greek and Latin is necessary for graduate study in classics. Students planning an academic career in classics should do advanced work in one of these languages and at least two semesters in the other. The study of French or German is also recommended.

## Classics concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in classics must complete at least 30 credits in the Classics Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

At least two of the following courses:
Classics 0.1, 0.11; Latin 1, 2, 1.9, 13, 15.
At least two of the following courses: Classics 16, 17; Latin 11, 12.
At least two of the following courses: Classics 14, 17, 22, 31, 32, 34; Latin 15, 16, 31, 32, 33.

## Requirements for a minor in classics

Twelve credits in classics, Greek, or Latin courses numbered 11 and higher. All courses must be completed with a grade of C or higher.

## Summer programs

Three special programs are offered by the department each summer. They are Greek 1.9 Greek Institute, Latin 1.9 Latin Institute, and Classics 29 Summer Archaeological Field School. Students should consult the chairperson for details.

## Courses

*Courses marked with an asterisk (*) are not counted toward the major or minor.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Classics

Knowledge of Latin or Greek is not required for classics courses. Works are read in English translation.

## *0.1 Special Topics

1 hour; 1 credit
Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics.

## *0.11 Vocabulary Building: The Greek and Latin Element in English

3 hours; 3 credits
Intensive study of word derivation through systematic analysis of Latin and Greek elements in English. Some attention to technical and scientific vocabulary. (Not open to students who are enrolled in or have completed either Latin 15 or 16.)

## *0.12 Medical and Scientific Terminology

3 hours; 3 credits
Introduction to medical and scientific terminology through a study of Greek and Latin word roots. (Not open to students who have completed Classics 3.1.)

## 13 Social Themes: Ancient and Modern

3 hours; 3 credits
Analysis of representative ancient Greek texts (epic, history, philosophy, tragedy, comedy) to investigate four significant social themes: the family, cultural diversity, love, and the role of women. Analysis of texts organized on the collaborative model with small working groups along with traditional lecture and classroom discussion.
Prerequisite: Core Studies 1 or permission of the chairperson.

## 14 Gender and Sexuality in Ancient Greece and Rome

 3 hours; 3 creditsAn exploration into the ways in which individual sexual experience was categorized and evaluated by society in the ancient world, with special attention to questions of gender role, sexual orientation, and the intersection of the personal and the political. Evidence from such literary and nonliterary sources as lyric poetry, epigram, drama, oratory, history, philosophy, epigraphy, and the visual arts.
Prerequisite: Core Studies 1.

## 15 Greek and Roman Mythology

## 3 hours; 3 credits

Classical myths and modern theories of mythology. Readings in English translation from the ancient sources. (Not open to students who have completed Classics 6.) This course is the same as Studies in Religion 16.
Prerequisite: Core Studies 1.

## 15W Greek and Roman Mythology

4 hours; 3 credits
Classical myths and modern theories of mythology. Readings in English translation from the ancient sources. Writingintensive section. This course is the same as Studies in Religion 16W. (Not open to students who have completed Classics 6 or Studies in Religion 16.)
Prerequisite: Core Studies 1 and English 2.

## 16 Rome: City of Empire

3 hours; 3 credits
The rise of Rome as the capital of an empire. Urban environment: housing, public buildings, monuments. Portrayals in literature of the Roman empire. Varied population of Rome: distinctions among social classes; role of women; ethnic minorities (e.g., Greeks, Jews, Christians). Later transformation of city and empire. (Not open to students who have completed Classics 12.)
Prerequisite: Core Studies 1.

## 17 Delphi and Apollo: The Oracle and the Site

3 hours; 3 credits
The religious, historical, and social significance of Apollo's shrine at Delphi. Literary and archaeological evidence. Athletic festivals held on the site.

## 18 Democracy and Imperialism: Athens in the Fifth Century BC

## 3 hours; 3 credits

The development of Athenian ideas about democracy and empire in the fifth century through a study of the literature of the period.
Prerequisite: Core Studies 1 or permission of the chairperson.

## 22 Greek Athletics

3 hours; 3 credits
An investigation of ancient Greek athletics as a cultural phenomenon with special attention to the nature of the various athletic events and the social context in which these competitions took place. Analysis of representative ancient Greek (and some Roman) texts (epic, history, philosophy, tragedy, comedy, medical writings, epigraphy) and relevant iconographical evidence. Comparison with modern athletics. (Not open to students who have completed Classics 9.)
Prerequisite: Core Studies 1 or permission of the chairperson.

## 26 Introduction to Archaeology

3 hours; 3 credits
Survey of major techniques and methods of archaeology. Reconstruction of social and subsistence patterns from material remains. Methods and procedures in excavation, classification, and evaluation of finds. This course is the same as Anthropology 2.2. (Not open to students who are enrolled in or have completed Classics 2.2 or 19 or Anthropology 2.2.) Prerequisite: Core Studies 1.

## 28 Science and Technology in Classical Antiquity

## 3 hours; 3 credits

Science and technological progress of classical antiquity.
Place of science and technology in ancient society. (Not open to students who have completed Classics 51.)
Prerequisite: Core Studies 1.

## 29 Summer Archaeological Field School

(Intensive Program)
3 hours lecture, 6 hours supervised fieldwork; 6 credits Intensive instruction in field methods and techniques of archaeology through participation in every aspect of an excavation; training in archaeological mapping, excavation techniques, and methods of archaeological laboratory analysis. This course is the same as Anthropology and Archaeology 70.1. (Not open to students who have previously received credit for archaeological fieldwork.)
Prerequisite: permission of the chairperson and one of the following: Classics 26, Anthropology 2.2, Core Studies 1, 2.1, 9, Judaic Studies 12, a course in archaeological theory and methodology.

## 30 Environmental Ideologies and Their Classical Roots 3 hours; 3 credits

Basic ideas about human nature and human activity that are rooted in the ancient Mediterranean ecosystem (Egypt, Greece, Italy) and still shape attitudes towards the environment, with special attention to such ideas as "nature, chaos, wildness, scarcity" and their contraries "culture, cosmos, tameness, fullness." Evidence from epic, historical, philosophical, and scientific writers.
Prerequisite: Core Studies 1 or permission of the chairperson.

## 31 Reading Tragedy

3 hours; 3 credits
Development of Greek tragedy. Different perspectives of Aeschylus, Sophocles, Euripides. Criticism of tragedy by Aristophanes, Plato, Aristotle. Roman drama of Seneca.
Reading in the works of modern critics. (Not open to students who have completed Classics 43.)
Prerequisite: Core Studies 1 or permission of the chairperson.

## 32 Homer and Heroism: Epic Dimensions

3 hours; 3 credits
The entire Iliad and Odyssey in translation. Heroic ideologies. Narrative and thematic structure. Oral vs. written communication. (Not open to students who have completed Classics 41.)
Prerequisite: Core Studies 1 or permission of the chairperson.

## 34 Roman Law

3 hours; 3 credits
Roman law from the law of the Twelve Tables to the Institutes of Justinian. Topics include sources and development of the law; criminal law; family law; property; contracts; delicts; succession; comparison of Roman law and common law; Latin legal terminology for the modern lawyer. (Not open to students who have completed Classics 52.)
Prerequisite: Core Studies 1 or permission of the chairperson.

## 35 Moral Choices in Classical Literature

3 hours; 3 credits
Moral problems as they were understood by the ancient Greeks and Romans. Topics include friendship, personal ambition, and social responsibility.
Prerequisite: Core Studies 1 or permission of the chairperson.

## 37 Pagans, Christians, and Jews

3 hours; 3 credits
Religious conflict in the Roman Empire. The relation of Judaism and Christianity to their pagan environment.
Prerequisite: Core Studies 1 or permission of the chairperson.

## 38 Special Topics

3 hours; 3 credits each term
Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take Classics 38 for credit twice but may not repeat topics. (Students may not receive more than a total of six credits in any combination of Classics 38, 58, and 59.)
Prerequisite: Core Studies 1 or permission of the chairperson.

## 39 The Comic Tradition in Greece and Rome

3 hours; 3 credits
The development of the comic tradition in Greece and Rome. Invective, the Old Comedy of Aristophanes, the New Comedy of Menander, Roman adaptations of Greek New Comedy by Plautus and Terence, satire, the novel, and the arts.
Prerequisite: Core Studies 1 or permission of the chairperson.

## 42 Exile and Return in Classical and Caribbean Epic

 3 hours; 3 creditsNarratives of exile and the struggle to get home in the Bible, Homer's Odyssey, and Virgil's Aeneid, with special emphasis on Derek Walcott's Omeros, along with other Caribbean writings.
Prerequisite: Core Studies 1 or permission of the instructor.

## 44 Makings of Pastoral Myth

3 hours; 3 credits
Pastoral, a powerful mode of mythic imagination, studied in its roots and transformations: plots and themes (herdsmen as lovers, rulers, and poets; kings as herdsmen and poets [David]) originating in ancient Mediterranean cultures and still at work in imagination today. Return and change of basic mythemes to meet the challenges of new times and worlds. This course is the same as English 50.91 and Comparative Literature 18.5.
Prerequisite: Core Studies 1 or permission of the instructor.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 84 Seminar

Minimum of 9 hours conference and independent work§; 3 credits
Study of an area of classical civilization. Independent research. Course description may be obtained in the department office before registration. Essay or examination.
Prerequisite: six hours of Classics Department courses numbered 31 or above.

### 84.7 Interdepartmental Humanities Seminar <br> 3 hours; 3 credits

A significant recurrent theme in Western literature and philosophy. Course description may be obtained in the department office before registration. Reports and term paper. Offered jointly by the Departments of Classics, English, Philosophy. This course is the same as Comparative Literature 74.7, English 74.7, Philosophy 84.7.
Prerequisite: a grade of $B$ or higher in six credits in advanced courses in the major field and permission of the instructors and the chairperson.

## 85 Senior Research Essay

3 hours; 3 credits
Bibliographical resources for research using classical texts. Directed research and paper. (Not open to students who are enrolled in or have completed Greek 85 or Latin 85.)
Prerequisite: six credits of Classics courses numbered 31 or above.

## Greek (classical)

*1 Elementary Greek 1
4 hours; 4 credits
Study of the fundamentals of the language in preparation for reading literary works and for linguistic studies. (Not open to students who are enrolled in or have completed Greek 0.5 or 1.9 or 5.2.)

### 1.9 Greek Institute

20 hours; 12 credits
Rapid, intensive introduction to the forms and syntax of Greek and to major authors and literary genres read in the original. History of Greek literature and methods of literary criticism. In the literature section, students study selections from the archaic through the Hellenistic periods. This program covers the entire sequence through course 14 and satisfies the college language requirement. Eleven-week summer course taught at the Graduate Center. (Not open to students who have completed Greek 5.2.)
Prerequisite: application to and permission of the director of the Latin/Greek Institute.

## *2 Elementary Greek 2

4 hours; 4 credits
Continuation of Greek 1. Review of fundamentals. Readings from Greek prose and poetry. (Not open to students who are enrolled in or have completed Greek 0.6 or 0.7 or 1.9 or 5.2.)
Prerequisite: Greek 1 or two years of high school Greek or permission of the chairperson.

## 12 Plato

3 hours; 3 credits
One dialogue and passages from others. (Not open to students who have completed Greek 1.9, 3.1, or 5.2.)
Prerequisite: Greek 2.

## 14 Homer

3 hours; 3 credits
Readings from the Iliad and the Odyssey. (Not open to students who have completed Greek 1.9, 4, or 5.2.)
Prerequisite: Greek 3.1 or 12.

## 31 Greek Drama I: Aeschylus and Sophocles

3 hours; 3 credits
One tragedy of Aeschylus and one of Sophocles. Close analysis of language, meter, and dramatic structure. Survey of modern critical perspectives. (Not open to students who have completed Greek 20.)
Prerequisite: Greek 1.9 or 4 or 5.2 or 14.

## 32 Greek Drama II: Euripides and Aristophanes

3 hours; 3 credits
One tragedy of Euripides and one comedy of Aristophanes. Close analysis of language, meter, and dramatic structure. Survey of modern critical perspectives. (Not open to students who have completed Greek 22.)
Prerequisite: Greek 1.9 or 4 or 5.2 or 14.

## 33 Herodotus and Thucydides: Athenian Politics

 3 hours; 3 creditsAthenian democracy and political leadership in the fifth century B.C. Miltiades, Themistocles, and Pericles. Readings from Herodotus and Thucydides. (Not open to students who have completed Greek 21.)
Prerequisite: Greek 1.9 or 4 or 5.2 or 14 .

## 34 Plato and Aristotle: Political Ideals

## 3 hours; 3 credits

Selected readings from Plato and Aristotle. Contrasting views of society and political leadership. (Not open to students who have taken Greek 24.)
Prerequisite: Greek 1.9 or 4 or 5.2 or 14 .

## 36 Greek Institute: Intensive Reading

21 hours for 7 weeks; 8 credits
Intensive reading program in Greek. Improvement of reading skills and knowledge of Greek syntax through the close reading of both prose and poetry. Regular prose composition exercises. The following texts will be read: Plato, Republic, Book 1; Thucydides, History of the Peloponnesian War, selections from Books 6 and 7; Lysias 1; Isocrates, Panegyricus, selections; Demosthenes, Third Philippic; Aeschylus, Prometheus Bound; Sophocles, Ajax; the Homeric Hymn to Demeter; and selected Odes of Pindar. Seven-week summer course taught at the CUNY Graduate School and University Center. Special fee for photocopied materials.
Prerequisite: one of the following: Greek 1.9, 31, 32, 33, 34; and permission of the director of the Latin/Greek Institute.

## 38 Studies in Greek

3 hours; 3 credits
Studies in a genre, period, or author not covered by the regular course offerings. (Not open to students who have completed Greek 60.)
Prerequisite: Greek 14 or 5.2 .

## 39 Readings in Greek

1 hour; 1 credit
Translation of Greek texts to supplement classics courses.
The department will announce coordinated classics courses each semester. Students may take this course for credit four times but may not repeat topics.
Prerequisite: Greek 1.9 or 4 or 5.2 or 14 ; and permission of the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 84 Seminar

Minimum of 9 hours conference and independent work§; 3 credits
Study in an author, period, or genre. Independent research. Course description may be obtained in the department office before registration. Essay or examination.
Prerequisite: six credits of advanced Greek.

## 85 Senior Research Essay

3 hours; 3 credits
Bibliographical resources for research using Greek texts. Directed research and paper. (Not open to students who are enrolled in or have completed Classics 85 or Latin 85.)
Prerequisite: six credits of Greek in courses numbered 31 or above.

## Latin

Regular track introductory courses
*1 Elementary Latin I
3 hours; 3 credits
Fundamentals of the language in preparation for reading literary works and for linguistic studies. (Not open to students who are enrolled in or have completed Latin 0.5, 1.1, 1.5, 1.9, or 5.2.)

## *2 Elementary Latin II

3 hours; 3 credits
Continuation of Latin 1. Review of fundamentals. Readings from Latin prose and poetry. (Not open to students who are enrolled in or have completed Latin $0.6,0.7,1.9,1.2,1.5$, or 5.2 .)
Prerequisite: Latin 1 or two years of high school Latin or permission of the chairperson.

## Special skills-acquisition track introductory courses

*1.1 Special Elementary Latin I: Part 1
4 hours; 2 credits
Fundamentals of the language especially designed for students with little or no background in languages or in basic language skills. Tutorials and individual workshops are included. Credit is received for Latin 1.1 only on completion of Latin 1.2. (Not open to students who are enrolled in or have completed Latin $0.5,1,1.5,1.9$, or 5.2 .)

## *1.2 Special Elementary Latin I: Part 2

4 hours; 2 credits
Continuation of Latin 1.1. Review of fundamentals. Emphasis on acquisition of basic language skills. Tutorials and individual workshops. (Not open to students who are enrolled in or have completed Latin $0.6,0.7,1.5,1.9,2$, or 5.2.)
Prerequisite: Latin 1.1.

## *2.1 Special Elementary Latin II: Part 1

3 hours; 2 credits
Continuation of Latin 1.2. Review of fundamentals of the language. Individual tutorials and workshops. This course prepares students for Latin 2.2. (Not open to students who are enrolled in or have completed Latin $0.5,0.6,0.7,1.5$, 1.9, 2, or 5.2.)

Prerequisite: Latin 1.2.

## *2.2 Special Elementary Latin II: Part 2

3 hours; 2 credits
Completion of fundamentals of the language. Elementary and intermediate readings from Latin prose and poetry. Individual tutorials and workshops. This course prepares students for Latin 11. (Not open to students who are enrolled in or have completed any of the following: Latin $0.5,0.6,0.7,1.5,1.9$, 2, or 5.2.)

## Intensive track course

### 1.9 Latin Institute

20 hours; 12 credits
Rapid, intensive introduction to the forms and syntax of Latin and to major authors and literary genres read in the original. History of Latin literature and methods of literary criticism. In the literature section, students choose to concentrate on either classical or medieval authors. This program covers the entire sequence through course 12 and satisfies the college language requirement. Eleven-week summer course taught at the Graduate Center.(Not open to students who have completed Latin 5.2.)
Prerequisite: application to and permission of the director of the Latin/Greek Institute.

## Intermediate courses

11 Intermediate Latin
3 hours; 3 credits
Readings from Latin prose and poetry. (Not open to students who are enrolled in or have completed Latin 1.9, 3.2, 4, 5.2, or 12.)
Prerequisite: One of the following: Latin 0.7, 1.5, 2, 2.2, two years of high school Latin or permission of the chairperson.

## 12 Vergil

3 hours; 3 credits
Readings from the Aeneid. (Not open to students who are enrolled in or have completed Latin 1.9, 3, 4.1, or 5.2.)
Prerequisite: Latin 3.1, 3.2, 11 or three years of high school Latin or permission of the chairperson.

## 31 Catullus and Cicero: Roman Society in the Late Republic

3 hours; 3 credits
Two contrasting views of life and love among the upper classes at the end of the Roman republic. Love poems of Catullus and Cicero's speech in defense of M. Caelius Rufus. Analysis of authors' styles and rhetorical tradition.
Prerequisite: Latin 1.9 or 4.1 or 5.2 or 12.

## 32 From Republic to Empire: Makers of Roman Myth

 3 hours; 3 creditsBreakdown of Republican Rome. Search for new forms of order. Philosophical, poetic, and historical models for renewal. Readings from Catullus, Horace, Livy, Virgil, Propertius, and Augustus.
Prerequisite: Latin 1.9 or 4.1 or 5.2 or 12.

## 33 The Satiric Spirit

3 hours; 3 credits
Satires and parodies from the works of Lucretius, Horace, Tacitus, Seneca, and Juvenal. (Not open to students who have completed Latin 26.)
Prerequisite: Latin 1.9 or 4.1 or 5.2 or 12.

## 34 Vulgar and Medieval Latin

3 hours; 3 credits
Morphology and grammar of vulgar and medieval Latin by Petronius, Gregory the Great, Einhard, Abelard, and other authors. Inscriptions. Connections with Romance languages. Prerequisite: Latin 1.9 or 4.1 or 5.2 or 12.

## 36 Latin Institute: Intensive Reading

21 hours for 7 weeks; 8 credits
Intensive reading program in Latin. Improvement of reading skills and knowledge of Latin syntax through the close reading of both prose and poetry. Regular prose composition exercises. The following texts will be read in their entirety: Cicero's Pro Archia, Somnium Scipionis and selected letters; Tacitus' De Vita Agricolae; the third book of Lucretius' De Rerum Natura; Catullus 64; and Horace's Ars Poetica. Sevenweek summer course taught at the CUNY Graduate School and University Center. Special fee for photocopied materials. Prerequisite: one of the following: Latin 1.9, 31, 32, 33, 34; and permission of the director of the Latin/Greek Institute.

## 37 Prose Composition

3 hours; 3 credits
Writing of Latin prose exercises. Review of Latin forms and syntax. (Not open to students who have completed Latin 90.) Prerequisite: Latin 4 or 4.1 or 5.2.

## 38 Studies in Latin

3 hours; 3 credits
Studies in a genre, period, or author not covered by the regular course offerings. (Not open to students who have completed Latin 60.)
Prerequisite: Latin 1.9 or 4 or 4.1 or 5.2 or 12.

## 39 Readings in Latin

1 hour; 1 credit
Translation of Latin texts to supplement classics courses. The department will announce coordinated classics courses each term. This course may be taken for credit four times but students may not repeat topics.
Prerequisite: Latin 1.9 or 4 or 5.2 or 12; and permission of the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 84 Seminar

Minimum of 9 hours conference and independent work§; 3 credits
Study in an author, period, or genre. Independent research. Course description may be obtained in the department office before registration. Essay or examination.
Prerequisite: six credits of advanced Latin.

## 85 Senior Research Essay

3 hours; 3 credits
Bibliographical resources for research using classical texts.
Directed research and paper. (Not open to students who have taken or are enrolled in Greek 85 or Classics 85.)
Prerequisite: six credits of classics courses numbered 31 and above.

The following courses are inactive and will be offered only if there is sufficient demand:
Classics 19.1 Humanism and Its Classical Origins
Classics 25 The Material Remains of Ancient Greece
Classics 27 Interdisciplinary Approaches to Archaeology
Classics 33 Classical Reflections in Literature and the Arts
Greek 37 Prose Composition
Latin 1.5 Accelerated Elementary Latin I, II

# Computer and Information Science 

Department office: 2109 Ingersoll Hall
Telephone: 951-5657, 951-5659
Chairperson: Aaron M. Tenenbaum
Deputy Chairperson, CLAS: Yedidyah Langsam
Deputy Chairperson, SGS: Joseph Thurm
Deputy Chairperson, Division of Graduate Studies:
Keith Harrow (Administrative); Daniel Kopec (Counseling)
Professors: Arnow, Augenstein, BarNoy, Eskicioglu, Gurwitz, Harrow, Langsam, Parikh, Raphan, Tenenbaum, Weiss, Whitlock, Zachos, Ziegler;
Associate Professors: Cox, Jones, Kopec, Parsons, Rudowsky, Scarlatos, Schnabolk, Thurm, Zhou; Assistant Professors: Chopra, Clark, Cogan, Dexter, Yanofsky, Yarmish.

## Core curriculum

The Department of Computer and Information Science participates in the college's core curriculum through Core Studies 5.1.

## Grades in prerequisite courses

All prerequisite courses in computer and information science must be completed with a grade of C or higher.

## B.S. degree program in computer and information science HEGIS code 0701

Department requirements (49-53 $1 / 2$ credits)
A student excused, without credit, from a course may not take the course for credit later, except with permission of the chairperson.
Computer and Information Science 1.5 or 2.80 .
All of the following: Computer and Information Science 4.1, $11,15,22,24,25,26 ; 27$ or $28 ; 23$ or $38 ; 60.1$ or 88.1 .
Two additional courses chosen from among: Computer and Information Science 13.2, 23, 29, 30.1, 32, 38, 40, 41, 42, $43,45,46,46.5,48,49,49.1,49.2,51,52,53,54,55,70.1$.
Mathematics 3.3 and 4.3 , or 3.20 and 4.20 and 4.31.
Mathematics 8.1 or 51.1 .
Transfer students who receive credit for Mathematics 3.20 and 4.20 are required to take Mathematics 4.31 and 8.1 to satisfy the mathematics requirement for the B.S. degree in computer and information science.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in computer and information science (including computational mathematics) must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Department of Computer and Information Science. For the B.S. degree in computational mathematics, these 24 credits must be in the Department of Computer and Information Science and/or the Department of Mathematics. These 24 credits must be completed at Brooklyn College with a grade of C or higher in each course. Specific course requirements for a B.S. degree are described above.
The following courses may be applied toward the 60 credits in science and mathematics:
A) All courses in the departments of biology, chemistry, computer and information science, geology, mathematics, physics, and psychology.
B) Courses marked with a dot $(\cdot)$ in the Department of Health and Nutrition Sciences.
C) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3.
Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2.

Economics 30.2, 30.3, 31.1, 31.2.
Philosophy 13, 33, 42.
Physical Education 22.71, 22.75, 23, 30, 51.
Sociology 77.1.

## Department recommendations

Students interested in computer-related careers should read the brochure Advice to Undergraduate Students, which may be obtained in the department office.
Incoming students with a knowledge of a programming language other than BASIC should consult with a department adviser.
With counseling, students should choose electives in any departments that may prepare them to apply computer science to a particular field of interest.

## B.S. degree program in computational mathematics HEGIS code 1701

An interdepartmental major offered by the Department of Computer and Information Science and the Department of Mathematics.
The computational option of this program enables students to apply mathematical and computational skills to the physical, biological, social, and behavioral sciences. The theoretical option is designed for students interested in the more abstract parts of computer science and for those interested in college teaching and research.
All mathematics courses offered to satisfy the requirements for a major in computational mathematics must be completed with a grade of C - or higher. All computer and information science prerequisites to computer and information science courses must be completed with a grade of C or higher.
Program requirements (51-57 credits)
Students should select option I or option II.
Option I: Computational.
Mathematics 3.3 and 4.3 and 5.3.
All of the following: Mathematics 10.1, 11.1, 13, 37.1, and 51.1.
All of the following: Computer and Information Science 1.5 or 2.80; 4.1, 11, 15, 22, 26.

Two courses chosen from among: Computer and Information Science 23, 24, 38, 46, 48, 51.

## Option II: Theoretical.

Mathematics 3.3 and 4.3 and 5.3.
All of the following: Mathematics 10.1, 11.1, 14.1, and 14.5. All of the following: Computer and Information Science 1.5 or $2.80 ; 4.1,11,15,22,26,38$.
One of the following: Computer and Information Science 23, 24, 46, 48, 51
One Computer and Information Science Department course numbered in the 60s or 80s.
One of the following: Mathematics 43, Philosophy 33, or a logic course offered by the Department of Computer and Information Science.

## Program recommendations

Mathematics 12.1 or 64.1 is recommended. With counseling, students should choose electives in any departments that may prepare them to apply computer science to a particular field of interest.

## B.S.-M.P.S. (Master of Professional Studies) in computer and information science and economics HEGIS code 0799

## Admission

Students should apply for admission to the program as early as possible, but no later than the fourth term of
undergraduate work. Applications are considered by the chairperson of the Computer and Information Science Department and the chairperson of the Economics Department on the basis of superior academic records and evidence of scholarly potential. Students must maintain a grade point average of 3.00 or higher to remain in the program.

## Planning the program

Students must plan their programs before the beginning of the junior year with the assistance of a counselor in each department. Some undergraduate course requirements may be satisfied by advanced placement or exemption examination. Information about the examinations is in the chapters "Admission" and "Academic Standing" in this Bulletin.
A student who completes undergraduate requirements for a B.S. degree with a major in accounting may choose that degree on completion of the program.
Program requirements ( 140 credits)
Undergraduate courses (110 credits)
Computer and Information Science 1.5 or 2.80, 4.1, 5.2, 13.2, $15,22,26,60.1$ or 88.1 .
Two courses chosen from the following: Computer and Information Science 45, 48, 49, 49.2, 51. With permission of the chairperson of the Department of Computer and Information Science, the student may substitute one of the following courses for any course in this requirement: Computer and Information Science 23, 24, 25, 27.
Mathematics 3.3 and 4.3.
Mathematics 8.1 or Economics 30.2.
Mathematics 10.1 or Economics 31.1.
Economics 10.1 and 20.1.
Two of the following: Economics 70.1, Economics 70.8 or Business 70.2, Business 70.3.
Accounting 1, 2, 3, 5, and 7. C.P.A. candidates must also complete Accounting 10, 11, 14, 21, 30, 40, and 41.
Additional undergraduate courses in any department or program to bring the total number of undergraduate credits to 110.
Graduate required courses ( 18 credits)
Three courses chosen from either group (a) or (b):
a. Economics 705X, 720X, 721X, 722X.
b. Accounting 706X, 707X, 708X, 712X, 714X. In order to qualify for the courses in group (b), the student must have completed all of the following undergraduate courses in addition to the program requirements: Accounting 7, 10, 11, 14, 30, 40, and 41. Students who intend to use this program to qualify for the one-year reduction in the experience requirement for the C.P.A. license must elect Economics 700X or 710X; 711X or 715X; and 722X as part of their graduate elective courses. Beginning in August 2004, the one year experience requirement reduction will no longer be effective due to the new NYSED 150 semester-hour requirement. Students must consult with an Accounting Program advisor to determine whether they comply with the equivalent education requirements contained in the new regulations.
Three of the following: Computer and Information Science 714X, 717.1X, 726X, 757X, 758X, 759X, 760X, 764X, 765X.
Thesis or comprehensive examination under the guidance of the Department of Economics or the Department of Computer and Information Science.
Graduate elective courses (12 credits)
Twelve credits chosen with approval of the department under whose guidance the student chooses to write a thesis or take a comprehensive examination.

## Certificate program in computers and programming HEGIS code 5101

The Department of Computer and Information Science offers a certificate program in computers and programming. The curriculum outlined below ranges from 24 to 29 credits, depending on which options are taken. To be eligible for the certificate, students must earn at least 24 credits. Students must apply to the Office of Student Records for their certificates upon completion of program requirements. The certificate in computers and programming will be issued upon the completion of the program with a grade of C or better in each course.
Admission requirements are described under the heading
"Certificate programs" in the chapter "Admission." Students are required to pass the CUNY Assessment Tests for admission.
Program requirements (24-28 credits)
Computer and Information Science 1.5 or 2.80 .
Computer and Information Science 5.2.
Computer and Information Science 4.1.
Computer and Information Science 15.
Computer and Information Science 22.
Computer and Information Science 60.1 or 88.1.
One of the following: a) or b) or c):
a) Computer and Information Science 26 and 45 .
b) Computer and Information Science 2.50, 26, and 46.
c) Computer and Information Science 13.2 and 52 .

In some cases, the department will permit students to take prerequisite courses as corequisites. Students may apply up to two courses of transfer credits towards the certificate.

## Requirements for a minor in computer and information science

A program of 12 credits in advanced electives in computer and information science, including one course numbered 20 or higher, each with a grade of $C$ or higher.

## Requirements for a minor in cognitive science

An interdisciplinary and interdepartmental minor, offered by the Department of Computer and Information Science, the Department of Philosophy, and the Department of Psychology, requiring 12 to 13 credits in advanced electives. All of the following: Philosophy 5, Computer and Information Science 1.5, Psychology 1.1, Psychology 57.1.
One from each of the following groups, a) and b):
a. Philosophy $12.3,26,27,28$, or 42.
b. Computer and Information Science 32 or 32.1 , or Philosophy 29, or Psychology 57.2.

## Requirements for a minor in multimedia computing

All of the following: Computer and Information Science 1.5, or 2.80; 3 or both 5.2 and 13.2; 3.1, 15, 22, 26, 41, 52.

Courses presented for the major in computer and information science may also be used to satisfy the minor in multimedia computing.

## Recommendations for prospective graduate students

Prospective doctoral students in computer-related fields should develop reading competence through course 2 in at least one of the following languages: French, German, Russian, and should take Computer and Information Science 23, 38, and 45.

## Division of Graduate Studies

The Computer and Information Science Department offers a master of arts degree program in computer science. Some courses may be creditable toward the CUNY doctoral degree.

For information, students should consult the graduate deputy chairperson for counseling. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 24 credits in advanced courses for majors in this department.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.
Students who enroll in Computer and Information Science 1.5 should be aware that most students find it necessary to spend from seven to ten hours a week, although some students may need more or less, in preparing and running programming assignments at the College Computer Center.

## *1.5 Introduction to Computing Using the

C Programming Language
4 hours; 4 credits
Algorithms, programs, and computers. Writing, debugging, and verifying programs. Data representation. Arrays, pointers, and structures. Loops, functions, and other control structures. Programming applications selected from the areas of statistics, business, science, and social science. History and basic concepts of computer science. (Not open to students who are enrolled in or have completed Computer and Information Science 1.10 or 1.20 or 2.80 or 15 or 16.)

## *2.30 COBOL for Programmers

2 hours; 2 credits
Programming in the COBOL language for students who can program in a language other than COBOL. Program structure, data description, arithmetic operations, input/output operations, tables, sorting and searching. The PERFORM statement, loops and subroutines. Design of data processing applications. (Not open to students who are enrolled in or who have completed Computer and Information Science 2.03 or 3.30 or any course in COBOL programming.)
Prerequisite: Computer and Information Science 1.10 or 1.20 or 1.5 .

## *2.50 UNIX Shell Programming

2 hours; 2 credits
The shell programming language. Command structure and I/O redirection. Control structures, metacharacters, process environment. Shell scripts, exception handling, numerical and string facilities, recursion. Filter programs, the software tools approach, pipeline programming. Regular expression pattern matching. Quoting. Subshells. Remote shell programs. Background processes, shell demons, process management. Prerequisite: Computer and Information Science 15 or 16.

## *2.55 Programming in Perl

2 hours, 2 credits
A survey of the Perl programming and scripting language. Data types in Perl including arrays, hashes, stacks, strings. Input and output. CGI description and examples. Database and network programming. Object-oriented programming. Prerequisite: Computer and Information Science 22.

## *2.60 Visual Programming and Windowing Applications

 2 hours; 2 creditsVisual programming languages and libraries. Creating windowing applications. Graphical user interfaces. Visual development environments, custom controls, dynamic link libraries, and database access.
Prerequisite: Computer and Information Science 22.

## *2.70 Java for Programmers

## 3 hours; 3 credits

The facilities of Java programming language core and the key Java class libraries. The imperative (nonobject-oriented) language, support for object-oriented programming, exception handling, concurrency and network programming. Images and graphic display techniques, drawing tools, event generation and handling, containers and container hierarchies, layout techniques and applet construction. Language issues such as comparison with C and $\mathrm{C}++$, compile-time vs. run-time checking, and implementation. Class designs file I/O, threads, and navigating the Java class libraries. (Not open to students who are enrolled in or have completed Computer and Information Science 1.6, 16, or 26.)
Prerequisite: Computer and Information Science 22.

## *2.80 C for Programmers

2 hours; 2 credits
Intensive introduction to programming in C for experienced programmers, covering all current features of the language. Special emphasis on pointers, parameter transmission, and multiple file programs. Implementation issues, application of C to systems programming, and word processing. (Not open to students who are enrolled in or have completed Computer and Information Science 1.5 or 15.)
Prerequisite: An introductory programming course in a language other than RPG, BASIC, or C.

## *2.85 C++ for Programmers

2 hours; 2 credits
Introduction to the C++ language for students who know the C programming language. Input and output streams, reference variables and arguments, overloaded and template functions, classes, self-reference, friends, class initialization, class templates, derived classes and inheritance, virtual functions, object-oriented programming.
Prerequisite: Computer and Information Science 22.

## *3 The Internet

2 hours lecture, 2 hours laboratory; 3 credits
A comprehensive survey of the design, implementation, history, and use of the Internet. Data communications and network concepts, Transmission Control Program/Internet Protocol (TCP/IP), client-server computing, e-mail and Web applications, Hypertext Markup Language (HTML), and clientside scripting tools. Security issues, financial and political applications, ethical concerns. (Not open to students who have completed any computer and information science course numbered 13 or higher.)
Prerequisite: Core Studies 5 or 5.1 or Computer and Information Science 1.10 or 1.5.

## *3.1 Multimedia Production for the World Wide Web

2 hours lecture, 2 hours laboratory; 3 credits
Principles of good design in a digital context. Internet hardware and software, digital display basics. Tools and techniques for creating digital media. Aesthetics in digital media, interface design guidelines, supporting interaction on the Web. (Not open to students who are enrolled in or have completed Computer and Information Science 13.2 or 52.)
Prerequisite: Core Studies 5 or 5.1 or Computer and Information Science 1.5.

## *3.2 Electronic Commerce

3 hours; 3 credits
How the Internet can be used to conduct business. Topics covered include: Internet hardware and software, tools and
technologies for creating a Web site, characteristics of successful Web sites, new technologies, the future of the Internet, Web communication strategies, security issues, legal and ethical issues, Internet information services, data mining, global E-commerce. Case studies of successful E-commerce businesses will be examined. This course is the same as Business 31.5.
Prerequisite: Core Studies 5 or 5.1 or Computer and Information Science 1.5.

## *4.1 Assembly Language Programming for Microcomputers <br> 3 hours; 3 credits

An introduction to assembly language programming for microcomputer systems. CPU architecture. Registers. Segmentation. Instruction formats and addressing modes. Instruction sets and programming. Directives and operators. Modular programming. Macros. String manipulation. Character codes. Arithmetic programming. (Not open to students who are enrolled in or have completed Computer and Information Science 4 or 2.90.)
Prerequisite: Computer and Information Science 1.10 or 1.20 or 1.5 or 2.40 or 2.80 .

## *5.1 Microcomputers in Education

2 hours lecture, 2 hours laboratory; 3 credits
Introduction to the use of the microcomputer as an educational tool. Computer literacy. Programming in LOGO and BASIC. Computers in relation to school curriculum. Comparison of computing languages in the schools. Implementation of computer peripherals and software. This course is the same as Education 68.1. (Not open to students who have completed Computer and Information Science 68.)
Prerequisite: Core Studies 5 or 5.1 its equivalent, or permission of the chairperson of the Department of Computer and Information Science; Education 48.1 or 58.1 or 60.1, or permission of the division coordinator.

## *5.2 Microcomputers in Business and Administration

 3 hours; 3 creditsIntroduction to the use of the microcomputer in the modern office. Computer literacy. Word processing, database systems, and electronic spreadsheets. Examination and evaluation of computer peripherals and software for personal computers. (Not open to students who are enrolled in or have completed Computer and Information Science 13.2.)
Prerequisite: Core Studies 5 or 5.1 or one of the following: Computer and Information Science 0.1 or 1.10 or 1.20 or 1.5 or permission of the chairperson.

## *5.4 The Social Consequences of Computers

3 hours; 3 credits
Social impact of computers on various groups, subcultures, and institutions. Effect of computer toys on children. Video games, computers in classrooms, "hackers," the world of professional programmers, computers in the workplace, robots, and expert systems. Political and military impact of computers. Issues of privacy and ethics. This course is the same as Sociology 53.
Prerequisite: both a) and b): a) Core Studies 5 or 5.1 or any of the following: Computer and Information Science 1.10 or 1.20 or 1.5 or $2.80 ;$ b) Core Studies 3 or Sociology 5.

## *7.1, *7.2 Special Topics in Computing

3 hours; 3 credits
A topic in the area of computing practice and interdisciplinary computing studies not covered in the regular curriculum.

Topics vary from term to term and reflect the interests of students and faculty. Course description may be obtained in the department office before registering. Prerequisite for the special topic will vary with each topic offered.

## 11 Introduction to Discrete Structures

3 hours; 3 credits
Elementary set theory, functions, relations, and Boolean algebra. Switching circuits, gating networks. Definition and analysis of algorithms. Applications of graph theory to computer science. Related algorithms. Introduction to combinatorial computing and counting arguments. Introduction to error analysis.
Prerequisite: Computer and Information Science 1.10 or 1.20 or 1.5 or 2.40 or 2.80 ; and Mathematics 2.9 or 2.92 or assignment to Mathematics 3.20 , 3.3 , or 4.10 by the Department of Mathematics.

### 13.2 Advanced Personal Computer Techniques for Business Applications

3 hours; 3 credits
In-depth analysis of software and hardware available for current business applications. Advanced use of application packages. Critique and comparison of current application software. Designing a proper interface. Examination of current trends toward office automation. System design and analysis. Prerequisite: Computer and Information Science 1.10 or 1.20 or 1.5 or 2.80; and 5.2.

## 15 Advanced Programming Techniques

3 hours; 3 credits
A second course in programming. Advanced programming techniques emphasizing reliability, maintainability, and reusability. Module design and multifile programs. Abstract data types. Storage class and scope. Data representation and conversion. Addresses, pointers, and dynamic storage allocation. Test suites, test drivers, and testing strategies; debugging and assertions. An introduction to formal techniques. Recursion and function parameters. (Not open to students who are enrolled in or have completed Computer and Information Science 16 or 22.)
Prerequisite: Computer and Information Science 1.5 or 2.80 .

## 22 Data Structures

4 hours; 4 credits
Stacks and their implementations. Prefix, postfix, and infix notation. Queues and linked lists and their implementations. Binary and general trees and their implementations and traversals. Sorting and searching techniques. Graph algorithms. (Not open to students who are enrolled in or have completed Computer and Information Science 14 or 21.)
Prerequisite: Computer and Information Science 15 or 16.

## 23 Analysis of Algorithms

## 3 hours; 3 credits

Algorithms, data structures, and their analysis. Applications for and solution to recurrence problems. Upper and lower bounds on complexities of various problems. Classification by design structures. Sorting methods, graph and selection algorithms. Pattern matching. Efficient computation of transitive closure and equivalences. NP-completeness.
Prerequisite: Computer and Information Science 11; 21 or 22; Mathematics 3.20 or 3.3 or 4.10 .

## 24 Programming Languages

3 hours; 3 credits
The design, implementation, and evolution of programming
languages. Language features and their effects upon translation and run-time environments. Languages studied are chosen for their historical and current significance, programming paradigm, and run-time environment. Syntax and semantic specification; formal grammars.
Prerequisite: Computer and Information Science 1.5 or 2.80; 4.1; and 22.

Prerequisite or corequisite: Computer and Information Science 26.

## 25 Operating Systems

3 hours; 3 credits
Design and implementation of operating systems for large computers. Multiprogramming, multiprocessing, time sharing. Resource allocation and scheduling. Communications, conversational computing, computer networks. Memory protection, interrupts, segmentation, paging, and virtual memories.
Prerequisite: Computer and Information Science 21 or 22; and 27 or 28 . It is recommended that students be acquainted with at least two computing platforms (e.g., PC, UNIX workstation, IBM mainframe) before taking Computer and Information Science 25.

## 26 Object-Oriented Programming

## 3 hours; 3 credits

Object-orientation and the class concept. Message passing, classes, objects, instances, and methods. An introduction to inheritance and polymorphism. Advanced object-oriented programming techniques. Introduction to object-oriented design. (Not open to students who are enrolled in or have completed Computer and Information Science 2.70 or 16.)
Prerequisite: Computer and Information Science 22.

## 26W Object-Oriented Programming

4 hours; 3 credits
Object-orientation and the class concept. Message passing, classes, objects, instances, and methods. An introduction to inheritance and polymorphism. Advanced object-oriented programming techniques. Introduction to object-oriented design. Writing-intensive section. (Not open to students who are enrolled in or have completed Computer and Information Science 2.70, 16, or 26.)
Prerequisite: Computer and Information Science 22 and English 2.

## 27 Computer Organization

3 hours; 3 credits
Basic digital circuits. Boolean algebra and combinational logic, data representation and transfer, and digital arithmetic. Digital storage and accessing, control functions, input-output facilities, system organization, and reliability. Description and simulation techniques. Features needed for multiprogramming, multiprocessing, and real-time systems. Other advanced topics and alternate machine organizations. (Not open to students who are enrolled in or who have completed Computer and Information Science 28.)
Prerequisite: Computer and Information Science 4 or 4.1; and 11.

## 28 Digital Computer Systems

3 hours lecture, 3 hours laboratory; $41 / 2$ credits
Functional components of computer systems: registers, counters, coders, multiplexers. Data representation. Memory, register, and bus transfer operations. Basic computer organization and design. Central processor organization. Hardwired and microprogrammed control units. Bus
structures. Arithmetic logic units. Memory and I/O organization. Laboratory experiments on computer operations. Design of a digital computer system. (Not open to students who are enrolled in or have completed Computer and Information Science 27.)
Prerequisite: Computer and Information Science 4 or 4.1; and 11.

## 29 Compiler Construction

3 hours; 3 credits
Review of programming language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Organization of a compiler including compile-time and run-time symbol tables, lexical scan, object code generation, error diagnostics, object code optimization techniques, and overall design. Use of compiler-writing languages and bootstrapping.
Prerequisite: Computer and Information Science 2.10 or 2.20 or 2.30 or 2.40 or 2.50 or 2.70 or 2.85 or 26 ; 11; and 22.

### 30.1 Introduction to Software Engineering

## 3 hours; 3 credits

A broad view of software engineering that introduces a variety of software engineering techniques that can be applied to practical software projects. Topics include: process models, software specification, software design, software development methods and tools, verification and validation, reliability, and human factors.
Prerequisite: Computer and Information Science 22.

### 30.1W Introduction to Software Engineering

 4 hours; 3 creditsA broad view of software engineering that introduces a variety of software engineering techniques that can be applied to practical software projects. Topics include: process models, software specification, software design, software development methods and tools, verification and validation, reliability, and human factors. Writing-intensive section.
Prerequisite: Computer and Information Science 22 and English 2.

## 32 Artificial Intelligence

3 hours; 3 credits
Techniques for making computers exhibit intelligent behavior. Topics covered are taken from the areas of problem solving, perception, game playing, knowledge representation, natural language understanding, programs that learn (adaptive programs), expert systems, and programming languages for work in artificial intelligence.
Prerequisite: Computer and Information Science 21 or 22.

### 32.1 Philosophy and Artificial Intelligence

3 hours; 3 credits
Contemporary issues in philosophy and psychology, such as the mind-machine analogy, the artificial intelligence model of the human mind, intentionality, representation, consciousness, concept formation, free will, behaviorism, mechanism. Discussion and evaluation of contemporary work in the field. This course is the same as Philosophy 29 and Psychology 57.2.

Prerequisite: Core Studies 5 or 5.1 or a course in computer and information science, and Core Studies 10 or a course in philosophy; or permission of the chairperson of the offering department.

## 38 Theoretical Computer Science

3 hours; 3 credits
Overview of theoretical computer science. Formal language theory, computability theory. Finite automata, context-free and regular grammars, push-down automata, and Turing machines. Other models of computation, including recursive functions. Universal program and unsolvability.
Prerequisite: Computer and Information Science 11, 21, or 22 , and Mathematics 3.20, 3.3, or 4.10.

## 40 Microcomputer Systems Programming

## 3 hours; 3 credits

Advanced assembly language programming techniques for microcomputer systems. I/O routines. Device interfaces. Interrupt handling. Programming direct memory access devices. Disk I/O. Floating point, I/O, and graphics processors.
Prerequisite: Computer and Information Science 4.1 or 2.90; and 27 or 28.

## 41 Computer Graphics

3 hours; 3 credits
Fundamentals of computer graphics programming. Graphics hardware and software standards. 2D geometric primitives and raster images. 3D object representations. Data structures, algorithms, and the graphics pipeline. Graphical user interfaces. Underlying concepts in computer graphics systems, including games, animation, modeling, rendering, and paint systems.
Prerequisite: Computer and Information Science 22; and Mathematics 2.9 or 2.92 or assignment to Mathematics 3.3 by the Department of Mathematics.

## 42 Microprocessors

2 hours lecture, 2 hours laboratory; 3 credits
Introduction to microprocessor technology. History and applications. Microprocessor architecture: eight- and sixteen- bit processors. Examples of commercially available processors. Instruction sets and software development. Microprocessor memory sections. I/O sections and interfacing techniques. Interrupt systems. Single-chip microcomputers and bit-slice processors. Hands-on laboratory experiments. (Not open to students who have completed Computer and Information Science 70.1 topic: Microprocessors.)
Prerequisite: Computer and Information Science 2.90 or 4.1, and 27 or 28 ; or permission of the chairperson.

## 45 Database Systems

## 3 hours; 3 credits

Introduction to database systems. Comparison to file processing systems. Data models. Relational, hierarchical, and network systems. Database design. Normal forms. Study of several real-world database management systems, with an emphasis on microcomputer applications. Database recovery query and transaction processing, concurrency. Distributed and object-oriented databases.
Prerequisite: Computer and Information Science 21 or 22; and 5.2 or permission of the chairperson.

## 46 Workstation Programming

3 hours; 3 credits
Programming techniques for development of applications on networks of workstations. Process environments, file system issues. Concurrent programming, interprocess communication. Graphical user interfaces, event-driven programming. Distributed programming; remote process creation, the client-server model, message passing. Prerequisite: Computer and Information Science 22.

### 46.5 Distributed System Administration

2 hours lecture, 4 hours laboratory; 4 credits
The principles and practice of system administration in networked and internetworked, multi-user, multi-tasking distributed systems. Basic system administration, connectivity, domain name system management, distributed system information services, network file systems, network service daemons, security kernel modification, device drivers, ethics, and legal issues. System administration tools and languages.
Prerequisite: Computer and Information Science 2.50, and 25 or 46.

## 48 Introduction to Modeling and Simulation

## 3 hours; 3 credits

Introduction to simulation and comparison with other techniques. Discrete simulation models. Introduction to queueing theory and stochastic processes. Comparison of discrete change simulation languages. Simulation methodology including generation of random numbers and variates, design of simulation experiments for optimization, analysis of data generated by simulation experiments, and validation of simulation models and results. Selected applications of simulation.
Prerequisite: Computer and Information Science 4 or 4.1; and Mathematics 8.1 or 51.1.

## 49 Computer Networks and Protocols

3 hours; 3 credits
Computer networks and protocols. Network topologies and switching mechanisms. Protocol concepts and characteristics. Network protocol architectures. Physical layer concepts. Data link layer functions and protocols. Network layer concepts. Network access protocols. Local area networks and protocols. Internetworking. Transport layer functions and protocols. Upper layer issues and approaches. Application program interfaces. Network examples. (Not open to students who are enrolled in or have completed Computer and Information Science 49.1 or 49.2.)
Prerequisite: Computer and Information Science 22; 27 or 28; and Mathematics 8.1.

### 49.1 Telecommunications

## 3 hours; 3 credits

Introduction to telecommunications. Data transmission fundamentals. Data encoding. Modems. Digital subscriber lines. Data compression. Physical layer interfaces. Transmission error control. Telephony signaling. Wireless and cellular communications. Asynchronous Transfer Mode (ATM) Networks. Integrated Services Digital Networks (ISDN). (Not open to students who are enrolled in or have completed Computer and Information Science 49.)
Prerequisite: Computer and Information Science 22, and either Computer and Information Science 27 or 28, and Mathematics 8.1.

### 49.2 Computer Networks

3 hours; 3 credits
A course on computer networks and protocols. Network topologies and switching mechanisms. Protocol concepts and characteristics. Network protocol architectures. Data link layer functions and protocols. Network layer concepts. Network access protocols. Local area networks and protocols. Internetworking. Transport layer functions and protocols. Application layer protocols. The World Wide Web. Network security. (Not open to students who are enrolled in or have completed Computer and Information Science 49.) Prerequisite: Computer and Information Science 22, and either Computer and Information Science 27 or 28.

## 52 Multimedia Computing

3 hours; 3 credits
A survey of the interrelationship of state-of-the-art communication and computer technology. Hardware, software, and system design issues in the multimedia presentation of information. Multimedia standards. Audio and video compression techniques. Hypermedia database systems.
Programming and the use of multimedia authoring systems. Survey of representative hypermedia applications.
Prerequisite: Computer and Information Science 3 or 5.2; and 13.2 or 22.

## 53 Client-Server Web Programming

3 hours; 3 credits
Programming a Web-based interactive client-server application. HTTP protocol, Web browsers, and Web servers. HTML and its extensions. Java applets. Interaction with server using CGI and alternatives. Server-side programming and control. Session persistence. Design of interactive Web pages using client-side (browser) scripting.
Prerequisite: Computer and Information Science 2.70 or 16 or 26; and 22.

## 54 Innovative Approaches to Computer-Human Interfaces

3 hours; 3 credits
Overview of computer-human interfaces with an emphasis on innovative approaches. Principles of computer-human interaction. Ubiquitous computing and tangible interfaces. Interfaces employing speech recognition and computer vision. Sensor technologies. Computer supported cooperative work. Virtual and augmented realities.
Prerequisite: Computer and Information Science 22 and either 3.1,52, or permission of the instructor.

## 55 Parallel and Distributed Computing

3 hours; 3 credits
Development of parallel and distributed applications.
Examples taken from scientific programming, artificial intelligence, operations research, and management science. Symmetric models and asymmetric models. Client-server. Threaded programming. Data parallelism versus algorithmic parallelism. Issues of resource utilization, program decomposition, performance, probability, debugging. Use of formal methods, fault-tolerance, security and other distributed systems issues.
Prerequisite: Computer and Information Science 22; 27 or 28; and one of the following: $2.50,2.70,24,25,26,32,46,48,51$.

## 60.1, 60.2 Independent and Group Projects I, II

3 hours recitation and at least 6 hours independent work§; 3 credits each term
Planning and development of a real computer systems project supervised by a faculty member. Projects generally involve group participation. Achievement measured by demonstrable attainment of the project's goals. Written report.
Prerequisite of 60.1: Computer and Information Science 15 or 16 and permission of the chairperson.
Prerequisite of 60.2: Computer and Information Science 60.1 and permission of the chairperson.

### 70.1 Special Topics in Computer Science

## 3 hours; 3 credits

A topic in computer science not covered in the regular curriculum. Topics vary from term to term and reflect the interests of students and faculty. Course description may be obtained in the department office before registration. Topics may include mathematical software, advanced topics in switching theory, system design and analysis, and management information systems.
Prerequisite: Computer and Information Science 21 or 22; and permission of the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 84.1, 84.2 Seminar in Theoretical Aspects of Information Science I, II

3 hours recitation and a minimum of 7 hours conference and independent work; 3 credits each term
Readings, discussions, and reports on topics in computer science. Topics may be selected from the study of formal linguistics, automata theory, theory of computation, and recursive function theory. Thesis or final examination. Prerequisite of 84.1: a superior record, including an approved program of advanced courses, and recommendation of a department faculty member and permission of the chairperson. Prerequisite of 84.2: Computer and Information Science 84.1 and permission of the chairperson.

## 84.3, 84.4 Seminar in Special Topics I, II

3 hours recitation and a minimum of 7 hours conference and independent work; 3 credits each term
Readings, discussions, and reports on computer science topics. Thesis or final examination.
Prerequisite of 84.3: a superior record, including an approved program of advanced courses, and recommendation of a department faculty member and permission of the chairperson. Prerequisite of 84.4: Computer and Information Science 84.3 and permission of the chairperson.
88.1, 88.2, 88.3, 88.4 Independent Study and Research I, II, III, IV
Minimum of 9 hours conference and independent work§; 3 credits each term
Independent research study or project supervised by a faculty member; approved reading; project report or written examination.
Prerequisite: Computer and Information Science 22, an advanced elective in Computer and Information Science numbered 23 or above, a minimum grade point average of 3.0 overall and in Computer and Information Science advanced electives, a declared major in the Department of Computer and Information Science, and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:
0.1 Computers in Our Society
0.2 Using Computers
2.20 Scientific Computing and FORTRAN
2.40 Pascal for Programmers

43 Real-Time Systems

## Economics

Department office: 218 Whitehead Hall
Telephone: 951-5317, 951-5318, 951-5319
Chairperson: Robert Bell
Deputy Chairperson, Economics Department and Business
Programs: Hershey Friedman
Deputy Chairperson, CLAS Economics Programs:
Merih Uctum
Deputy Chairperson, Division of Graduate Studies:
Emanuel Thorne
Deputy Chairperson, Accounting Programs:
Kreindel Giladi
Deputy Chairperson, SGS: Taiwo Amoo
Deputy Chairperson, Business: Mitchell Langbert
Professors: Bell, Cherry, Friedman, Laibman, Minars, Sardy, Solomon;
Associate Professors: Arenberg, Davidoff, Fox, Giladi, Goldberg, Klein, Langbert, McTague, Testa, Thorne, Uctum, Widman, Zelcer;
Assistant Professors: Amoo, Bhattacharya, Hirakubo, Lopez-Pumarejo.

The Department of Economics sponsors or co-sponsors the following degree, certificate, and minor programs: B.A. in economics; B.S. in business, management, and finance; B.S. in accounting (non-C.P.A. qualifying); B.S. in accounting (C.P.A. qualifying); B.S.-M.P.S. in computer and information science and economics (jointly with the Department of Computer and Information Science); B.A., Social Studies Teacher, grades 7-12 (jointly with the School of Education). The department also offers a certificate of achievement in accounting.
The department offers minors in marketing, in finance, and in economics. The requirements of these minors are such that students can not minor in the department in which they are majoring.

## B.A. degree program in economics HEGIS code 2204

Department requirements (35 credits)
a. All of the following: Economics 10.1, 20.1; Economics 30.2 , or Business 30.2, or Mathematics 8.1 or 51.1; Economics 31.1, or Mathematics 10.1.
Students must achieve a grade of C or better in at least three of the above courses. Students who have received transfer credit for any of the above courses must have a grade of $C$ or better in all of the above courses taken in residency.
b. Accounting 1; and Economics 30.3 or Business 30.3.
c. One of the following concentrations:

1. Enterprise and Public Policy:

Any four courses from Economics 20.2, 40.1, 40.5, 60.2, 70.8, 75.5, 75.6.
2. International Economics:

Any four courses from Economics 10.2, 10.4, 75.3, 76.1, 76.2, 76.3, Business 76.4.
3. Financial Economics:

Any four courses from Economics 10.2, 70.1, 70.7, 70.8, 75.2, 76.1, Business 70.3.
4. Political Economy:

Any four courses from Economics 10.2, 40.1, 40.5, 60.2, 75.2, 75.3, 75.4, 75.5.
5. Economic Analysis:

Economics 10.2, 20.2, and any two additional Economics courses.
d. One additional course with an economics prefix not used to meet requirements in b) or c) above.

Students considering graduate work in economics are strongly encouraged to take Economics 31.2 and the Economic Analysis concentration; those intending to pursue a Master of Business Administration are encouraged to take Economics 10.2 and/or Economics 20.2.
Residence requirement: Student must take at least one macroeconomics course (Economics 10.1, 10.2, 70.1), one microeconomics course (Economics 20.1, 20.2, 75.6), and one statistics course (Economics 30.2, 30.3; Business 30.2, 30.3) while in residence; as well as at least three of the courses used to satisfy requirements in c), above.

## Requirements for an optional minor in economics

A program of 12 credits of advanced economics courses. An "advanced" course is defined as any course that may be used to satisfy b), c), or d) in the list of requirements for the B.A. degree program in economics. Students majoring in accounting or business, management, and finance are eligible for this minor; economics majors are not. All courses used to satisfy the minor must be completed with a grade of C or higher.

## B.S. degree program in business, management,

 and finance
## HEGIS code 0506

## Admission to program

In order to declare a major in this program, a student must have completed at least 32 credits at Brooklyn College with a grade point average of 2.20 or better. Students who enter Brooklyn College after earning at least 28 credits elsewhere, may declare a major in this program after earning at least 15 credits at Brooklyn College with a grade point average of 2.20 or better.
Department requirements (49-53 credits)
Majors must complete four tiers of course requirements:

## Tier I

All of the following: Economics 10.1, 20.1; Business 30.2 or Economics 30.2 or Mathematics 8.1 or 51.1; Business 50.1; Business 70.2; Accounting 1, 40.

## Tier II

All of the following: Economics 31.1 or Mathematics 10.1; Business 31.4; Business 40.3 or Psychology 12.7; Business 50.2 ; Philosophy 14 or Classics 35 or Speech 9 or 18 or 23; Computer and Information Science 1.10 or 1.5 or 5.2.

## Tier III

Students must complete one course from each of any two of the following three areas:

1. Business Management

Business 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9;
Accounting 2, 41; Psychology 12.
2. Finance

Business 70.3, 70.7, 76.4, 76.5; Economics 70.1, 70.7, 75.2, 76.1; Accounting 30; Mathematics 74.2.
3. Quantitative Analytic Techniques

Business 30.3, 31.5; Economics 20.2, 30.3, 30.4, 31.2;
Computer and Information Science 3.2, 48; Accounting 4,

## 21; Mathematics 74.1.

Tier IV
One of the following seminars: Business 80.1, 80.2, 80.3, 80.4, 80.5 .

Residence requirement: At least 21 credits of the above courses, including the required Tier IV course, must be completed at Brooklyn College.
Index requirement: Attainment of a grade point average of 2.00 in all courses taken to satisfy department requirements.

## Requirements for a minor in finance

The minor in finance requires 20 credits.
All of the following: Accounting 1, Economics 10.1, Economics 20.1, Mathematics 74.1 .
Two of the following: Economics 70.1, Business 70.2, Business 70.3.
(Mathematics majors may count Mathematics 74.1 both for the major and for this minor.)
Note: Accounting, Business, and Economics majors are not eligible for this minor.

## Requirements for an interdisciplinary minor in marketing

This minor is not open to students who major in a degree program within the Department of Economics or in the concentration in Philosophy and Business in the degree program in philosophy.
A grade of $C$ or higher in each of the five courses offered in the minor.
All of the following: Business 50.2; Sociology 77.2; and Television and Radio 17 or Business 50.7.
Two courses chosen from the following: Business 50.9, English 19.1, Film 20, Psychology 12 or 12.1, Sociology 43.3 or 61.5, Television and Radio 19 or 26.15 or 26.16.

## B.S. degree program in accounting (non-C.P.A. qualifying)

 HEGIS code 0502Department requirements (49-53 credits)
All of the following: Economics 10.1, 20.1; Economics 30.2 or Business 30.2, or Mathematics 8.1 or 51.1; Computer and Information Science 5.2; and Accounting 40.
All of the following with a grade of C - or higher: Accounting 1 , 2, 3, 5, 7, 21, and 30.
Two of the following: Economics 70.1; Business 70.2 or Economics 70.8; Business 70.3 .
One of the following: Accounting 10, 11, 14, or 31.
One of the following: Philosophy 14 or Speech 23.
Students must consult a department counselor to prepare a plan of study and obtain approval of courses chosen to fulfill department requirements.
Residence requirement: Students must complete a minimum of 30 credits at Brooklyn College, including at least 12 credits with a grade of C - or higher from Accounting 1 through 31. The work of the senior year must be completed at Brooklyn College.

## B.S. degree program in accounting (C.P.A. qualifying) HEGIS code 0502

Accreditation: The Brooklyn College certified public accountancy (C.P.A.) program is registered with the New York State (NYS) Education Department. Holders of bachelor of science degrees with a major in accounting who satisfactorily complete this registered program meet the collegiate education requirements for the NYS C.P.A. certificate. Students who complete this program prior to August 1, 2004, may sit for the C.P.A. examination in NYS until August 1, 2009. Commencing August 1, 2004, NYS has adopted a 150 semester-hour requirement to sit for the C.P.A. examination. Therefore, the current program will no longer be registered as C.P.A. qualifying after that date. See B.S. degree program in accounting (public accountancy), below.
Department requirements (59-62 credits)
All of the following: Accounting 1, 2, 3, 5, 7, 10, 11, 14, 21, 30, 40, 41; Economics 10.1, 20.1; Business 30.2 or Economics 30.2; Computer and Information Science 5.2.

Two of the following: Economics 70.1; Business 70.2 or Economics 70.8; Business 70.3.
One of the following: Philosophy 14 or Speech 23.
Students must achieve a grade of C - or better in each of the following courses: Accounting 1, 2, 3, 5, 7, 10, 11, 14, 21, 30.

## B.S. degree program in accounting (public accountancy) HEGIS code 0502

New York State (NYS) has adopted a 150 semester-hour educational requirement, commencing August 1, 2004, to sit for the certified public accounting (C.P.A.) examination. Candidates for the C.P.A. examination must complete this program and either the master of arts in economics (C.P.A. qualifying) at Brooklyn College or an equivalent graduate program elsewhere to comply with the 150 semester-hour requirement. The Brooklyn College 150 semester-hour program is registered with the New York State Education Department.
Within the 150 semester-hour requirements, students must complete at least 60 credits in liberal arts and sciences courses. This requirement may be satisfied through a combination of undergraduate and graduate level courses. Students should consult with the Accounting Program adviser regarding the 150 semester-hour registered curriculum.
Department requirements (59-62 credits)
All of the following: Accounting 1, 2, 3, 5, 7, 10, 11, 14, 21, 30, 40, 41; Economics 10.1, 20.1; Business 30.2 or Economics 30.2; Computer and Information Science 5.2.
Two of the following: Economics 70.1; Business 70.2 or Economics 70.8; Business 70.3 .
One of the following: Philosophy 14 or Speech 23.
Students must achieve a grade of C- or better in each of the following courses: Accounting 1, 2, 3, 5, 7, 10, 11, 14, 21, 30.

## B.A. degree program in adolescence education:

 social studies teacherHEGIS code 2201.01; SED program code 26754
See the "Social Studies" and "Education" sections in this Bulletin.

## Certificate of achievement in accounting HEGIS code 0502

Admission requirements are described under the heading "Certificate programs" in the chapter "Admission."
Program requirements (26-28 credits)
The certificate of achievement in accounting program consists of eight courses: Economics 10.1; Business 50.1; Business 70.2 or Economics 70.8; Accounting 1, 2, 3, 7; and one course chosen from Accounting 21, 30, or 40.
Students who have received transfer credits from other colleges must complete at least 20 of the 26 to 28 credits at Brooklyn College.
Students must apply to the Office of the Registrar for their certificates upon completion of program requirements. The certificate of achievement in accounting will be issued upon the completion of the program with a grade of C - or better in each course

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Requirements for a minor in accounting
Students majoring in economics and in business,
management, and finance are eligible for this minor.
A minimum of 12 credits as follows:
All of the following: Accounting 2, 30, and 40.
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Students majoring in economics and in business, management, and finance are eligible for this minor.

All of the following: Accounting 2, 30, and 40.

One of the following: Accounting 3, 7, 21, 31, 41.
A grade of C - or higher in each of the four courses offered in the minor is required.
A minimum of three courses must be completed at Brooklyn College.

## Department recommendation

Students planning careers in areas other than public accounting or teaching, such as internal, managerial, or governmental accounting, should consult a department counselor to prepare a plan of study appropriate to their professional goals.

## B.S.-M.P.S. degree program (Master of Professional Studies) in computer and information science and economics <br> HEGIS code 0799

## Admission

Students should apply for admission to the program as early as possible, but no later than the fourth term of undergraduate work. Applications are considered by the chairperson of the Computer and Information Science Department and the chairperson of the Economics Department on the basis of superior academic records and evidence of scholarly potential. Students must maintain a grade point average of 3.00 or higher to remain in the program.

## Planning the program

Students must plan their programs before the beginning of the junior year with the assistance of a counselor in each department. Some undergraduate course requirements may be satisfied by advanced placement or exemption examination. Information about the examinations is in the chapters "Admission" and "Academic Standing" in this Bulletin. A student who completes undergraduate requirements for a B.S. degree with a major in accounting may choose that degree on completion of the program.
Program requirements (140 credits)
Undergraduate courses (110 credits)
Computer and Information Science 1.5 or 2.80, 4.1, 5.2, 13.2, $15,22,26,60.1$ or 88.1 .
Two courses chosen from the following: Computer and Information Science 45, 48, 49, 49.2, 51. With permission of the chairperson of the Department of Computer and Information Science, the student may substitute one of the following courses for any course in this requirement: Computer and Information Science 23, 24, 25, 27.
Mathematics 3.3 and 4.3.
Mathematics 8.1 or Economics 30.2 or Business 30.2. Mathematics 10.1 or Economics 31.1.
Economics 10.1 and 20.1.
Two of the following: Economics 70.1; Economics 70.8 or Business 70.2; Business 70.3.
Accounting 1, 2, 3, 5, and 7. C.P.A. candidates must also complete Accounting 10, 11, 14, 21, 30, 40, and 41.
Additional undergraduate courses in any department or program to bring the total number of undergraduate credits to at least 110 .
Graduate required courses ( 18 credits)
Three courses chosen from either group (a) or (b):
a. Economics 705X, 720X, 721X, 722X.
b. Accounting 706X, 707X, 708X, 712X, 714X. In order to qualify for the courses in group (b), the student must have completed all of the following undergraduate courses in addition to the program requirements: Accounting 7, 10, 11, 14, 30, 40, and 41. Students who intend to use this
program to qualify for the one-year reduction in the experience requirement for the C.P.A. license must elect Economics 700X or 710X; 711X or 715X; and 722X as part of their graduate elective courses. Beginning in August 2004, the one year experience requirement reduction will no longer be effective due to the new NYSED 150 semester-hour requirement. Students must consult with an Accounting Program advisor to determine whether they comply with the equivalent education requirements contained in the new regulations.
Three of the following: Computer and Information Science 714X, 717.1X, 726X, 757X, 758X, 759X, 760X, 764X, 765X.
Thesis or comprehensive examination under the guidance of the Department of Economics or the Department of Computer and Information Science.
Graduate elective courses (12 credits)
Twelve credits chosen with the approval of the department under whose guidance the student chooses to write a thesis or take a comprehensive examination.

## Division of Graduate Studies

Graduate economics courses. Undergraduate students whose scholastic work is superior may be permitted to take graduate courses and apply the credit towards the baccalaureate degree. Students must consult with the deputy chairperson for graduate studies or the director of the accounting programs for approval prior to registration.
The Economics Department offers a master of arts degree program in economics and cosponsors, with the Department of Political Science, a master of arts degree program in political economy. Some courses may be creditable toward the CUNY doctoral degree. Courses in accounting may be used to qualify for the C.P.A. examination in the State of New York.
For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

+Economics 10.1 and 20.1 are required courses for students majoring in economics and accounting. Sophomores may take Economics 10.1 as a corequisite course. Juniors and seniors majoring in other departments may enroll in advanced courses without taking Economics 10.1, but they must have the necessary background information.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Macroeconomics

*0.1 Contemporary Problems of the Economy
3 hours; 3 credits
Instability, monopoly, inequality, poverty, development. Topics studied vary with each section and reflect the interests of the students and the instructor. Intended for nonmajors.
*+10.1 Elementary Macroeconomics
4 hours; 4 credits
Contemporary economic analysis of the operation of the United States economy. Role of markets and the determination of the overall level of economic activity. Dynamic process of growth, inflation, and international trade.
Prerequisite: a score of 32 or higher on the CUNY Mathematics Skills Assessment Test or a grade of C or higher in Core Studies 5 or 5.2 , or passing Mathematics 2.9 or higher.

### 10.2 Intermediate Macroeconomics

3 hours; 3 credits
Static and dynamic analysis of national income measurement; aggregate approaches to theories of income; employment, prices, interest rates; public policies for growth and stabilization. (Not open to students who have completed Economics 19.1.) Prerequisite: Economics 20.1 and 31.1, or the equivalent.

### 10.4 Theory of Economic Growth

## 3 hours; 3 credits

Steady state growth equilibria, comparative dynamics, and disequilibrium growth. Post-Keynesian, neoclassical, and neo-Ricardian models. Production functions and the capital valuation problem; the duality of the growth rate and the profit rate; two-sector and multisector models; the golden rule and problems of optimal growth. Critical analysis of growth models. Structural requirements and behavioral conditions for existence and stability of equilibrium. Fundamental question of why economies generate pressures for growth.
Prerequisite: Economics 20.1 and 31.1, or the equivalent.

## Microeconomics <br> +20.1 Elementary Microeconomics <br> 3 hours; 3 credits

Basic laws and principles of economic science. Value, price, and distribution. Preparation for more comprehensive studies involving application of the tools of analysis to economic problems.
Prerequisite: +Economics 10.1 and a score of 32 or higher on the CUNY Mathematics Skills Assessment Test or a grade of C or higher in Core Studies 5 or 5.2 , or passing Mathematics 2.9 or higher.

### 20.2 Intermediate Microeconomics

3 hours; 3 credits
Methods and results of economic analysis used in interpretation of economic data and in solution of economic problems. Outstanding exponents of major theoretical approaches.
Prerequisite: +Economics 20.1 and 31.1, or the equivalent.

## Quantitative and mathematical economics

30.2 Introduction to Economic and Business Statistics 4 hours; 4 credits
Descriptive statistics including measures of central tendency, dispersion, and skewness. Probability and theoretical probability distributions including the binomial function and the normal curve. Sampling, estimation, and test of hypothesis. Simple correlation and regression analysis. Applications from social sciences. This course is the same as Business 30.2. (Not open to students who are enrolled in or have completed any of the following: Sociology 19.1, 20, 20.1; Political Science 12.5, 57; Psychology 40.1, 50; Mathematics 8.1, 51.1.)
Prerequisite: a score of 32 or higher on the CUNY Mathematics Skills Assessment Test or a grade of C or higher in Core Studies 5 or 5.2, or passing Mathematics 2.9 or higher.

### 30.3 Advanced Economic and Business Statistics

3 hours; 3 credits
Index number construction. Time series analysis. Chi-square, F, and student's t distributions. Advanced topics in statistical inference. Variance, multiple regression, and correlation analysis. Applications from economics. This course is the same as Business 30.3.
Prerequisite: Economics 30.2 or Business 30.2 or Mathematics 51.1; and Economics 31.1 or its equivalent.

### 31.1 Fundamental Methods of Mathematical Economics I

 3 hours; 3 creditsMathematical tools necessary for advanced study. Application of differential calculus and matrix algebra to economic analysis. Consideration of static, comparative static, and optimization models. (Not open to students who have completed Mathematics 10.1.)
Prerequisite: +Economics 20.1 and Mathematics 2.9 or Mathematics 2.91 or any Mathematics course numbered higher than 2.9, or 2.91, or placement in Mathematics 3.3 on the basis of the calculus placement test.

## Economics electives

### 40.1 Labor Economics

3 hours; 3 credits
Labor force concepts, composition, trends, and measurements. Human resource development problems in relation to population and economic growth. Wage patterns and theories. Characteristic risks and problems of the wage earner. Legislative and private attempts to secure full employment. Insecurity and underutilization of the labor force.
Prerequisite: +Economics 10.1.

### 40.5 Economics of Discrimination

3 hours; 3 credits
Discrimination in labor markets as it applies to sex, race, ethnic, and religious groups. Historical and theoretical analysis of the relationship of discrimination to economic systems, presented from alternative perspectives. Slavery, immigration, unionization, affirmative action, and the problem of quotas.
Prerequisite: +Economics 10.1.

### 60.2 Environmental and Natural Resource Economics

 3 hours; 3 creditsEconomic aspects of pollution and resource conservation. Resource scarcity. Allocation of renewable and depletable resources. Application of environmental and conservation economics to current public policy problems.
Prerequisite: Economics 20.1 or permission of the chairperson.

### 70.1 Money and Banking

## 3 hours; 3 credits

The nature of money, the monetary system, and monetary standards. Commercial banking operations and noncommercial banking institutions. Relationship of money and banking to prices and economic activity.
Prerequisite: +Economics 10.1.

### 70.7 Investment Science

4 hours; 4 credits
Net present value, internal rate of return; yield, duration, immunization, and convexity of fixed-income securities; mean-variance portfolio theory, Markowitz model, CAPM, factor models, arbitrage pricing theory; models of asset dynamics, Ito's lemma, options theory, Black-Scholes equation, interest-rate derivatives. (This course is the same as Business 70.7 and Mathematics 74.2.)
Prerequisite: Economics 30.2 or Business 30.2 or Mathematics 8.1 or Mathematics 51.1; Economics 31.1 with a grade of $B$ - or better; Economics 70.2 or Business 70.2.

### 70.8 Financial Economics

3 hours; 3 credits
Theoretical and public policy issues related to the structure and workings of financial markets. Uses microeconomic analysis to
assess the effectiveness of various financial instruments in meeting the needs of investors who have varying preferences for risk. Derives and applies a variety of financial-decisions rules, including those associated with asset-pricing and arbitrage-pricing models. Additional topics include: risk and return trade-offs, cost of capital, and capital budgeting. Prerequisite: Economics 20.1

### 75.2 Public Finance

3 hours; 3 credits
Economics of public finance. Government expenditures, taxation, and debt in relation to efficient resource use, equity in the distribution of wealth and income, stable growth, and related aspects of economic well-being.
Prerequisite: +Economics 20.1.

### 75.4 Socialist Thought

## 3 hours; 3 credits

Various forms of socialism in their historical setting. Ideologies, critiques of capitalism, and programs of change.
Prerequisite: +Economics 20.1.

### 75.5 Urban Economics

## 3 hours; 3 credits

Economic basis of the urban economy. Land utilization, land tenure, and land and building income. Ratios of improvement value to site value. Zoning regulations and city planning. Common real estate instruments.
Prerequisite: +Economics 20.1.

### 75.6 Industrial Organization

3 hours; 3 credits
Economic analysis of the structure of markets and the behavior of firms. Examination and evaluation of public policy toward business. Topics include pricing strategies, product differentiation, barriers to entry, corporate mergers, research and development, and antitrust legislation and regulation.
Prerequisite: Economics 20.1

### 76.1 International Macroeconomics and Finance

3 hours; 3 credits
The foreign exchange market, international financial markets, and the determination of the equilibrium exchange rate. Price levels and the exchange rate in the long run; output and the exchange rate in the short run; foreign exchange intervention; capital mobility; monetary and asset market approach to the balance of payments; international macroeconomic policy and the international monetary system.
Prerequisite: +Economics 20.1.

## Honors seminars

### 81.1 Seminar in Macroeconomics

3 hours; 3 credits
Mathematical and econometric techniques. Course description may be obtained in the department office before registration.
Prerequisite: Economics 10.2.
81.3, 81.4 Independent Research in Macroeconomics

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member.
Approved topic. Weekly conference. Research paper.
Prerequisite: Economics 10.2.

### 82.3 Independent Research in Microeconomics

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Research paper.
Prerequisite: Economics 20.2.

### 83.3 Independent Research in Quantitative and Mathematical Economics

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member.
Approved topic. Weekly conference. Research paper.
Prerequisite: Economics 31.2 or Business 31.4.

## 84.3, 84.4 Independent Research in Human Resources and Economics of Poverty

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Research paper.
Prerequisite: Economics 40.1 or 40.4 .

## 87.3, 87.4 Independent Research in Money and Finance

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Research paper.
Prerequisite: Economics 70.1.

### 90.3 Special Topics

3 hours; 3 credits
Topics vary from term to term. Course descriptions may be obtained from department office before registration. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: permission of the chairperson.

### 92.3 Independent Research in Economic Development and Trade

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Research paper.
Prerequisite: Economics 76.1 or 76.2 .
The following course is inactive and will be offered only if there is sufficient demand:

### 10.3 Business Cycles

30.4 Econometrics
31.2 Fundamental Methods of Mathematical Economics II
31.3 Introduction to Mathematical Economic Theory
65.1 Evolution of Modern Economic Thought
75.3 Transitional Economics and Comparative Economics
76.2 Economic Development Theory
76.3 International Trade
92.4 Independent Research in Economic Development and Trade

## Accounting

Accounting 1 Introductory Accounting
4 hours; 4 credits
Introduction to the concepts and principles of accounting. Techniques of data accumulation. Nature and interpretation of financial statements. Corporate accounting. (Not open to students who have completed Economics 71.01 or 71.1.) Fall and spring terms.

## Accounting 2 Introduction to Managerial Accounting

 3 hours; 3 creditsAccounting systems and controls. Cost accounting for manufacturers. Uses of accounting data. Analysis of changes in financial position. (Not open to students who have completed Economics 71.02 or 71.2 .) Fall and spring terms. Prerequisite: Accounting 1, or Economics 71.01 or 71.1.

## Accounting 3 Intermediate Financial Accounting I

 3 hours; 3 creditsDetailed consideration of the accounting principles and valuation of current assets, operational assets, liabilities, and taxes. Concepts of future and present value. Emphasis placed on pronouncements of the Financial Accounting Standards Board and the Accounting Principles Board.
(Not open to students who have completed Economics 71.03 or 71.3.) Fall and spring terms.
Prerequisite: Accounting 2, or Economics 71.02 or 71.2 .

## Accounting 4 Cost Accounting

## 3 hours; 3 credits

The theories and methods of accounting for manufacturing costs with the emphasis placed on control, planning, and decision making. Historical and predetermined cost accumulation. Costs for special purposes. Cost concepts, problems, and applications. (Not open to students who have completed Economics 71.04 or 71.5 .) Fall and spring terms. Prerequisite: Accounting 2, or Economics 71.02 or 71.2 .

## Accounting 5 Intermediate Financial Accounting II

 3 hours; 3 creditsDetailed consideration of long-term investments, liabilities, and stockholders' equity. Statement of changes in financial position. Other related topics. (Not open to students who have completed Economics 71.05 or 71.3 .) Fall and spring terms.
Prerequisite: Accounting 3, or Economics 71.03.

## Accounting 6 Introduction to Auditing

3 hours; 3 credits
Internal auditing. Control systems. Auditing programs and techniques. Adequacy of evidence. (Not open to students who have completed Economics 71.06 or 71.6 .) Fall and spring terms.
Prerequisite: Accounting 3, or Economics 71.03 or 71.3 .

## Accounting 7 Cost and Managerial Accounting for Strategic Decision Making <br> 4 hours; 4 credits

Strategies for cost accumulation with emphasis on control, planning, and decision making. Quantitative methods and analytical tools for capital budgeting and inventory control, including linear programming. Management decision making under uncertainty. (Not open to students who have completed Accounting 4 or 12.)
Prerequisite: Economics 30.2; Computer and Information Science 5.2; and Accounting 2 or Economics 71.02 with a grade of C - or higher.

## Accounting 10 Advanced Financial Accounting

 3 hours; 3 creditsSignificant issues relating to theory and problems of accounting topics including leases, pensions, and earnings per share. Partnership accounting. (Not open to students who have completed Economics 71.07 or 71.7 .) Fall and spring terms.
Prerequisite: Accounting 5 or Economics 71.05 with a grade of C - or higher.

## Accounting 11 Consolidated and Not-for-Profit Entities

 3 hours; 3 creditsTheory and problems of consolidated statements and not-forprofit entities. (Not open to students who have completed Economics 71.08 or 71.4 .) Fall and spring terms.
Prerequisite: Accounting 5, or Economics 71.05 or 71.3 with a grade of C - or higher.

## Accounting 12 Advanced Managerial Accounting

 3 hours; 3 creditsQuantitative analysis for decision making in manufacturing. Topics in capital budgeting, inventory control, and linear programming. Decision models under uncertainty. Cost behavior patterns and cost allocations. The computer as a tool. (Not open to students who have completed Economics 71.09 or 71.5.) Fall and spring terms.

Prerequisite: Economics 30.2 or Business 30.2; and Accounting 4 or Economics 71.04 with a grade of C - or higher.

## Accounting 13 Auditing in the Public Environment

 3 hours; 3 creditsThe attest function. Independent public accounting: principles and procedures. The code of professional ethics. Detailed consideration of Statements on Auditing Standards. (Not open to students who have completed Economics 71.10 or 71.6.) Fall and spring terms.
Prerequisite: Economics 30.2 or Business 30.2; and Accounting 5 or Economics 71.05, and Accounting 6 or Economics 71.06 with grades of C - or higher.
Prerequisite or corequisite: Accounting 10 or Economics 71.07.

## Accounting 14 Auditing Concepts

4 hours; 4 credits
Theory, concepts, and procedures utilized in the audit process, including the code of professional ethics, legal liability, evidence, and verification of accounts. Course material supplemented with specific applications using cases and group decision making. (Not open to students who have completed Accounting 6 or 13.)
Prerequisite: Economics 30.2 or Business 30.2; and Accounting 5 or Economics 71.05 and Accounting 21 with grades of C - or higher.

## Information systems and control

Accounting 21 Accounting Information Systems 2 hours; 2 credits
Purposes and uses of accounting information systems; design, implementation, and evaluation. Interrelationship of accounting and managerial information systems. Emphasis on computer applications. (Not open to students who have completed Economics 79.2.)
Prerequisite: Core Studies 5 or 5.1 or the equivalent and Accounting 2.

## Taxation

## Accounting 30 Income Taxation

## 4 hours; 4 credits

Principles and problems associated with the federal incometax laws. Methods of tax research. Broad implications and consequences of the tax system with brief coverage of other tax laws and jurisdictions. (Not open to students who have completed Economics 70.5.) Fall and spring terms.
Prerequisite: Accounting 1, or Economics 71.01 or 71.1.

## Accounting 31 Taxation of Business Enterprises

3 hours; 3 credits
A survey course outlining the basic tax law affecting business enterprises. Corporate income tax from organization of the corporate entity, capital structure, corporate distributions, the income process, redemptions, liquidations, and reorganizations; small business corporations (Sub Ch. S); and partnership taxation. This course is designed to provide theoretical and practical experience with tie-ins to applicable tax forms. The case study method will be used where applicable. A class project or research paper will be required. (Not open to students who have completed Economics 70.6.) Fall and spring terms.
Prerequisite: Accounting 30 or Economics 70.5, and Accounting 3 or Economics 71.03; or their equivalent.

## Business law

## Accounting 40 Business Law I

3 hours; 3 credits
Systematic analysis of legal concepts and principles applied to economic institutions. Wealth and income of individuals, families, and business enterprises including: fixing future behavior (contracts); the rules of the game in commodity markets (sales); distribution of risks through primary and secondary underwriters (insurance, guaranty, and suretyship); storage of commodities function (bailments); sales of commodities with secured interests (secured transactions); accumulated capital, consumer goods, and legal rights in commodities and diverse intangibles (personal property). (Not open to students who have completed Economics 50.5.) Fall and spring terms.

## Accounting 41 Business Law II

3 hours; 3 credits
Systematic analysis of legal concepts and principles applied to ownership, control, and management of natural resources (real property); delegating authority and responsibility (agency); structure and functions of business enterprises (partnerships, corporations, and holding companies); creditors' rights, rehabilitation of failing firms (creditors' compositions and bankruptcy); substitutes for money (negotiable instruments); and elements of providing wealth and/or income during life and after death (trusts and wills). (Not open to students who have completed Economics 50.6.) Fall and spring terms. Prerequisite: Accounting 40 or Economics 50.5.

## Accounting seminars

Accounting 84.1, 84.2 Seminar in Accounting
3 hours; 3 credits
Basic postulates of accounting and income measurement. Accounting aspects of business control and decision making. Application of accounting in special areas including those subject to administrative control. Written and oral reports. Course description may be obtained in the department office before registration. (Accounting 84.1 is not open to students who have completed Economics 93.6. Accounting 84.2 is not
open to students who have completed Economics 93.7.)
Prerequisite: Accounting 5, or Economics 71.05 or 71.3; and Accounting 4, or Economics 71.04 or 71.5.

## Accounting 90.2 Special Topics

2 hours; 2 credits
Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course twice, but may not repeat topics.
Prerequisite: permission of the department chairperson.

## Business, Management, and Finance

## Business 30.2 Introduction to Economic and Business Statistics

## 4 hours; 4 credits

Descriptive statistics including measures of central tendency, dispersion, and skewness. Probability and theoretical probability distributions including the binomial function and the normal curve. Sampling, estimation, and test of hypothesis. Simple correlation and regression analysis. Applications from social sciences. This course is the same as Economics 30.2. (Not open to students who are enrolled in or have completed any of the following: Sociology 19.1, 20, 20.1; Political Science 12.5, 57; Psychology 40.1, 50; Mathematics 8.1, 51.1.)
Prerequisite: a score of 32 or higher on the CUNY Mathematics Skills Assessment Test or a grade of C or higher in Core Studies 5 or 5.2 , or passing Mathematics 2.9 or higher.

## Business 30.3 Advanced Economic and Business Statistics

## 3 hours; 3 credits

Index number construction. Time series analysis. Chi-square, F, and student's $t$ distributions. Advanced topics in statistical inference. Variance, multiple regression, and correlation analysis. Applications from economics. This course is the same as Economics 30.3.
Prerequisite: Business 30.2 or Economics 30.2 or Mathematics 51.1; and Economics 31.1 or its equivalent.

## Business 31.4 Operations Management

3 hours; 3 credits
Study in managerial decision making to solve a wide range of operating management problems. Topics covered include: planning, evaluating, and control of operations; forecasting and inventory management; scheduling; project design and management; resource allocation; queuing models; quality of the work environment; and technological change. Design and implementation of management strategy will be emphasized through computer simulation, problems, and cases. (Not open to students who are enrolled in, or who have completed Mathematics 73.2 or Economics 31.4.)
Prerequisite: Business 30.2 or Economics 30.2; and Business 50.1.

## Business 31.5 Electronic Commerce

3 hours; 3 credits
How the Internet can be used to conduct business. Topics covered include: Internet hardware and software, tools and technologies for creating a Web site, characteristics of successful Web sites, new technologies, the future of the Internet, Web communication strategies, security issues, legal and ethical issues, Internet information services, data mining, and global E-commerce. Case studies of successful E -commerce businesses will be examined. This course is
the same as Computer and Information Science 3.2.
Prerequisite: Core Studies 5 or 5.1 or Computer and Information Science 1.5.

## Business 40.3 Personnel Management

3 hours; 3 credits
Managerial labor policies. Factors affecting productive efficiency and morale of workers. Methods and policies of apprenticeship, recruitment, dismissal; criteria of employee selection, wage payment, and work standards. Problems of monotony and work schedules. Welfare policies. This course is the same as Psychology 12.7. (Not open to students who have completed Economics 40.3.)
Prerequisite: Sophomore status or Psychology 10.

## Business 50.1 Introduction to Management

3 hours; 3 credits
Principles of management. Functions of the manager. Organization and operation of American business. Management processes, concepts, and specific problems of production, management, labor relations, marketing, financing, decision making and accounting. Lectures, discussions, and case studies. (Not open to students who have completed Economics 50.1.)

## Business 50.2 Principles of Marketing Management

 3 hours; 3 creditsAn overall view of the field of marketing and the theory of consumer and enterprise demand. Emphasis is given to consumer behavior, advertising, social responsibility, marketing strategies, market potential, product planning and development, market research, pricing, sales promotion, channels of distribution and government regulation. (Not open to students who have completed Economics 50.2.)

## Business 50.3 Negotiation and Conflict Resolution

 3 hours; 3 creditsIntroduction to the field of negotiation, conflict studies, and mediation theory. Nature of conflict, conflict resolution, nature of negotiation, finding negotiation leverage, professional and moral responsibility in negotiation, mediation approaches, trends in the discipline of conflict resolution. Games, simulations, and case studies.
Prerequisite: Business 50.1 or 50.2, and upper sophomore status. Juniors and seniors not majoring in accounting; business, management, and finance; or economics may take this course without any prerequisites.

## Business 50.4 Organizational Behavior

3 hours; 3 credits
This course deals with individual and group behavior within organizational systems. Topics covered include: job satisfaction, work motivation, communications, organizational design, organizational culture, organizational change, leadership, team development, interpersonal and intergroup conflict management, total quality management, and social responsibility/ethics. (Not open to students who have completed Economics 50.4.)
Prerequisite: Business 50.1.

## Business 50.5 Small Business Management and Minority Entrepreneurship <br> 3 hours; 3 credits

Entrepreneurial processes of new venture creation and small business management. How entrepreneurs start businesses, psychological and economic characteristics of entrepreneurs, obtaining financing, small business marketing and advertising, financial and cash management for a small business, managing a small business, and using the World Wide Web as a profitable business tool. Importance of small business development by minorities. Case studies of successful minority entrepreneurs will be examined.

## Business 50.6 Business Practices and the Jewish Tradition 3 hours; 3 credits

 Using the classical sources of the Jewish tradition, this course will examine subjects dealing with running a business in accordance with Jewish law and values. Topics covered include compassion for the poor, concern for the stranger, racism, employer-employee relations, pricing, honesty in business, water, environmentalism, and moral leadership. (This course is the same as Judaic Studies 20.5.) Prerequisite: Judaic Studies 12 or 13 or permission of the chairperson.
## Business 50.7 Advertising and Direct Marketing

 3 hours; 3 creditsImportance of advertising and direct marketing in the mix of strategies for selling. Determining budgets and objectives. Evaluating strategies. Development of a media plan. Analysis of the creative process. Copy and media testing. Direct response advertising, direct mail, catalogs, mailing lists, cooperative advertising, telemarketing, and lead generation. Group projects and real-life applications. (Not open to students who have completed Economics 50.7.) This course is the same as Television and Radio 17.
Prerequisite: Business 50.2 or Television and Radio 6.5.

## Business 50.8 Management of New and Emerging Technologies <br> <br> 3 hours; 3 credits

 <br> <br> 3 hours; 3 credits}The focus of this course is on the management of work units charged with technical renewal or new applications of technology. The practical problems of people in industry, involving interpersonal relations, groups, leadership, and organizational change, will be viewed in light of the overall strategy of the firm. Issues will range from managing project groups in traditional pyramid organizations, as well as in the newer matrix organizations, to managing the transfer of technology on an international basis. This course will use the case study approach predominantly, but also will include small group student projects. (Not open to students who have completed Economics 50.8.)
Prerequisite: Business 50.1.

## Business 50.9 Consumer Behavior

3 hours; 3 credits
Interdisciplinary approach to understanding consumer motivation and behavior. The relationship of information processing and learning theory on buyer behavior, importance and measurement of images and attitudes, theories of promotion and communication, and models of consumer behavior. Consumerism. Application of theoretical principles to advertising, positioning, segmentation, and product strategies. (Not open to students who have completed Economics 50.3 or Economics 50.9.)
Prerequisite: Business 50.2.

## Business 70.2 Corporation Financial Management

 3 hours; 3 creditsBasic problems faced by financial managers. Goals and functions of financial managers, tools of financial analysis, forecasting funds requirements, management of current assets, short-, intermediate-, and long-term financing. (Not open to students who have completed Economics 70.2.) Prerequisite: Accounting 1.

## Business 70.3 Investment and Securities Markets

 3 hours; 3 creditsExistent markets including investment institutions and security exchanges. Technique of investment analysis. (Not open to students who have completed Economics 70.3.)
Prerequisite: Business 70.2 or Economics 70.2 or Economics 70.8.

## Business 70.7 Investment Science

4 hours; 4 credits
Net present value, internal rate of return; yield, duration, immunization, and convexity of fixed-income securities; mean-variance portfolio theory, Markowitz model, CAPM, factor models, arbitrage pricing theory; models of asset dynamics, Ito's lemma, options theory, Black-Scholes equation, interest-rate derivatives. (This course is the same as Economics 70.7 and Mathematics 74.2.)
Prerequisite: Economics 30.2 or Business 30.2 or Mathematics 8.1 or Mathematics 51.1 ; Economics 31.1 with a grade of B - or better; Economics 70.2 or Business 70.2.

## Business 76.4 International Business and Marketing

 3 hours; 3 creditsAn introduction to the international business environment. Topics covered include: issues involved in researching and entering overseas markets, identification and evaluation of opportunities in overseas markets, and problems faced by international business. Emphasis will be placed on understanding the economic, financial, technological, sociopolitical, and cultural environments in designing international business strategies.
Prerequisite: Economics 10.1 or Business 50.2.

## Business 76.5 Asian Business

## 3 hours; 3 credits

Introduction and overview of the business environment in the Asia-Pacific region: China, Japan, Korea, Taiwan, and the ASEAN nations. Researching and entering Asian markets, Asian management theory and practice, the Asian financial crisis, identification and evaluation of risks and opportunities in Asian markets, problems faced by international firms in doing business in Asia. Designing international business in light of historical, economic, technological, political, and socio-cultural environments.
Prerequisite: Economics 10.1 or Business 50.1 or 50.2. Juniors and seniors not majoring in accounting; business, management, and finance; or economics may take this course without any prerequisites.

## Seminars

## Business 80.1 Seminar in Business Management and Policy

 3 hours; 3 creditsAnalysis and discussion of selected cases in business organization, staffing, supervision, motivation, and compensation of employees; strategic planning, budgeting, controllership, and decision-making in the financing, marketing, and production functions of business firms. The students will employ models to develop solutions to common management problems. (Not open to students who have completed Economics 80.1.)
Prerequisite or corequisite: Business 50.1 or Economics 50.1, and senior standing, and at least 34 credits in departmental courses required for the B.S. degree in business, management, and finance.

## Business 80.2 Seminar in Business Finance

 3 hours; 3 creditsResearch, analysis, and discussion of case histories in the financing of business, multinational, and not-for-profit enterprises, including study of debt and equity issues in mergers, consolidations, acquisitions, split-ups and expansions. Financing by venture capital, banks, and other financial institutions including underwriters and governmental agencies. Emphasis on alternatives facing financial managers in decision making under conditions of certainty and uncertainty. (Not open to students who have completed Economics 80.2.)
Prerequisite or corequisite: Business 70.2 and senior standing; and at least 34 credits in departmental courses required for the B.S. degree in business, management, and finance.

## Business 80.3 Seminar in Computer-Assisted Management Games <br> 3 hours; 3 credits

Simulation of a business environment providing practice in various management functions such as objective setting, planning, supervision, organizing, controlling, problem solving, and leadership. Emphasis on presentation and communication skills in presenting results and their justification. Includes games involving competition in the marketplace and use of knowledge-based management software for the business executive. The desired course objectives are enhanced negotiating skills, improved personnel observations, and optimized managerial behaviors. (Not open to students who have completed Economics 80.3.)
Prerequisite or corequisite: Business 30.2; or Mathematics 8.1 or 51.1; and Business 31.4; and Business 50.1 or Economics 50.1; and Computer and Information Science 5.2 or 1.10; and senior standing; and at least 34 credits in departmental courses required for the B.S. degree in business, management, and finance.

## Business 80.4 Seminar in Marketing Research

 3 hours; 3 creditsBasic techniques of marketing research, including research design, use of primary and secondary data, questionnaire construction, sample selection, data collection and analysis, report writing, and applications of research to the solution of marketing problems. A group research project involving data collection and analysis is required. (Not open to students who have completed Economics 80.4.)
Prerequisite or corequisite: Business 30.2 or Economics 30.2, or Mathematics 8.1 or 51.1; and Business 50.2; and senior standing.

## Business 80.5 Seminar in Special Topics in Business

 3 hours; 3 creditsTopics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course more than once for credit but may not repeat topics.
Prerequisite: Senior standing and at least 34 credits in departmental courses required for the B.S. degree in business, management, and finance.

## Honors seminars

Business 85.3, 85.4 Independent Research in Business

## Policy and Managerial Economics

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Research paper. (Students may not receive credit for more than two of the following courses: Business 85.3, 85.4; Economics 85.3, 85.4.)

Prerequisite: one of the following: Business 31.4, 40.3, 50.1, 50.2, 50.4; Economics 31.4, 40.3, 50.1, 50.2, 50.3, 50.4; an overall GPA of at least 2.85; and departmental permission.

## Business Internship

97.5, 97.6 Fieldwork I, II

9 hours fieldwork; 3 credits
Off-campus internship or independent research project supervised by a faculty member. Final report. (Business 97.5 is not open to students who have completed Economics 87.5 or 97.5 . Business 97.6 is not open to students who have completed Economics 87.6 or 97.6.)
Prerequisite: Upper sophomore status and departmental permission.

## Education

Dean: Deborah A. Shanley
Office of the Dean: 2111 James Hall
Telephone: 951-5214, 951-5208
Assistant Dean : Kathleen McSorley
1107 James Hall
Telephone: 951-5214
Office of Student Advisement and Services
Director: John L. Stahlnecker
2105 James Hall
Telephone: 951-5447, 951-5820
Program Offices
Early childhood education
Childhood education
Adolescence education and special subjects
2309 James Hall
Telephone: 951-5205
Professors: Brumberg, Fuys, Gluck, Lemke, Rose, Shanley, Welchman;
Associate Professors: Bloomfield, Bursztyn, Duboys, Giles, Korn, Lynch, Martinez-Pons, Pawelski, Rubal-Lopez, Taubman;
Assistant Professors: Bynoe, Dhingra, Elizalde-Utnick, Forbes, Hwu, Kharem, Louis, Mancuso, McDonald, McSorley, Miele, Novemsky, Rosenfeld, Rubinson, Shaw, Solis, Winslow, Zolkower.
The School of Education offers undergraduate programs for the education of teachers in the following areas and levels:

1. Early childhood education teacher (birth-grade 2 ) with an option for dual certification for teaching students with disabilities in early childhood.
2. Childhood education teacher (grades 1-6).
3. Childhood education teacher (grades 1-6) with an extension for bilingual (Spanish-English) education.
4. Adolescence education (grades 7-12): biology, chemistry, English, mathematics, modern languages (French, Italian, or Spanish), physics, and social studies.
5. Special subjects (all grades): music education, physical education.
Each program includes courses and related field experiences in schools and communities.
Advisement and counseling for all programs are coordinated through the School of Education Office of Student Advisement in 2105 James Hall. Students who have completed courses no longer listed in the Bulletin must have them evaluated by the program head or the School of Education undergraduate deputy before taking additional education courses.
To continue in an education sequence, students must meet New York City health requirements and School of Education competence and grade point average requirements at specified levels.
The School of Education in coordination with Kingsborough Community College offers a joint A.S. degree in Educational Studies/B.A. in Early Childhood Education Teacher. Information about these programs may be obtained from Kingsborough Community College.

## New York State certification

The Early Childhood, Childhood, and Childhood Bilingual programs are registered with the State Education Department as approved programs for initial teacher certification for prekindergarten through grade 6. In addition, the Childhood Bilingual program is approved for the initial Bilingual Extension certificate. The Adolescence Education program is registered as an approved program for initial teacher certification for the grades and areas listed in the previous section.
During their final semester before graduation, students should apply in the Office of Student Advisement and Services, 2105 James Hall, for review of their records and should complete an application for certification.

## Early Childhood Center

The Early Childhood Center provides opportunities for students in the School of Education to observe and study young children in an educational setting. There are opportunities for planned observations and conferences.

## Division of Graduate Studies

The School of Education offers master's degree programs in early childhood education, childhood education, literacy, teacher of students with disabilities, and adolescence education. There is an advanced certificate program in educational administration and supervision; there are also master's degree and advanced certificate programs in guidance and counseling and school psychology. For information, students should consult the program head or the School of Education undergraduate deputy. A Bulletin for the Division of Graduate Studies may be obtained in the Office of Admissions.

## Admission requirement for education programs

In order to declare a major in education, a student must have completed at least 30 credits with a grade point average of 2.50 or better in liberal arts and sciences.

## Admission requirements for student teaching for early childhood, childhood, middle childhood, and adolescence education teacher

In order to register for student teaching a student must have completed all education courses with a grade point average of 2.75 or higher, and a grade point average of 2.50 or higher in liberal arts and sciences courses.

## Preregistration for student teaching on the secondary-school level

Students who plan to take courses in Adolescence Education or Special Subjects, listed as 71.01-71.13 and 72.01-72.13, should preregister in the Office of Adolescence Education and Special Subjects, 2309 James Hall. Obtain application forms and file by October 1 for spring term enrollment and by March 1 for fall term enrollment. Education 71.01-71.13 are offered only in the fall term, and Education 72.01-72.13 are offered only in the spring term.

## B.A. degree program for early childhood education teacher (birth-grade 2)

HEGIS code 0823; SED program code 26737
Dual certification for early childhood education teacher and teaching students with disabilities in early childhood HEGIS code 0823; SED program code 27988
Completion of the B.A. degree with a major in early childhood education qualifies students to receive New York State initial teacher certification (birth through grade 2). Students who meet additional requirements will qualify for dual certification in early childhood education and in teaching students with disabilities in early childhood. Students majoring in the early childhood education teacher program are expected to have satisfied the foreign language requirement in high school and must be exempt from assignment to a speech course. In addition to fulfilling the Core Studies requirements, students must complete a liberal arts and sciences concentration (30 credits). Specific requirements apply for each concentration. Students should consult separate listings for the following departments and programs and should also consult with an adviser in the Office of Student Advisement in the School of Education: American studies; anthropology and archaeology; art; children's studies; classics; environmental studies; English; general science; health and nutrition sciences; history; Judaic studies; mathematics; modern languages and literatures (including Chinese, French, Italian, Russian, Spanish); music; philosophy; political science; psychology; Puerto Rican and Latino studies; sociology; theater; women's studies. (Additional concentrations may be offered.)
Students must also complete the following courses and their corequisites and prerequisites: Psychology 24.5 or Health and Nutrition Sciences 31; Speech 12; Mathematics 1.95, or a mathematics course numbered 3 or higher and a passing score on a Mathematics Department proficiency examination; General Science 9.1 or 9.2 or 9.3 or 9.4; Mathematics 1.97; and General Science 20 (21-22 credits). In addition, students must complete the following pedagogical courses: Education $16,34,36.1,37.11,39,40.1,43.1$; 44.1, 45.1, 75.11, and 75.12 ( 33 credits).

Students wishing to obtain dual certification for early childhood education teacher and teaching students with disabilities in early childhood must complete Education 51.11 and 51.12 and their prerequisites as well as 50 hours of field experience and 150 hours of student teaching in settings for students with disabilities in early childhood education.
Each education course must be completed with a grade of C or higher. Note: Students must present a G.P.A. of at least 3.00 in education courses prior to student teaching (Education 75.11 and 75.12.)
These requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Undergraduate Bulletin.

## B.A. degree program for childhood education teacher (grades 1-6) <br> HEGIS code 0802; SED program code 26829

Completion of the B.A. degree with a major in childhood education qualifies students to receive New York State initial teacher certification (grades 1-6) and prepares students for employment in the schools of New York City. Students majoring in the childhood education teacher program are expected to have satisfied the foreign language requirement in high school and must be exempt from assignment to a speech course.
In addition to fulfilling the Core Studies requirements, students must complete a liberal arts and sciences concentration (30 credits). Specific requirements apply for each concentration. Students should consult separate listings for the following departments and programs and should also consult with an adviser in the Office of Student Advisement in the School of Education: American studies; anthropology and archaeology; art; children's studies; classics; environmental studies; English; general science; health and nutrition sciences; history; Judaic studies; mathematics; modern languages and literatures (including Chinese, French, Italian, Russian, Spanish); music; philosophy; political science; psychology; Puerto Rican and Latino studies; sociology; theater; women's studies. (Additional concentrations may be offered.)
Students must also complete the following courses and their corequisites and prerequisites: One of the following social science courses: Africana Studies 41, Anthropology 37.5, Political Science 23, Psychology 4, Puerto Rican and Latino Studies 32.5, Sociology 26.4; one of the following arts and humanities courses: Art 62.10, Classics 13, English 6, Film 9, Judaic Studies 10, Philosophy 9, Speech 14.5, Television and Radio 10, Theater 60; Mathematics 1.95 , or a mathematics course numbered 3 or higher and a passing score on a Mathematics Department proficiency examination; General Science 9.1 or 9.2 or 9.3 or 9.4 ; Mathematics 1.97; and General Science 20 (17 credits). In addition, students must complete the following pedagogical courses: Education 16, $34,36,37,38,40,43,44,45,77$, and 78 ( 33 credits).
Each education course must be completed with a grade of $C$ or higher. Note: Students must present a G.P.A. of at least 3.00 in education courses prior to student teaching (Education 75, 76, 77, and 78.)
These requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Undergraduate Bulletin.

## B.A. degree program for childhood education teacher, bilingual (Spanish/English) education extension (grades 1-6) <br> HEGIS code 0802; SED program code 26828

Completion of the B.A. degree with a major in childhood education with an extension for bilingual education qualifies students to receive New York State initial teacher certification for childhood education (grades 1-6) with an extension of that certification to include teaching bilingual education. This program is offered to selected students interested in teaching children in Spanish/English bilingual programs to qualify for teacher certification in Spanish/English bilingual education. Students must demonstrate proficiency in English and Spanish. For courses in Spanish, students should seek counseling in the School of Education and in the Department of Puerto Rican and Latino Studies. Students majoring in childhood education with an extension for bilingual education are expected to have satisfied the foreign language requirement in high school and must be exempt from assignment to a speech course.

In addition to fulfilling the Core Studies requirements, students must complete a Puerto Rican and Latino Studies concentration by taking the following courses: Puerto Rican and Latino Studies 41, 42, 43, 44, 45 as well as one course from each of the four following groups: Puerto Rican and Latino Studies 14, 16, 18; Puerto Rican and Latino Studies 23, 24, 40; Puerto Rican and Latino Studies 32, 78; and Puerto Rican and Latino Studies 35, 38, 77 (31 credits). Students must also complete the following courses and their corequisites and prerequisites: One of the following social science courses: Africana Studies 41, Anthropology 37.5, Political Science 23, Psychology 4, Puerto Rican and Latino Studies 32.5, Sociology 26.4; one of the following arts and humanities courses: Art 62.10, Classics 13, English 6, Film 9, Judaic Studies 10, Philosophy 9, Speech 14.5, Television and Radio 10, Theater 60; Mathematics 1.95 , or a mathematics course numbered 3 or higher and a passing score on a Mathematics Department proficiency examination; General Science 9.1 or 9.2 or 9.3 or 9.4 ; Mathematics 1.97; and General Science 20 ( 17 credits). In addition, students must complete the following pedagogical courses: Education 16, $34,36,37,38,40.2,43,44,45,77.2$, and 78.2 ( 33 credits). Students must present a G.P.A. of at least 2.50 in liberal arts and science courses. Each required education course must be completed with a grade of C or higher. Note: Students must present a G.P.A. of at least 3.00 in education courses prior to student teaching.
These requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Undergraduate Bulletin.

## Bachelor's degree programs for adolescence education (grades 7-12): biology, chemistry, English, mathematics, modern languages (French, Italian, Spanish), physics, social studies (Africana studies, American studies, anthropology, economics, history, political science, Puerto Rican and Latino studies, sociology), and special subjects (all grades): music, physical education

 (see appropriate department for HEGIS code)These programs reflect changes in teacher certification requirements recently implemented by the New York State Education Department. Students completing majors in secondary education or in special subjects under the former requirements should refer to the 2000-2003 Undergraduate Bulletin. Degree programs in adolescence education and in special subjects include a major in an appropriate department of the college and in the case of social studies may also include an approved selection of interdepartmental courses. Completion of an adolescence education program as part of a major in English, one of the appropriate social sciences, mathematics, one of the sciences, or a language other than English qualifies students for New York State initial certification in adolescence education for grades 7 through 12. Completion of a special subjects program as part of a major in music education or physical education qualifies students for New York State initial certification in special subjects for all grades. Students qualifying for the initial certification in adolescence education may obtain an extension to teach English, social studies, mathematics, or one of the sciences in grades 5 and 6 by taking Education 63.3. In addition to this section, students should consult the listing for their major department.
Students, except music education majors, must complete 21 credits in the School of Education as specified below. Music education majors must complete 12 credits in the School of Education as specified below. Music education majors should see below and consult the listing in the "Music" section in this Bulletin.

School of Education courses (21 credits)
This four-term sequence may be started in the lowersophomore term, or upper-sophomore term.
Education 16, 34, 64.1, 69 (12 credits).
The appropriate 5 -credit course in student teaching:
Education 71.01 Seminar on Methods of Teaching English, Student Teaching I
Education 71.02 Seminar on Methods of Teaching Social Studies, Student Teaching I
Education 71.03 Seminar on Methods of Teaching Mathematics, Student Teaching I
Education 71.04 Seminar on Methods of Teaching Science, Student Teaching I
Education 71.11 Seminar on Methods of Teaching Modern Languages, Student Teaching I
Education 71.13 Seminar on Methods of Teaching Physical Education, Student Teaching I
The appropriate 4 -credit course in student teaching
Education 72.01 Advanced Seminar on Methods of Teaching English, Student Teaching II
Education 72.02 Advanced Seminar on Methods of Teaching Social Studies, Student Teaching II
Education 72.03 Advanced Seminar on Methods of Teaching Mathematics, Student Teaching II
Education 72.04 Advanced Seminar on Methods of Teaching Science, Student Teaching II
Education 72.11 Advanced Seminar on Methods of Teaching Modern Languages, Student Teaching II
Education 72.13 Advanced Seminar on Methods of Teaching Physical Education, Student Teaching II
In addition to the required Bachelor of Music in Music Education curriculum, music education majors must complete the following courses, including student teaching (12 credits):
Education 16 and 34 ( 6 credits).
Education 65 (6 credits).

## A major in a department of the college

Students must complete an appropriate major in another department of the college. Consult the appropriate departmental section in this Bulletin for the major requirements. In the case of social studies, students must complete a major in one of the following: Africana studies, American studies, anthropology, economics, history, political science, Puerto Rican and Latino studies, or sociology. Study must include within the major, or in addition to courses in the major, study in economics, government, and at least 21 credits in the history and geography of the United States and the world. In the case of music, the major must be in the Bachelor of Music in Music Education in order to meet the state requirements.

## Admission requirements and academic standing

Students must have a GPA of 2.50 or higher based on a minimum of 30 credits in liberal arts and sciences to take Education 16 and 34; to take Education 64.1 and 69, students must have a GPA of 2.50 or higher in liberal arts and sciences courses and a GPA of 2.75 or higher in Education 16 and 34 ; to take Education 65, 71.01, 71.02, 71.03, 71.04, 71.11, or 71.13, students must have a GPA of 2.75 or higher in liberal arts and sciences courses, a GPA of 2.75 or higher in education courses, and a GPA of 2.75 or higher in their major, and permission of the chairperson of the major department and the head of adolescence education and special subjects; to take Education 72.01, 72.02, 72.03, $72.04,72.11$, or 72.13 , students must have a GPA of 3.00 or higher in Education 71.01-71.13, a GPA of 2.75 or higher in their major, and the permission of the chairperson of the
major department and the head of adolescence education and special subjects.

## Courses

The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Early childhood education, childhood education, childhood bilingual education, adolescence education and special subjects

16 The Art, Philosophy, and Culture of Teaching 3 hours recitation, 25 hours field experience; 3 credits Study of teaching, linking theory and practice and connecting the philosophical, historical, and cultural foundations of education with curriculum and the art of teaching. Relation of significant educational movements, philosophies, and teaching practices to all students' educational experiences, including students with special needs and English language learners, from birth through adolescence. Opportunities through class discussion, portfolio preparation, and field experiences for reflection on interactions between school and community, teachers' roles, and issues of diversity and social justice. (Not open to students who are enrolled in or have completed Education 14 and open only to students who have completed at least 30 credits in liberal arts and sciences with a grade point average of 2.50 or higher.)
Prerequisite: English 1.

## 34 Urban Children and Adolescents: Development and Education

3 hours recitation, 25 hours field experience; 3 credits Relationships between basic developmental processes of children and adolescents and their educational experiences in schools and communities. Role of culture, ethnicity, race, gender, and social class upon biological and psychological processes. Emphasis on children in urban, multicultural schools, including students with special needs and those who are English language learners, from birth through adolescence. Field trips to a variety of educational sites; observations and interviews of children; continuation of portfolio development; reflection upon field experiences of 25 hours.
Prerequisite or corequisite: Education 16.

## 36 Education and Society: Teaching the Social Sciences

2 hours recitation, 2 hours supervised field experience; 3 credits
The teaching of social science contributions to the teaching of social studies. The influence of culture, class, ethnicity, gender and race, as well as factors in the home, school, and community, on students' readiness to learn, and on the creation of a sense of active citizenship, sense of community, and respect for one another. Approaches to the social studies curriculum that address multiple research-validated instructional strategies, the uses of technology, and assessment methods for all students, including English language learners and students with special needs. Continuation of portfolio development. Fieldwork in classrooms. (Not open to students who are enrolled in or have completed Education 48.5 or 58.5.)
Prerequisite: Education 16 and 34.
Corequisite: Education 43 and one of the following: Africana Studies 41, Anthropology 37.5, Political Science 23, Psychology 4, Puerto Rican and Latino Studies 32.5, Sociology 26.4. A student who receives a failing grade in Education 36 and a grade of $C$ or higher in the corequisite social science course may with departmental permission, repeat Education 36 without a corequisite requirement.

### 36.1 Social Studies in Early Childhood Education:

 General and Special Education2 hours recitation, 2 hours supervised field experience; 3 credits
Social studies curriculum for young children with diverse learning needs and of differing cultural and linguistic backgrounds in varied school, family, and community settings. Study of social science texts and materials, curriculum, and pedagogic methods, including culturally developmentally appropriate practices and play-based curriculum for young children. Field experience in schools and community settings. Development of teaching portfolio. This course is linked with a corequisite course through the use of thematic material and faculty collaboration.
Prerequisite: Education 16 and 34.
Corequisite: Psychology 24.5 or Health and Nutrition Sciences 31. A student who receives a failing grade in Education 36.1 and a grade of C or higher in the corequisite course may, with departmental permission, repeat Education 36.1 without a corequisite requirement.

## 37 Education and Literacy: An Interdisciplinary Approach to the Language Arts

3 hours recitation, 2 hours supervised field experience; 3 credits
Framework for integrating the humanities with related teaching arts. Identification of the learning processes, motivation, communication, and classroom organization skills necessary for language acquisition and literacy development. Study of multiple literacies and narrative structures. Curriculum development and planning, individualized instruction and assessment strategies for teaching the language arts to all children, including English language learners and students with special needs. Psycholinguistic and sociolinguistic factors in literacy. Emphasis on multiethnic children's literature and arts experiences. Continuation of portfolio development.
Prerequisite: Education 16 and 34.
Corequisite: Education 40 and one of the following: Art 62.10, Classics 13, English 6, Judaic Studies 10, Philosophy 9, Speech 14.5, Theater 60. A student who receives a failing grade in Education 37 and a grade of C or higher in the corequisite humanities course may, with departmental permission, repeat Education 37 without a corequisite requirement.

### 37.11 Development of Language and Literacy in Young Children: General and Special Education

2 hours recitation, 2 hours supervised field experience; 3 credits
Language acquisition in the early years; typical and atypical development. Planning and implementing curriculum for emergent literacy. Psycholinguistic and sociolinguistic factors in literacy; narrative structures in children's oral language and in children's literature. Consideration of the needs of English language learners. Role of families and cultural communities in language and literacy development, with a particular focus on the urban experience. Study of children's literature, texts, and materials, including on-line resources. Communication and early literacy in an integrated early childhood curriculum that includes the arts and the humanities. Development of teaching portfolio. This course is linked with a corequisite course through the use of thematic material and faculty collaboration.
Prerequisite: Education 16 and 34.
Prerequisite or corequisite: Education 36.1.
Corequisite: Speech 12. A student who receives a failing grade in Education 37.11 and a grade of C or higher in the corequisite course may, with departmental permission, repeat Education 37.11 without a corequisite requirement.

## 38 Education and Science/Mathematics/Technology

 2 hours; 2 creditsIntegrates study of the sciences, mathematics, technology, and education. Analysis of the processes of scientific investigation that students experience in General Science $9.1,9.2,9.3$, or 9.4 , and development of the ability to make effective use of these experiences in teaching. Models of instruction, such as cooperative learning and inquiry-based learning. Continuation of portfolio development. Examination of mathematics, science, and technology in the current and historical social context. Influence of attitudes towards science on learning. Use of the Internet and computer software in education. National, state, and local mathematics, science, and technology teaching and curriculum standards.
Prerequisite: Education 34; Core Studies 5, or Core Studies 5.1 and 5.2 ; Core Studies $7.1,7.2,8.1$, and 8.2, or their equivalents.
Corequisite: General Science 9.1, 9.2, 9.3, or 9.4. A student who receives a failing grade in Education 38 and a grade of C or higher in General Science 9.1, 9.2, 9.3, or 9.4 may, with departmental permission, repeat Education 38 without a corequisite requirement.

## 38W Education and Science/Mathematics/Technology

 3 hours; 2 creditsIntegrates study of the sciences, mathematics, technology, and education. Analysis of the processes of scientific investigation that students experience in General Science 9.1, $9.2,9.3$ or 9.4 and development of the ability to make effective use of these experiences in teaching. Models of instruction, such as cooperative learning and inquiry-based learning. Continuation of portfolio development. Examination of mathematics, science, and technology in the current and historic social context. Influence of attitudes towards science on learning. Use of the Internet and computer software in education. National, state, and local mathematics, science, and technology teaching and curriculum standards. Writingintensive section.
Prerequisite: Education 34; Core Studies 5, or Core Studies 5.1 and 5.2; Core Studies $7.1,7.2,8.1$, and 8.2, or their equivalent; English 2.
Corequisite: General Science 9.1, 9.2, 9.3 or 9.4. A student who receives a failing grade in Education 38 and a grade of $C$ or higher in General Science 9.1, 9.2, 9.3 or 9.4 may, with departmental permission, repeat Education 38 without repeating General Science 9.1, 9.2, 9.3 or 9.4.

## 39 Early Education and Care of Infants and Toddlers: General and Special Education

2 hours recitation; 2 credits
This course addresses developmental needs and appropriate practices in the education and care of infants and toddlers. Prospective teachers will study current research in typical and atypical early development and learn to create nurturing and learning environments for all children. Introduction to models of infant and toddler programs, including early intervention, with a focus on culturally diverse, urban settings. Establishing partnerships with families and caregivers; developing community resources. Consultation and collaboration with other professionals in education and related services. Development of teaching portfolio. Field assignments.
Prerequisite: Education 16 and 34.
Prerequisite or corequisite: Education 36.1 and 37.11.

## 40 Integrated Methodologies for Literacy Instruction.

2 hours recitation, 2 hours supervised field experience; 3 credits
An integrated approach to teaching literacy to all children, including English language learners and students with special needs. Appropriate multiple research-validated instructional strategies; formal and informal assessment methods for evaluating student learning and improving instruction. Continuation of portfolio development. Supervised field experiences.
Prerequisite: Education 16 and 34. Corequisite: Education 37.

### 40.1 Literacy Teaching and Learning in Early Childhood: General and Special Education

2 hours recitation, 2 hours supervised field experience; 3 credits.
Nature and basis of literacy teaching and learning for young children; curriculum development strategies; print and on-line resources for emergent and early literacy. Approaches to integrating early literacy throughout the curriculum for all children, including English language learners and children with special needs. The role of families and communities in literacy teaching and learning.
Prerequisite: Education 16, 34, 36.1, 37.11, and 39.
Prerequisite or corequisite: Education 43.1.

### 40.2 Integrated Methodologies for Bilingual

## Literacy Instruction

2 hours recitation, 2 hours supervised field experience; 3 credits
An integrated approach to teaching literacy to all children, including students with special needs, with a primary focus on literacy development and language acquisition in bilingual (Spanish/English) programs. Appropriate multiple researchvalidated instructional strategies; formal and informal assessment methods for evaluating student learning and improving instruction. Supervised field experiences.
Prerequisite: Education 16 and 34.
Corequisite: Education 37.

## 43 Teaching the Creative Arts

2 hours recitation, 2 hours supervised field experience; 3 credits
Analysis and application of theories and educational research in learning to the teaching of the visual arts, music, dance, and drama. Strategies for developing creative skills, aesthetic sensitivity, and an understanding of the role of materials and performance in artistic expression and classroom practice.
Role and value of the arts in individual and social development in a society of varied cultures, communities, and families. Approaches and techniques that foster and deepen all children's creativity and thinking skills. Continuation of portfolio development. Work with a variety of artistic forms and media; guided field trips and supervised field experience.
Prerequisite: Education 16 and 34.
Corequisite: Education 36.

### 43.1 Arts in Early Childhood Curriculum: General and Special Education

2 hours recitation, 2 hours supervised field experience; 3 credits
Analysis and application of theory and research to the teaching of the visual arts, music and movement, dance, and drama for all young children, birth through grade two, including culturally and linguistically diverse children, as well as children with special needs. Role of materials and performance as they apply to artistic learning in young children. Approaches to integrating the arts in early childhood curriculum; place of the arts in diverse cultures and communities, with a focus on the urban experience. Development of teaching portfolio. Work with a variety of artistic forms and media, field trips, and supervised field experience.
Prerequisite: Education 16, 34, 36.1, 37.11, and 39. Corequisite: Education 40.1.

## 44 Teaching Mathematics: Childhood Education

2 hours laboratory, 2 hours supervised field experience; 2 credits
Study of how children learn mathematics. Curriculum development; research-based instruction; multiple forms of assessment. Approaches to teaching mathematics to all students, including English language learners and students with special needs. Technology as a tool for student learning and a resource for teaching. Application of course content in field placement and development of reflective practice. Continuation of portfolio development. Taught in coordination with Mathematics 1.97.
Prerequisite: Education 38, General Science 9.1, or 9.2, or 9.3, or 9.4, and Mathematics 1.95.

Corequisite: Mathematics 1.97.

### 44.1 Teaching Mathematics in the Early Years: General and Special Education

2 hours mathematics laboratory, 2 hours supervised field experience; 2 credits
Approaches to the teaching of mathematics with an emphasis on the curricular and instructional topics emphasized in early childhood. These include the development of mathematical thinking processes in young children; curricular guidelines from New York State, National Association for the Education of Young Children, and National Council of Teachers of Mathematics; integration of mathematical experiences into all curricular areas; needs of special populations, including English language learners; familial involvement; appropriate use of technology; and multiple perspectives on assessment. Development of early childhood teaching portfolio. Taught in coordination with Mathematics 1.97.
Prerequisite: Education 16, 34, 36.1, 37.11, 39, 40.1, 43.1, and Mathematics 1.95.
Corequisite: Education 45.1; Mathematics 1.97.

## 45 Teaching Science: Childhood Education

1 hour recitation, 2 hours supervised field experience; 2 credits
Methods of teaching basic science concepts and processes to children. Focus on promoting scientific curiosity and developing literacy through inquiry and active learning needed for science explorations. Methods of teaching science to all students, including English language learners and children with special needs. Application of course content in field sites with emphasis on developing reflective practice. Continuation of portfolio development. Taught in coordination with General Science 20.
Prerequisite: Education 38 and General Science 9.1, or 9.2, or 9.3, or 9.4.
Corequisite: General Science 20.

### 45.1 Science Inquiry for Young Children: General and Special Education

1 hour recitation, 2 hours supervised field experience; 2 credits
Creation of environments that promote scientific curiosity and playful exploration in all children, including children with special needs and English language learners. Integration of science within the early childhood curriculum; the role of movement, music, and the performing arts in representing, refining, reviewing, and communicating science learning. Exploration of technologies and community resources, with a particular focus on urban environments. Review of professional, state, and local curriculum standards. Family involvement in science education. Development of teaching portfolio. Taught in coordination with General Science 20.
Prerequisite: Education 16, 34, 36.1, 37.11, 39, 40.1, and 43.1. Corequisite: Education 44.1; General Science 20.

### 51.11 Foundations and Pedagogy in Early Childhood Special Education <br> 3 hours recitation; 3 credits

Introduction to the historical, social, cultural, and legal foundations of special education. Roles of families, educators, related service professionals, and advocates in shaping policy, curriculum, and expectations for students with disabilities. Epistemological issues in the study of disability. Focus on young children of diverse cultural and linguistic backgrounds in urban settings.
Prerequisite: Education 16, 34, 37.11, and 40.1.

### 51.12 Environments and Curriculum Adaptation for Young Learners with Special Needs 3 hours recitation; 3 credits

Introduction to planning, implementing, and evaluating instruction for young children with special needs. Curricular planning and modification to implement inclusive programs, including work in subject areas and positive behavior supports. Consultation with related service professionals; assessment and interventions with children and families; interagency collaborations. Focus on young children from diverse cultural and linguistic backgrounds in urban settings. Prerequisite: Education 16, 34, and 51.11.

### 75.11 Seminar and Comprehensive Student Teaching I: General and Special Education

2 hours seminar, supervised teaching
(at least 225 hours/semester); 4 credits
Role of materials and resources in the early childhood years; classroom organization and curriculum modification for children of different age levels and with diverse learning needs in culturally and linguistically diverse, urban settings. Families and communities in early childhood education; special topics in early childhood education. Development of teaching portfolio. Students will complete at least 225 hours of student teaching in one of the following age levels: preschool, kindergarten, grades 1 and 2 . They will complete student teaching requirements in Education 75.12 in a second age level in order to qualify for the initial certificate in early childhood education. Open only to students who have completed all required education courses with a grade point average of 3.00 or higher, and a grade point average of 2.75 or higher in liberal arts and sciences courses.
Prerequisite: Education 16, 34, 36.1, 37.11, 39, 40.1, 43.1, 44.1, and 45.1.

Corequisite: For dual certification in early childhood education and early childhood special education: Education 51.11.

### 75.12 Seminar and Comprehensive Student Teaching II: General and Special Education

3 hours seminar, supervised teaching
(at least 225 hours/semester); 5 credits
Methodology and curriculum development in early childhood settings, birth-grade 2. Integrated curriculum in early childhood settings, with a focus on culturally and linguistically diverse, urban settings. Teachers as researchers; development of a reflective approach to teaching and assessing a diverse child population, including children with special needs and English language learners. Families and communities in early childhood education. Development of teaching portfolio. Students who have completed at least 225 hours of student teaching in Education 75.11 in preschool, kindergarten, or grades 1 and 2, must complete the student teaching requirements for this course in a second age level. Open only to students who have completed all required education courses with a grade point average of 3.00 or higher, and a grade point average of 2.75 or higher in liberal arts and sciences courses.
Prerequisite: Education 16, 34, 36.1, 37.11, 39, 40.1, 43.1, 44.1, 45.1, and 75.11

Prerequisite or corequisite: For dual certification in early childhood education and early childhood special education: Education 51.11 and 51.12.

## 77 Seminar and Comprehensive Student Teaching I: Childhood Education

2 hours recitation, weekly supervised teaching
(at least 150 hours); 4 credits
Student teaching. Application of the principles of teaching to all aspects of the curriculum, including literacy instruction in childhood classrooms (grades 1-6); long- and short-term planning; development of an interdisciplinary approach to teaching. Focus on self-reflective teaching and assessment procedures to address the learning needs of a diverse student population, including English language learners and students with special needs. Preparation in development of school-community relationships and collaborative learning; integration of instructional technology; culmination of portfolio development. Readings and discussions on significant issues, related to classroom teaching and professional development, including preventing child abduction, substance abuse, safety education, and child abuse awareness. Focus on skills in
fostering effective relationships and interactions to support all students. (Not open to students who are enrolled in or have completed any of the following: Education 75.1, 75.2, 75.3 . Open only to students who have completed all required education courses with a grade point average of 3.00 or higher, and a grade point average of 2.75 or higher in liberal arts and sciences courses. This course is in the process of being revised. Please consult the School of Education Office of Student Advisement.)
Prerequisite: Education 43, 44, and 45.

### 77.2 Seminar and Comprehensive Student Teaching I: Bilingual Education

2 hours recitation, supervised teaching (175 hours); 4 credits Student teaching. Application of the principles of teaching to all aspects of the curriculum in bilingual and non-bilingual classrooms, including literacy instruction in childhood classrooms, (grades 1-6); long- and short term planning; methods of teaching native language arts to bilingual (Spanish/English) language learners; methods of teaching content areas using the native language and English; development of an interdisciplinary approach to teaching. Focus on self-reflective teaching and assessment procedures to address the learning needs of a diverse student population, including English language learners and students with special needs. Preparation in development of school-community relationships and collaborative learning; integration of instructional technology; and culmination of portfolio development. Readings and discussions of significant issues related to classroom teaching and professional development, including preventing child abduction, substance abuse, safety education, and child abuse awareness. Focus on skills in fostering effective relationships and interactions to support all students. (Not open to students who are enrolled in or have completed any of the following: Education 75, 75.1, 75.3. Open only to students who have completed all required education courses with a grade point average of 3.00 or higher, and a grade point average of 2.75 or higher in liberal arts and science courses.)
Prerequisite: Education 44 and 45.

## 78 Seminar and Comprehensive Student Teaching II: Childhood Education

3 hours recitation, weekly supervised teaching
(at least 150 hours); 5 credits
Student teaching. Application of the principles of teaching to all aspects of the curriculum, including literacy instruction in childhood classrooms (grades 1-6); long- and short-term planning. Focus on self-reflective teaching and assessment procedures to address the learning needs of a diverse student population, including English language learners and students with special needs. Preparation in development of school-community relationships and collaborative learning; integration of instructional technology; culmination of portfolio development. Readings and discussions on significant issues related to classroom teaching and professional development, including preventing child abduction, substance abuse, safety education, and child abuse awareness. Focus on urban schools and the process of school change. (Not open to students who are enrolled in or have completed any of the following: Education 76.1, 76.2. Open only to students who have completed all required education courses with a grade point average of 3.00 or higher, and a grade point average of 2.75 or higher in liberal arts and sciences courses. This course is in the process of being revised. Please consult the School of Education Office of Student Advisement.)
Prerequisite: Education 44, 45, and 75.

### 78.2 Seminar and Comprehensive Student Teaching II:

 Bilingual Education3 hours recitation, weekly supervised teaching (175 hours); 5 credits
Student teaching. Application of the principles of teaching to all aspects of the curriculum in bilingual and non-bilingual classrooms, including literacy instruction in childhood classrooms, grades 1-6; long- and short-term planning; methods of teaching native language arts to bilingual (Spanish/English) language learners; methods of teaching content areas using Spanish and English. Focus on selfreflective teaching and assessment procedures to address the learning needs of a diverse student population, including English language learners and students with special needs. Preparation in development of school-community relationships and collaborative learning; integration of instructional technology; and culmination of portfolio development. Readings and discussions on significant issues related to classroom teaching and professional development, including preventing child abduction, substance abuse, safety education, and child abuse awareness. Focus on urban schools and the process of school change. (Not open to students who are enrolled in or have completed any of the following: Education 76, 76.1. Open only to students who have completed all required education courses with a grade point average of 3.00 or higher, in and a grade point average of 2.75 or higher in liberal arts and science courses.)
Prerequisite: Education 44, 45, and 75.2.

## Adolescence education and special subjects 62.01 Curriculum and Teaching in the Middle School: English and the Humanities

2 hours; 2 credits
Teaching methods and curriculum for middle schools. Focus on various literacies, specifically on the teaching of literature, languages, and speech. Topics include teaching strategies, assessment, lesson plans, creating inclusive and aesthetically rich classrooms, curriculum development, and teacherstudent relationships.
Prerequisite: Education 16 and 34.

### 62.02 Curriculum and Teaching in the Middle School: Social Science and Humanities

 2 hours; 2 creditsMethods and materials for teaching social studies and humanities. National standards and implications for secondary education. National and regional curriculum models and approaches to teaching in light of differing standards and curricula. Interdisciplinary and multicultural perspectives; teaching literacy across the curriculum. Framework for specific methodological issues in preparation for student teaching.
Prerequisite: Education 16 and 34.

### 62.03 Curriculum and Teaching in the Middle School: Mathematics and Science

2 hours; 2 credits
Contemporary issues of curriculum standards and teaching methods with emphasis on grades $6-9$. Specific strategies for classroom organization, lesson development, teaching, and assessment. Literacy as related to teaching mathematics and science. Using calculators and computers in teaching.
Prerequisite: Education 16 and 34.

### 62.13 Physical Education and the School Curriculum

 2 hours; 2 creditsRelationship of physical education to the school curriculum, including its role in teaching literacy and quantitative skills. Prerequisite: Education 16 and 34.

### 63.3 Methods and Teaching Practice in Middle Schools

 4 hour recitation, 100 hours supervised field experience; 6 creditsCurricula and methodologies for teaching various subjects in middle schools. Emphasis on the needs of middle school students, on writing across the curriculum, and on the interdisciplinary aspects of the curriculum. Development of literacy and approaches to the English language learner and special needs learner. Supervised practical teaching and other field experiences in the middle ( 5 and 6 ) grades.
Prerequisite: Education 16 and 34 and permission of the head of Adolescence Education and Special Subjects. Prerequisite or corequisite: Education 64.1 or 69 .

### 64.1 Language and Literacy Development in Adolescence Education and Special Subjects

3 hours recitation, 25 hours supervised field experience; 3 credits
Current theory and methods of teaching the use of written and spoken language in all subject areas of the curriculum from grades 7 to 12. Includes issues of language development and diversity, differences between written and spoken language, teaching students of diverse linguistic and cultural backgrounds and those with special needs, and the relationship between identity formation and writing, reading, and speaking. (Not open to students who have completed Education 64).
Prerequisite: Education 16 and Education 34.

### 64.15 Theories and Practice of Composition

 3 hours; 3 creditsWorkshop in understanding the nature of writing and how to teach it. Writing as a process: invention, revision, editing; effective structures; writing about literature; experimenting with genres; writing as a way of learning. Social and linguistic influences on writing. Responding to other people's work. Frequent in-class writing; several short papers taken through drafts; compilation of a portfolio. This course is the same as English 50.14.
Prerequisite: English 1.

## 65 Seminar on Teaching Methods of Music Education, Student Teaching I and II

1 hour recitation, weekly supervised teaching (total 40 days, 300 hours); 6 credits
Supervised teaching in music in schools at two grade levels (pre K-6; and 7-12). Weekly seminar. Synthesis and application of knowledge and skill in human processes and variations, learning styles and processes, motivation, communication, classroom management, special needs, language acquisition and literacy development, curriculum development, instructional planning and strategies, technology and assessment, and the rights and responsibilities of all involved in the educational process, especially as applied to urban students. Workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention, and safety education. Students spend the equivalent of forty days in schools during which time they engage in daily supervised student teaching.
Prerequisite: permission of the director of the Conservatory of Music and the head of the Program in Adolescence Education and Special Subjects.
66.21-66.37 Curriculum Methods of Teaching Students with Special Needs
2 hours recitation, 2 hours laboratory; 3 credits
Objectives, variations in methodology and curriculum construction, evaluation, and role of materials and resources applied to teaching special-needs preadolescents and adolescents in secondary schools. Making subject matter understandable to students with a wide range of disabilities. Mastering, improvising, and adapting techniques for special-needs students. Motivation and evaluation for special-needs students.
66.21 English.
66.22 Social studies.
66.23 Mathematics.
66.24 Science.
66.31 Modern languages.
66.32 Music.
66.33 Physical education.

Prerequisite or corequisite: Education 60.1 and 60.2.

### 67.01-67.17 Methods of Teaching in the <br> Secondary Schools

3 hours; 3 credits
Planning for instruction, teaching techniques, curriculum evaluation and assessment, and special issues in one of the subjects specified below.
67.01 English.
67.02 Social studies.
67.03 Mathematics.
67.04 Science.
67.11 Modern languages.
67.12 Music (K-12).
67.13 Physical education (K-12).

Prerequisite: Education 60.1 or its equivalent and a baccalaureate degree. Open only to students who are currently teaching or who have obtained written permission of the secondary education division coordinator.

## 69 Integrative and Multidisciplinary Teaching and Learning

3 hours recitation, 25 hours supervised field experience; 3 credits
Principles for integrating multidisciplinary, multicultural, and aesthetic perspectives into the curriculum. Relating skills, knowledge, and instructional technology through connecting themes, issues, and activities. Innovative and alternative research-based models and practices for inclusive settings, special education, reading, and writing across the curriculum. Prerequisite: Education 16, 34
Prerequisite or Corequisite: Education 64.1

### 71.01 Seminar on Methods of Teaching English,

 Student Teaching I.71.02 Seminar on Methods of Teaching Social Studies, Student Teaching I.
71.03 Seminar on Methods of Teaching Mathematics, Student Teaching I.
71.04 Seminar on Methods of Teaching Science, Student Teaching I.
71.11 Seminar on Methods of Teaching Modern Languages, Student Teaching I.
71.13 Seminar on Methods of Teaching Physical Education, Student Teaching I.
3 hours recitation, weekly supervised teaching, (total 20 days, 150 hours); 5 credits
Objectives, variations in methodology and curriculum construction, evaluation, and role of materials and resources aligned with New York State learning standards and applied to teaching specific subject areas at grade levels appropriate for state certification requirements; selection of supervised instructional experiences structured to evolve professional awareness; development of self-reflective teaching styles and assessment procedures to address the learning needs of a diverse student population, students with special needs, and English language learners; continued application of knowledge of language acquisition and literacy development by native English speakers and English language learners, and of strategies for integrating technology into the classroom. Students spend a minimum of two hours each day in the school. Daily supervised student teaching in grades appropriate for state certification requirements. Observing, developing, and studying curriculum in light of teaching experiences and observations.
Prerequisite: Education 64.1 unless otherwise specified by the major department and approval of the chairperson of the major department and the head of Adolescence Education and Special Subjects.
Prerequisite or corequisite: Education 69 unless otherwise specified by the major department and the head of Adolescence Education and Special Subjects.

### 72.01 Advanced Seminar on Methods of Teaching

 English, Student Teaching II2 hours recitation, weekly supervised teaching (total 20 days, 150 hours); 4 credits
Advanced theories and methods of teaching English at grade levels appropriate for state certification requirements; focus on developing reflective practitioners and researchers; developing individualized instruction for all students; using technology for cooperative learning in the classroom and school; developing and evaluating newly adopted English curriculum and classroom and school cultures responsive to the needs of diverse students and students with special needs, particularly in urban settings; developing advanced methods of teaching English language learners and applying knowledge of language acquisition. Students enroll in workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention, and safety education. Students spend the equivalent of twenty days in the schools, during which time they engage in daily supervised student teaching.
Prerequisite: permission of the chairperson of the English Department and the head of the Program in Adolescence Education and Special Subjects.
Prerequisite or corequisite: Education 71.01.

### 72.02 Advanced Seminar on Methods of Teaching

 Social Studies, Student Teaching II2 hours recitation, weekly supervised teaching (total 20 days, 150 hours); 4 credits
Advanced theories and methods of teaching specific subject areas within social studies at grade levels appropriate for state certification requirements; focus on developing reflective practitioners and researchers; developing individualized instruction for all students; using technology for cooperative learning in the classroom and school; developing and evaluating newly adopted social studies curriculum and classroom and school cultures responsive to the needs of diverse students and students with special needs, particularly in urban settings; developing advanced methods of teaching English language learners and applying knowledge of language acquisition. Students enroll in workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention, and safety education. Students spend the equivalent of twenty days in the schools, during which time they engage in daily supervised student teaching.
Prerequisite: permission of the chairperson of the major department and the head of the Program in Adolescence Education and Special Subjects.
Prerequisite or corequisite: Education 71.02.

### 72.03 Advanced Seminar on Methods of Teaching Mathematics, Student Teaching II

2 hours recitation, weekly supervised teaching (total 20 days, 150 hours); 4 credits
Advanced theories and methods of teaching mathematics at grade levels appropriate for state certification requirements; focus on developing reflective practitioners and researchers; developing individualized instruction for all students; using technology for cooperative learning in the classroom and school; developing and evaluating newly adopted mathematics curriculum and classroom and school cultures responsive to the needs of diverse students and students with special needs, particularly in urban settings; developing advanced methods of teaching English language learners and applying knowledge of language acquisition. Students enroll in workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention, and safety education. Students spend the equivalent of twenty days in the schools, during which time they engage in daily supervised student teaching.
Prerequisite: permission of the chairperson of the Mathematics Department and the head of the Program in Adolescence Education and Special Subjects.
Prerequisite or corequisite: Education 71.03.

### 72.04 Advanced Seminar on Methods of Teaching Science, Student Teaching II

2 hours recitation, weekly supervised teaching (total 20 days, 150 hours); 4 credits
Advanced theories and methods of teaching science at grade levels appropriate for state certification requirements; focus on developing reflective practitioners and researchers; developing individualized instruction for all students; using technology for cooperative learning in the classroom and school; developing and evaluating newly adopted science curriculum and classroom and school cultures responsive to the needs of diverse students and students with special needs, particularly in urban settings; developing advanced methods of teaching English language learners and applying knowledge of language acquisition. Students enroll in workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention,
and safety education. Students spend the equivalent of twenty days in the schools, during which time they engage in daily supervised student teaching.
Prerequisite: permission of the chairperson of the major department and the head of the Program in Adolescence Education and Special Subjects.
Prerequisite or corequisite: Education 71.04.

### 72.11 Advanced Seminar on Methods of Teaching a Modern Language, Student Teaching II

2 hours recitation, weekly supervised teaching (total 20 days, 150 hours); 4 credits
Advanced theories and methods of teaching a modern language at grade levels appropriate for State certification requirements; focus on developing reflective practitioners and researchers; developing individualized instruction for all students; using technology for cooperative learning in the classroom and school; developing and evaluating newly adopted modern language curriculum and classroom and school cultures responsive to the needs of diverse students and students with special needs, particularly in urban settings; developing advanced methods of teaching English language learners and applying knowledge of language acquisition. Students enroll in workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention, and safety education. Students spend the equivalent of twenty days in the schools, during which time they engage in daily supervised student teaching.
Prerequisite: permission of the chairperson of the Department of Modern Languages and Literatures and the head of the Program in Adolescence Education and Special Subjects. Prerequisite or corequisite: Education 71.11.

### 72.13 Advanced Seminar on Methods of Teaching Physical Education, Student Teaching II

2 hours recitation, weekly supervised teaching (total 20 days, 150 hours); 4 credits
Advanced theories and methods of teaching physical education at grade levels appropriate for state certification requirements; focus on developing reflective practitioners and researchers; developing individualized instruction for all students; using technology for cooperative learning in the classroom and school; developing and evaluating newly adopted physical education curriculum and classroom and school cultures responsive to the needs of diverse students and students with special needs, particularly in urban settings; developing advanced methods of teaching English language learners and applying knowledge of language acquisition. Students enroll in workshops in identifying, reporting, and responding to child abuse, and in substance abuse, fire and arson prevention, and safety education. Students spend the equivalent of twenty days in the schools, during which time they engage in daily supervised student teaching.
Prerequisite: permission of the chairperson of the Department of Physical Education and Exercise Science and the head of the Program in Adolescence Education and Special Subjects. Prerequisite or corequisite: Education 71.13.
Elective courses
9 Parent as Educator
3 hours; 3 credits
Parenting as an educative process; needs of parents and
children; effect of parental attitudes and cultural influences on
the child's development and learning. The home and family as
an educational environment; roles of parents in preschool and
school settings. (This course cannot be credited towards any
education sequence or taken for credit by an education major.)

## 24 Studio II: The Culture and Politics of Teaching

 2 hours; 2 creditsContinuation of Studio I with a shift in focus to social, institutional, and cultural frameworks for teaching. (Not open to students who are enrolled in or have completed Education $16,48.1,48.21,48.22,58.1,58.11$, or 58.12 .)
Prerequisite: Education 36.
Prerequisite or corequisite: Education 40 or 40.1 or 40.2 or 40.3; and Education 43.

The following courses are inactive and will be offered only if there is sufficient demand:

### 60.2 Principles of Teaching Students with Special Needs 68.1 Microcomputers in Education

## English

Department office: 2308 Boylan Hall
Telephone: 951-5195
Chairperson: Ellen Tremper
Deputy Chairperson, CLAS: Elaine Brooks
Deputy Chairperson, SGS: Nancy B. Black
Deputy Chairperson, ESL: Leonard Fox
Deputy Chairperson, Division of Graduate Studies:
Nancy Black
Professors: Belton, Black, Boyle, Browne, Brownstein, Bruffee, Buncombe, Corey, Cunningham, DeLuca, Elsky, Fairey, Fox, Gerber, Hirsch, Jervis, Mancini, Natov, Pearse, Reeves, Tremper, Viscusi, Xiques, Zlotnick;
Associate Professors: Agoos, Asekoff, Bayoumi, Brinton, Brooks, Farley, Gonsalves, Harrison, Marks, Melani, Moser, Moses, Patkowski, Roy, Streiter;
Assistant Professors: Acosta, Lutzkanova-Vassileva, Masciandaro;
Lecturers: Camargo, Goldman, Kehl, Luisi, Paolella, Zanderer.

## Core curriculum

The Department of English participates in the college's core curriculum through Core Studies 6 .

## English-as-a-Second-Language Program

The Department of English conducts the English-as-a-SecondLanguage Program.

## B.A. degree program in English

HEGIS code 1501
Department requirements (39 credits)

## I. English 51 and 52 ( 6 credits)

English 51-52 constitutes, for students enrolled in
Department of English baccalaureate degree programs, a substitution for Core Studies 6 . Students who have already taken Core Studies 6, and transfer students who are admitted with a Core Studies 6 exemption, are required to take either English 51 or 52. English majors are encouraged to complete at least one of the two courses, or be enrolled in one or the other, before continuing in other electives.
II. Fields of Study ( 15 credits)

One course from each of five of the following seven Fields; at least two of the courses must be chosen from Fields 1 through 3:

1. Middle Ages: English 24.4, 30.1, 30.2, 79.1; Comparative Literature 21.
2. Renaissance: English 30.3, 30.4, 30.5, 30.6, 30.7, 31.1, 79.2; Comparative Literature 23.
3. Eighteenth Century: English 31.3, 31.4, 31.5, 79.3; Comparative Literature 24.
4. Nineteenth Century and Romanticism: English 40.1, 40.3, 40.4, 40.7, 62.11, 79.4; Comparative Literature 14.2, 26.
5. American Literature and Culture: English 18.17, 25.3, 25.4, 61, 62.11, 62.21, 62.31, 62.41, 63.1, 63.2, 64.2, 64.3, 64.4, 67, 79.5; Comparative Literature 38.1, 38.3 .
6. Modernism: English 41.2, 41.3, 50.12, 62.31, 64.3, 79.6; Comparative Literature 13.1, 14.3, 16.3, 29, 38.1.
7. Postmodernism and Contemporary Discourses: English 6, 41.4, 50.12, 50.13, 50.3, 50.4, 50.41, 62.41, 79.7; Comparative Literature 14.4, 16.4.
III. Field Concentration (6 credits)

Two additional courses in one of the five Fields of Study chosen in II or two additional courses from a concentration of similar courses (e.g., poetry, fiction, drama, folklore, linguistics, etc.).
IV. Electives (12 credits)

Four additional courses, one of which must be a seminar, numbered $70-79.7$, or 74.7 . One may be in an allied discipline (Africana Studies, American Studies, Art, Classics, History, Modern Languages and Literatures, Music, Philosophy, Puerto Rican and Latino Studies, Speech Communication Arts and Sciences, or any other with permission of the chairperson).

## Requirements for an optional minor in English

A program of 12 credits of advanced electives in the English Department with a grade of C or higher in each course. It is recommended that students meet with a department counselor to plan a coherent program.
Students might choose a sequence of courses constituting a general survey of English and/or American literature; a genre; (e.g., fiction, poetry, drama); a period (e.g., medieval, romantic, modern); creative writing, expository writing, journalism; or linguistics.

## B.F.A. degree program in creative writing HEGIS code 1507

Program requirements ( 42 credits)
I. English 51 and 52 ( 6 credits)

English 51-52 constitutes, for students enrolled in Department of English baccalaureate degree programs, a substitution for Core Studies 6 . Students who have already taken Core Studies 6, and transfer students who are admitted with a Core Studies 6 exemption, are required to take either English 51 or 52. Creative writing majors are encouraged to complete at least one of the two courses, or be enrolled in one or the other, before continuing in other electives.
II. Creative writing courses ( 15 credits)
a) English 11.1.
b) One of the following sequences:

1) English 15.1, 15.2.
2) English 16.1, 16.2.
3) English 17.1, 17.2.
c) Two additional creative writing courses in the English Department.
III. Fields of Study (12 credits)

One course from each of four of the following seven Fields; at least one course must be chosen from Fields 1 through 3:

1. Middle Ages: English 24.4, 30.1, 30.2, 79.1; Comparative Literature 21.
2. Renaissance: English 30.3, 30.4, 30.5, 30.6, 30.7, 31.1, 79.2; Comparative Literature 23.
3. Eighteenth Century: English 31.3, 31.4, 31.5, 79.3; Comparative Literature 24.
4. Nineteenth Century and Romanticism: English 40.1, 40.3, 40.4, 40.7, 62.11, 79.4; Comparative Literature 14.2, 26.
5. American Literature and Culture: English 18.17, 25.3, 25.4, 61, 62.11, 62.21, 62.31, 62.41, 63.1, 63.2, 64.2, 64.3, 64.4, 67, 79.5; Comparative Literature 38.1, 38.3.
6. Modernism: English 41.2, 41.3, 50.12, 62.31, 64.3, 79.6; Comparative Literature 13.1, 14.3, 16.3, 29, 38.1.
7. Postmodernism and Contemporary Discourses: English 6, 41.4, 50.12, 50.13, 50.3, 50.4, 50.41, 62.41, 79.7; Comparative Literature 14.4, 16.4.

## IV. Additional course requirements (9 credits)

Nine additional credits in advanced English Department courses. Related courses offered by other departments may be substituted with the permission of the English Department chairperson.

## B.A. degree program in comparative literature HEGIS code 1503

Program requirements (39 credits)
I. (6 credits) English 51 and 52.

English 51-52 constitutes, for students enrolled in Department of English baccalaureate degree programs, a substitution for Core Studies 6. Students who have already taken Core Studies 6, and transfer students who are admitted with a Core Studies 6 exemption, are required to take either English 51 or 52 . Comparative literature majors are encouraged to complete at least one of the two courses, or be enrolled in one or the other, before continuing in other electives.
II. (9 credits) Three of the following: Comparative Literature 21, 23, 24, 26, 29.
III. (9 credits) A total of three of the following courses chosen from at least two genres:
The novel: Comparative Literature 14.2, 14.3, 14.4.
Drama: Comparative Literature 16.3, 16.4.
Other genres: Comparative Literature 13.1, 18.1, 18.2, 18.3, 18.4, 18.5, 19.1, 19.5.
IV. (3 credits) One of the following: Comparative Literature 31.1, 32.2, 36.1, 38.1, 38.3, 42.1, 50.12, 50.13.
V. ( 6 credits) Comparative Literature 74 or 74.7 and any course listed under interdisciplinary and thematic studies.
VI. ( 6 credits) At least six credits in literature courses numbered higher than 4 in a classical or modern language. Students who have successfully completed the Communication 10.4 and Humanities 10.4 seminars of the Special Baccalaureate Degree Program for Adults or Comparative Literature 11 or the approved equivalents for the latter automatically have the prerequisites for any advanced course in comparative literature.

## Requirements for an optional minor in comparative literature

At least 12 credits in advanced electives in the Comparative Literature Program with a grade of C or higher. Comparative literature minors should consult with the director for recommendations.

## Comparative Literature Program recommendations

Students should continue foreign language study beyond the requirement.
Students should begin the required language study as early as possible because they use their knowledge of foreign languages in advanced courses in the program.
Students should consult the director in planning individual programs of concentration.
For prospective graduate students, study of or proficiency in a second foreign language through course 2, or the equivalent, is recommended.
The Comparative Literature Program offers graduate courses for students in other fields. For information, students should consult the director. A Graduate Bulletin may be obtained in the Office of Admissions.

## B.A. degree program in journalism <br> HEGIS code 0602

Program requirements (39-42 credits)
I. ( 24 credits) All of the following: English 18.11; 18.13; 18.14 or 18.20; 18.16 or 18.19; 18.17; 18.18; 18.21 .
II. (3-6 credits) English 18.12 or 18.15 or 19.1, or the Summer Broadcast News Institute: Television and Radio 29.
III. (12 credits) Twelve credits, approved by the director of the Journalism Program, in any department. No journalism courses may be used to satisfy this requirement.
Students should note that the prerequisite of English 18.11 is English 2 or 2.7 with a grade of B or higher; or English 5 or 14 .

## Requirement for an optional minor in journalism

## Requirements (12 credits)

English 18.11
Nine credits chosen from the following: English 18.12, 18.13, 18.14, 18.16, 18.17, 18.18, 18.19, 18.20, 18.21, 19.1. (For students minoring in journalism, the prerequisite of 18.18 will be only 18.11.)

## B.A. degree program in adolescence education: English teacher <br> HEGIS code 1501.01; SED program code 26812

## Program requirements

Students must complete the following English Department requirements for the B.A. degree program for English teacher (39 credits):
I. English 51 and 52 ( 6 credits)

English 51-52 constitutes, for students enrolled in Department of English B.A. degree programs, a substitution for Core Studies 6. Students who have already taken Core Studies 6, and transfer students who are admitted with a Core Studies 6 exemption, are required to take either English 51 or 52. Majors in the English teacher program are encouraged to complete at least one of the two courses, or be enrolled in one or the other, before continuing in other electives.
II. Fields of Study (12 credits)

One course from each of four of the following seven Fields; at least one course must be chosen from Fields 1 through 3 :

1. Middle Ages: English 24.4, 30.1, 30.2, 79.1;Comparative Literature 21.
2. Renaissance: English 30.3, 30.4, 30.7, 31.1, 79.2; Comparative Literature 23.
3. Eighteenth Century: English 31.3, 31.4, 31.5, 79.3; Comparative Literature 24.
4. Nineteenth Century and Romanticism: English 40.1, 40.3, 40.4, 40.7, 62.11, 79.4; Comparative Literature 14.2, 26.
5. American Literature and Culture: English 18.17, 25.3, 25.4, 61, 62.11, 62.21, 62.31, 62.41, 63.1, 63.2, 64.2, 64.3, 64.4, 67, 79.5; Comparative Literature 38.1, 38.3.
6. Modernism: English 41.2, 41.3, 50.12, 62.31, 64.3, 79.6; Comparative Literature 13.1, 14.3, 16.3, 29, 38.1 .
7. Postmodernism and Contemporary Discourses: English 6, 41.4, 50.12, 50.13, 50.3, 50.4, 50.41, 62.41, 64.4, 79.7; Comparative Literature 14.4, 16.4.
III. Field Concentration: English Teaching (9 credits)

Three courses, one from each of the following groups:
A. Language: English 24.3, 24.61, 24.7, 24.8, 24.9, or a course in linguistics.
B. Composition: English 5, 11.1, 14, 50.14W, or any other writing-intensive course.
C. Literature of diversity: English 6, 50.13, 64.2, 64.3, 64.4, 65, Comparative Literature 19.5, 30, 32.2, 38.1, 38.3, or any course in literature and culture.
IV. English $\mathbf{3 0 . 5}$ or $\mathbf{3 0 . 6}$ ( 3 credits).
V. Three additional English Department electives (9 credits). In addition, students must complete the following pedagogical courses: Education 16, 34, 64.1, 69, 71.01, and 72.01 ( 21 credits). These courses are described in the "Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree program for English teacher.
These program requirements meet the revised teacher certification program regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

## English concentration for majors in the following programs: early childhood education teacher

 (birth-grade 2); childhood education teacher (grades 1-6)The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in English must complete at least 30 credits in the English Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

English 2.
One course from each of the following three groups:
a) English 24.61, 24.7, 24.8, 24.9
b) English 5, 11.1, 14, 50.14
c) English 6, 50.41, 50.6, 64.2, 64.3, 65; Comparative Literature 19.5, 30, 32.2, 38.1, 38.3
Eighteen credits of advanced English or comparative literature electives.

## Department recommendations

Students should consult the deputy chairperson for help in planning a course of study.

## Requirements for departmental honors in English

Fulfillment of the requirements of the B.A. in English or English teacher (7-12) or the B.F.A. in creative writing with a B+ or higher average in all advanced work in the major; completion with a grade of B or higher of one writing-intensive seminar, numbered 70 through 79.7; completion of the Senior Thesis courses 89.1 and 89.2, also with grades of B or higher. While a student may elect to gain honors credit in a specific elective course, in accordance with the description in the "Honors" section in the Bulletin, such honors credit does not constitute departmental honors, which is awarded only upon completion of the Honors Sequence.

## Requirements for departmental honors in Comparative Literature

Fulfillment of the requirements for the B.A. in comparative literature with a $\mathrm{B}+$ or higher average in all advanced work in the major; completion of Comparative Literature 74 and 74.7 with a grade of B or higher; completion of the Senior Thesis courses Comparative Literature 89.1 and 89.2, with grades of B or higher. While a student may elect to gain honors credit in a specific elective course in accordance with the description in the "Honors" section in the Bulletin, such honors credit does not constitute departmental honors, which is awarded only upon completion of the Honors Sequence.

## Recommendations for prospective graduate students <br> Graduate programs in English require a broad background in English and American literature. Prospective graduate students should take a number of courses in English literature of the period before 1800 and a course in literary theory. Prospective graduate students should develop reading knowledge of French or German through at least course 4. <br> Division of Graduate Studies <br> The English Department offers the following graduate degree programs: master of arts in English, master of fine arts in creative writing, and master of arts, English teacher (7-12). Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Writing Center

Help may be obtained in prewriting, outlining, mechanics of writing, proofreading, revising, or developing a format for any paper. Students may also receive help with such specific tasks as writing essays, research papers, résumés, or laboratory reports. Further information may be obtained at the center, 1310 Boylan Hall, or by calling 951-5821.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 33 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term

## *1 English Composition I

3 hours and conference; 3 credits
Workshop in expository writing: strategies of, and practice in, analytical reading and writing about texts. Fundamentals of grammar and syntax. Frequent assignments in writing summaries, analyses, comparisons of texts, and such other expository forms as narration, description, and argumentation. Emphasis on writing as a process: invention, revision, editing (Not open to students who have completed English 1.2 or 1.7.) Prerequisite: placement in the course on the basis of the score of 480 or higher on the verbal SAT, or 75 on the New York State Regents Examination in English, or a score of 7 on the ACT Writing Examination.

## *1.5 Approaches to Learning a Modern Language

3 hours; 3 credits
Analysis of the process of second-language acquisition for the adult language learner and of the relationship between language learning and cultural awareness. Development of practical self-monitoring and self-evaluating strategies to promote successful language acquisition and cultural competence. For students studying or planning to study a modern language, including English at the college level. This course is the same as Modern Languages and Literatures *1.5.
Prerequisite: permission of the chairperson of the Department of English.

## *1.7 English Composition

2 hours recitation, 4 hours lecture, conference, and independent work§; 6 credits
Intensive study of the fundamentals of punctuation and grammar. Drill and practice in writing based on experience and readings of essays and stories. Introduction to expository development and the functions of rhetoric. Introduction to research. Themes and conferences. (Not open to students who are enrolled in or have completed Core Studies 1.5, 4.5, or 6.5 with a grade of $C$ or higher. Not open to students who are enrolled in or have completed English 1 or 1.2 or 2.)
Prerequisite: enrollment in the Small College Program.

## *2 English Composition II: Seminar in Expository Writing

 3 hours and conference; 3 creditsWriting-intensive seminar focusing on a topic chosen by the instructor. Provides students with an opportunity to explore a particular subject in depth and further develop skills of critical thinking, research techniques, and clear expression necessary for academic writing. Students must take English 2 within two semesters of completing English 1. Topics include: The Fool in Literature; Reading the City; 1960s: Decade of Revolt; Novels of the Jazz Age; Cross-Cultural Writing and the Arts.
Prerequisite: English 1 or placement in the course on the basis of transfer evaluation.

## *2.7 Introduction to Literature

1 hour recitation, 4 hours lecture, conference, and independent work§; 5 credits
English and American fiction, drama, and poetry. Continued emphasis on writing clear expository prose. At least four papers. (Not open to students who are enrolled in or have completed Core Studies $1.5,4.5$, or 6.5 with a grade of $C$ or higher. Not open to students who are enrolled in or have completed English 2 or 2.4 or 3.4 or 4.4 .)
Prerequisite: English 1.7.

## 5 Advanced Exposition and Peer Tutoring

2 hours lecture, 3 hours tutoring; 3 credits
Intensive study of and practice in writing the principal rhetorical forms. Training in principles of peer tutoring and three hours of tutoring writing in the Learning Center or other appropriate setting.
Prerequisite: A grade of A in English 1 or 1.2 or 1.7 and permission of the chairperson.

## Required literature sequence for all majors <br> 51 Overview of Literary Study I: Representative Selections of World Literature from the Middle Ages to the Late Eighteenth Century

3 hours; 3 credits
Studies in the literature and culture of the Middle Ages, the Renaissance, and the eighteenth century. Part I of a two-course general survey and overview with three principal focuses: 1) the major literary and intellectual movements of world literature, in historical perspective, 2) the close reading of texts in the several genres, and 3) literature as viewed through the various lenses of contemporary theory and critical discourses.
Prerequisite: English 1

## 52 Overview of Literary Study II: Representative Selections of World Literature from the Nineteenth Century to Postmodernism <br> 3 hours; 3 credits <br> Studies in literature and culture from nineteenth-century Romanticism to the modernist and postmodernist movements. Part II of a two-course general survey and overview with three principal focuses: 1) the major literary and intellectual movements of world literature, in historical perspective, 2) the close reading of texts in the several genres, and 3) literature as viewed through the various lenses of contemporary theory and critical discourses. <br> Prerequisite: English 1

## Creative writing

Students may not register for more than two creative writing courses in one term without permission of the chairperson.

### 11.1 Introduction to Creative Writing

1 hour recitation and conference, 2 hours lecture; 3 credits
Workshop in writing stories, poems, and short plays.
Prerequisite: English 1 or 1.2 or 1.7.

## 14 Writing Prose Nonfiction

1 hour recitation and conference, 2 hours lecture; 3 credits
Workshop in writing personal essays, biography, and criticism.
Prerequisite: English 1 or 1.2 or 1.7.

### 15.1 Writing Fiction I

1 hour recitation and conference, 2 hours lecture; 3 credits
Workshop in writing stories. Techniques of narrative. (Not open to students who have completed English 15.)
Prerequisite: English 11.1.

### 15.2 Writing Fiction II

1 hour recitation and conference, 2 hours lecture; 3 credits Continuation of English 15.1.
Prerequisite: English 15 or 15.1.

### 16.1 Writing Poetry I

1 hour recitation and conference, 2 hours lecture; 3 credits
Workshop in writing poetry. Experiments in form and language.
(Not open to students who have completed English 16.)
Prerequisite: English 11.1.

### 16.2 Writing Poetry II

1 hour recitation and conference, 2 hours lecture; 3 credits Continuation of English 16.1.
Prerequisite: English 16 or 16.1.

### 17.1 Writing Plays I

1 hour recitation and conference, 2 hours lecture; 3 credits Workshop in writing plays. Dramatic construction and characterization. (Not open to students who have completed English 17.)
Prerequisite: English 11.1.

### 17.2 Writing Plays II

1 hour recitation and conference, 2 hours lecture; 3 credits
Continuation of English 17.1.
Prerequisite: English 17 or 17.1.

### 17.15 Writing for Musical Theater

1 hour recitation and conference, 2 hours lecture; 3 credits
Workshop in writing the book and lyrics for a one-act musical comedy or for serious musical theater. No knowledge of music is necessary.
Prerequisite: English 11.1.

## 20 Theater Workshop

4 hours; 3 credits
Writing and production of original scripts. Theater problems formulated, analyzed, and tested on stage. Unified study of writing, acting, and directing. Offered jointly by the
Department of English and the Department of Theater. This course is the same as Theater 36. (Not open to students who have completed Speech and Theater 36.)
Prerequisite: English 17 or 17.1; and Theater 35.1 or Speech and Theater 35.1.

### 69.3 Advanced Tutorial in Creative Writing

Minimum of 9 hours conference and independent work§; 3 credits
Writing a substantial piece of prose or poetry such as a short novel, play, or group of short stories, poems, or articles. Students may take this course for credit twice but may not repeat topics.
Prerequisite: English 15.2 or 16.2 or 17.2 and permission of the instructor.

## Journalism

18.11 News Writing: An Introduction to Journalism

1 hour recitation and conference, 2 hours lecture; 3 credits
Technique of general news gathering and writing basic types
of news stories; examination of the issues and problems confronted by reporters in their work.
Prerequisite: English 2 or 2.7 with a grade of B or higher; or English 5 or 14.

### 18.12 Editing

1 hour recitation and conference, 2 hours lecture; 3 credits
Technique of handling copy, proofreading, assessing news values. Headline writing and layout.
Prerequisite: English 18.11.

### 18.13 Feature Writing

1 hour recitation and conference, 2 hours lecture; 3 credits
Sources for feature articles. Technique of writing basic types of news features and editorials.
Prerequisite: English 18.11.

### 18.14 Reporting

1 hour recitation and conference, 2 hours lecture; 3 credits
Techniques of reporting a story in depth and organizing a large amount of material into a newspaper series or magazine story.
Prerequisite: English 18.11.

### 18.15 Journalism Internship

9 hours fieldwork, 1 hour conference; 3 credits
The internship requires working one day each week for a newspaper or wire service in the New York metropolitan area. Weekly conference. Written work based on the internship experience.
Prerequisite: permission of the journalism program.

### 18.16 Advanced News Writing

3 hours; 3 credits
Classroom drills, outside assignments, lectures, and field trips to expand organizational and writing skills.
Prerequisite: English 18.11.

### 18.17 The Press in America

3 hours; 3 credits
Lectures and readings in the history of journalism from Colonial times to the present.
Prerequisite: English 1 or 1.2 or 1.7.

### 18.18 News Laboratory

2 hours lecture, 8 hours laboratory; 6 credits
Students act as reporters, rewrite persons, and feature writers covering a day in the life of New York alongside members of the working press. Students' stories are examined in class and compared with those produced by dailies and wire services. Prerequisite: English 18.11, 18.14, and 18.16.

### 18.19 Seminar: Topics in Journalism

3 hours; 3 credits
Study of a topic in journalism. Emphasis is on analyzing societal institutions from a journalist's point of view. Topic is selected by the instructor.
Prerequisite: English 18.11 or permission of the journalism program.

### 18.20 Business Journalism

## 3 hours; 3 credits

Emphasis is on reporting and writing about the world of business, with students learning the basics of covering Wall Street, the economy, workplace issues, and personal finance. The course will prepare students for entry-level jobs in business journalism or for graduate study.
Prerequisite: English 18.11 or permission of the journalism program.

### 18.21 Beat Reporting

3 hours; 3 credits
This is a capstone course in which students who have taken advanced journalism electives will learn to cover a beat, such as health, education, immigration, poverty, publishing, the arts, or politics. Journalism majors will be required to shape a specialty beat informed by their field of concentration. (Majors must complete a 12 -credit concentration in nonjournalism courses.) The emphasis is on teaching students to become specialists who are able to write with clarity and expertise on a particular subject area.
Prerequisite: English 18.11, two advanced journalism electives, and two courses in a 12-credit concentration approved by the director of the journalism program. Nonmajors who have taken two advanced journalism electives can take the course with the approval of the journalism program.

## The English language <br> 24.61 Applied English Linguistics <br> 3 hours; 3 credits

Introduction to the nature of language learning, language analysis, and language assessment presented through the examination of the teaching of English language learners and language minority students. The linguistic, psychological, sociolinguistic, and pedagogical parameters of human language learning; source materials and approaches for investigating language learning processes. (Not open to students who completed English 59 CV in Spring 1995, or English 24.6.)
Prerequisite: English 1 or 1.2 or 1.7.

### 24.7 Practical English Grammar

3 hours; 3 credits
Essentials of the structure and nature of the English language. A systematic study of English grammar: the elements and processes of the sound system, the system of grammatical markers, the syntax and the semantic systems of English. (Not open to students who have completed English 24.1 and/or 24.2.)

### 24.9 Introduction to Semiology

## 3 hours; 3 credits

The study of semiology as a branch of linguistics. Its influence on the analysis of language, culture, and text. The nature of structures and systems of signs in relationship to literature and culture.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 24.9W Introduction to Semiology

4 hours; 3 credits
The study of semiology as a branch of linguistics. Its influence on the analysis of language, culture, and text. The nature of structures and systems of signs in relationship to literature and culture. Writing-intensive section.
Prerequisite: English 2.

## English literature

30.1 Medieval English Literature

3 hours; 3 credits
Epic, chronicle, and romance. The Arthurian tradition.
Development of allegorical writing. The lyric. (Not open to
students who have completed English 26.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 30.2 Chaucer

## 3 hours; 3 credits

The Canterbury Tales and such earlier works as The House of Fame and Troilus and Criseyde. Their relation to the language, literary background, and life of the author. (Not open to students who have completed English 31.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 30.3 Poetry and Prose of the Sixteenth Century: The Early Renaissance

3 hours; 3 credits
English poetry from Wyatt through Shakespeare's sonnets. Edmund Spenser. English prose from Thomas More through Richard Hooker. (Not open to students who have completed English 35.1.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 30.4 Poetry and Prose of the Seventeenth Century

## 3 hours; 3 credits

English poetry from Donne through Marvell. Prose from
Francis Bacon through Thomas Hobbes. (Not open to students who have completed English 35.1.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 30.5 Shakespeare I

3 hours; 3 credits
Major Shakespearean plays selected from the chronicles, comedies, and tragedies. Intensive reading. (Not open to students who have completed English 32.1.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 30.6 Shakespeare II

## 3 hours; 3 credits

Topics in Shakespeare in the plays and nondramatic writings.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 30.7 English Drama from the Beginnings to 1642, Exclusive of Shakespeare

3 hours; 3 credits
Mystery plays, the revenge tragedy, pastoral comedy, comedy of humors, and the development of blank verse. Such writers as Lyly, Dekker, Marlowe, Jonson, Webster, Beaumont and Fletcher, and Middleton. (Not open to students who have completed English 34.3.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 31.1 Milton

3 hours; 3 credits
Major poetry and prose in the light of the literary background and life of the poet. Intensive readings from Paradise Lost. (Not open to students who have completed English 37.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 31.3 English Literature of the Age of Reason

3 hours; 3 credits
Major neoclassical and preromantic literature. Poetry and prose of such writers as Dryden, Pope, Swift, Johnson, Addison and Steele, Burke, and Gray. (Not open to students who have completed English 28.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 31.4 English Drama of the Restoration and the Eighteenth Century

3 hours; 3 credits
Comedy of manners and the heroic tragedy; beginnings of bourgeois drama. Plays of such writers as Dryden, Congreve, Wycherley, Farquhar, Goldsmith, and Sheridan.
Prerequisite: one of the following: 1 or 1.2 or 1.7.

### 31.5 The Eighteenth-Century Novel

3 hours; 3 credits
Development of prose fiction as the main vehicle for portraying
the middle class and its values. Such writers as Richardson,
Defoe, Fielding, Sterne, and Austen.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 40.1 Chief Romantic Poets

3 hours; 3 credits
Growth of romanticism in the poetry of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats. (Not open to students who have completed English 29.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 40.3 Chief Victorian Poets

3 hours; 3 credits
Poetry of Browning, Tennyson, Arnold, and Hopkins studied in detail. Supplementary reading from such poets as the Rossettis, Swinburne, Morris, and Clough. (Not open to students who have completed English 29.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 40.4 Major English Novels of the Nineteenth Century

 3 hours; 3 creditsArtistic development and growth of the novel as social criticism. Such writers as Dickens, Thackeray, the Brontës, and George Eliot.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 40.6 British Literature in Transition from 1885 to 1914

## 3 hours; 3 credits

Significant developments in the novel, poetry, and drama between the Victorian period and the modern period. Work of such writers as George Moore, Wilde, Shaw, Wells, Hardy, Yeats, and Kipling and of such groups as the Aesthetes, Decadents, Activists, Symbolists, and Imagists.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 41.2 Modern British Fiction to 1950

3 hours; 3 credits
Development of prose fiction as a vehicle for the examination of self and society. Such writers as Joyce, Woolf, Conrad, Huxley, Lawrence, and Forster. (Not open to students who have completed English 73.2.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 41.3 Modern British Poetry

3 hours; 3 credits
Poetry of such writers as Yeats, Graves, Auden, Lawrence, and Dylan Thomas. (Not open to students who have completed English 74.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 41.4 Contemporary British Writing from 1950 to the Present <br> 3 hours; 3 credits

Plays, novels, and poems of such writers as Beckett, Pinter, Osborne, Behan, Lessing, Anthony Powell, Murdoch, Durrell, Spark, Ted Hughes, Charles Tomlinson, Thom Gunn, and Thomas Kinsella.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 41.5 Irish Literature and Culture

3 hours lecture, 6 supervised field hours; 6 credits Intensive summer course in Irish literature and culture: two weeks in Brooklyn and three weeks in Ireland. Yeats, Joyce, Synge, O'Casey, and others. Historical, political, and cultural backgrounds. Irish nationalism, Gaelic Ireland, literary Dublin. Travel to sites of historical and literary significance. Travel fee required.
Prerequisite: one of the following: English 1 or 1.2 or 1.7, or Special Baccalaureate Humanities 10.3.

## Special studies and approaches

6 Literature and Cultural Diversity
3 hours; 3 credits
Analysis of differing uses and evaluation of literature. Focus on standard texts (short stories, plays, novels, and poems) as well as representative works which emerge from the family and home communities of the students and/or different cultures and historical periods.
Prerequisite: Core Studies 1 and 6.

### 24.5 African-American Folklore

3 hours; 3 credits
African-American oral tradition and African-American culture. Survival of the African culture. Oral history, spirituals, folktales, blues, toasts, dozens, etc. Uses of the oral tradition in literature. This course is the same as Africana Studies 23.
Prerequisite: English 1 or 2.1 or 1.7.

### 25.3 American Folklore

3 hours; 3 credits
Myths, legends, tales, proverbs, riddles, songs, dances, beliefs, rituals, celebrations, and folk art of American folk groups. Ethnic, regional, and occupational folklore. The relationship of oral folk culture to popular expression and written literature. Independent work in collecting folklore. This course is the same as American Studies 66.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 25.4 New York City Folklore

3 hours; 3 credits
Folklore of the streets and neighborhoods of New York City. The urban environment as a region generating its own folklore and traditions. Customs, language, and symbols of urban life, past and present. Introduction to problems of fieldwork and methods of collecting urban folklore. This course is the same as American Studies 61.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 31.2 The Bible as Literature

## 3 hours; 3 credits

Representative Biblical selections evaluated by literary criteria. Origin and development of the English Bible as a literary classic. (Not open to students who have completed English 42.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 41.1 Modern Drama to 1950

3 hours; 3 credits
Modern British and American drama. Continental influences. (Not open to students who have completed English 72.1.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

## 50 Dramatic Analysis for Media Production

2 hours lecture, 2 hours television laboratory; 3 credits A workshop combining literary and technical skills. Analysis of four plays of different types (realistic, nonrealistic, absurdist, Shakespearean). Scenes prepared for television. Students interpret, "crew for," shoot, edit, and evaluate the scenes taped using skilled actors. This course is the same as Television and Radio 50.
Prerequisite: a course in dramatic literature or Television and Radio 26.1.

### 50.12 Contemporary Literary Criticism and Theory

## 3 hours; 3 credits

Major approaches to literature since 1960. Topics may include semiotics, structuralism, post-structuralism, deconstruction, narratology, new historicism, feminist theory, psychoanalytic criticism, Marxism, and social constructionism. This course is the same as Comparative Literature 50.12.
Prerequisite: one of the following: English 2 or 2.7 or 50.1 .

### 50.13 Introduction to Postcolonial Literature and Theory

 3 hours; 3 creditsStudy of literary works and theoretical paradigms relating to the culture of European imperialism and its aftermath. Emphasis on the diversity of works from many parts of the formerly colonized world to introduce the global significance of postcolonialism. Topics incude: race and representation, Orientalism and the production of knowledge, Empire and exoticism, gender and nationalism, and multiculturalism and diasporic identities. This course is the same as Africana Studies 28.5 and Comparative Literature 50.13.
Prerequisite: English 1.

### 50.14W Theories and Practice of Composition

 3 hours; 3 creditsWorkshop in understanding the nature of writing and how to teach it. Writing as a process: invention, revision, editing; effective structures; writing about literature; experimenting with genres; writing as a way of learning. Social and linguistic influences on writing. Responding to other people's work. Frequent in-class writing; several short papers taken through drafts; compilation of a portfolio. Writing intensive section.
Prerequisite: English 2.

### 50.2 Comedy

3 hours; 3 credits
The comic mode in dramatic and nondramatic forms of literature. Aesthetic, philosophical, and psychological theories of comedy. This course is the same as Comparative Literature 18.3. (Not open to students who have completed English 58.) Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 50.3 Literature and Psychology

3 hours; 3 credits
Relationship of literature to psychological theories in specific readings. Freudian, Jungian, and/or other psychological techniques applied, compared, and evaluated as tools of literary criticism. This course is the same as Comparative Literature 45.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 50.4 Women and Literature

## 3 hours; 3 credits

Sexual roles and the sources of sexual conflict in English and American literature. Problems of sensibility, style, and audience. Function of literary images of women.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 50.41 Contemporary U.S. Women Writers:

## Diverse Cultural Perspectives

3 hours; 3 credits
Literature of selected contemporary Native American, AfricanAmerican, Latina, Asian-American, and other women writers, analyzed from the perspective of feminist literary theories. A comparative course focusing on the literature of two or more groups. This course is the same as Women's Studies 33.
(Not open to students who completed Women's Studies 58 or English 50.4 in fall, 1993, or spring, 1994.)
Prerequisite: one of the following: Women's Studies 10.8, Core Studies 6, English 1.

### 50.5 Tragedy

3 hours; 3 credits
The tragic mode in dramatic and nondramatic forms of literature. Aesthetic, philosophical, and psychological theories of tragedy. This course is the same as Comparative Literature 18.2.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 50.6 The Literature of Fantasy

3 hours; 3 credits
Fantasy and its many modes, including the gothic tale, the literary fairy tale, the animal tale, surrealism and the absurd, time and space travel, and futuristic fiction. This course is the same as Comparative Literature 19.1.
Prerequisite: English 1 or 1.2 or 1.7.

### 50.7 From Epic Tradition to Epic Vision

3 hours; 3 credits
Western literature illustrating developments in the epic genre from the Middle Ages to the present. Adjustment of the epic tradition to differing cultural values through a continual process of translation, imitation, adaptation, and transformation of epic form and content which has led to expressions of the modern "epic vision." This course is the same as Comparative Literature 18.1. (Not open to students who have completed Comparative Literature 55.)
Prerequisite: English 1 or 1.2 or 1.7.

### 50.71 The Lyric Tradition: Imagery, Structure, and Meaning

 3 hours; 3 creditsHow to read lyric poetry effectively. A comprehensive acquaintance with traditional imagery, traditional versification, lyric structure, lyric "concentration," traditional themes, and conventional forms (e.g., sonnet, quatrain, couplet). Representative lyrics of the sixteenth to twenty-first centuries, including those that conform to lyric traditions (e.g., Marvell, Frost), rebel against them (e.g., Donne, Eliot), and put both conformity and rebellion in play at once (e.g., Dickinson, Williams). The genre's diversity, aesthetic value, and the values it implies.
Prerequisite: English 1 or 1.2 or 1.7.

### 50.9 Romance

3 hours; 3 credits
An examination of romance as a literary genre: the historical development of its conventions, narrative formulas, and characteristic themes; its relationships with and contributions to other forms of literature. This course is the same as Comparative Literature 18.4. (Not open to students who completed English 59 or Comparative Literature 40.2 in spring, 1991, or spring, 1993.)
Prerequisite: English 1 or 1.2 or 1.7.

### 50.91 Makings of Pastoral Myth

3 hours; 3 credits
Pastoral, a powerful mode of mythic imagination, studied in its roots and transformations: plots and themes (herdsmen as lovers, rulers, and poets; kings as herdsmen and poets [David]) originating in ancient Mediterranean cultures and still at work in imagination today. Return and change of basic mythemes to meet the challenges of new times and worlds. This course is the same as Classics 44 and Comparative Literature 18.5.
Prerequisite: English 1; Core Studies 1 or permission of the instructor.

## 59 Special Topics in Literature <br> 3 hours; 3 credits

Themes in the literature of different periods or in the work of several authors. Topics vary from term to term. Topic is selected by the instructor. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics. Prerequisite: one of the following: English 1 or 1.2 or 1.7.

## 65 Literature for Young People

## 3 hours; 3 credits

Literature appropriate for students in elementary and secondary schools. Fundamentals of literature and basic reading of interest to young people. (Not open to students who have completed English 56 or 57.)
Prerequisite: English 1 or 1.2 or 1.7.

## 65W Literature for Young People

4 hours; 3 credits
Literature appropriate for students in elementary and secondary schools. Fundamentals of literature and basic reading of interest to young people. Writing-intensive section. (Not open to students who have completed English 56 or 57.) Prerequisite: English 2.

## 66 Internship

7 hours fieldwork, 1 hour conference; 3 credits
Students work seven hours a week in editing, technical writing, and report writing, or in allied fields under supervision. Final report based on the internship experience. Students may take this course for credit twice but may not repeat topics.
Prerequisite: 15 credits in advanced English electives and permission of the chairperson.

## 67 The Immigrant Experience in Literature, Film, and Photography <br> 3 hours; 3 credits

The experience of immigrant groups as recorded in autobiography, folklore, and fiction. Becoming an American as recorded in photographs and film. Exploring relationships between text and image. This course is the same as American Studies 67. (Not open to students who have completed American Studies 70. )
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 69.1 Independent Research

Minimum of 9 hours conference and independent work§; 3 credits
Independent research on a major writer or group of writers or special problem supervised by a faculty member. Approved topic. Periodic conferences. Research paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: English 2 or 2.7 and permission of the instructor.

### 69.2 Independent Study

Minimum of 9 hours conference and independent work§; 3 credits
Independent study of a major writer, group of writers, or special problem supervised by a faculty member. Approved reading. Periodic conferences. Final examination. Students may take this course for credit twice but may not repeat topics.
Prerequisite: English 2 or 2.7. and permission of the instructor.

## American literature <br> 61 Private Lives: American Autobiography 3 hours; 3 credits

Autobiography and its special importance to the process of defining the self in America. Examination of the theme of the New World and the "new" man and the "new" woman. The relation between private identity and national character as revealed in the autobiographical writings of immigrants, workers, and plainfolk. This course is the same as American Studies 63.
Prerequisite: English 1 or 1.2 or 1.7.

### 62.11 American Renaissance

3 hours; 3 credits
The achievement of Emerson, Hawthorne, Melville, Poe, Thoreau, and Whitman; some attention to the Puritan heritage. (Not open to students who have completed two of the following courses: English 60.2, 60.3, and 60.7.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 62.21 American Realism and Naturalism

3 hours; 3 credits
The passage of American literature into the twentieth century with such poets and fiction writers as James, Dickinson, Twain, Crane, Chopin, Wharton, Dreiser, and Frost. (Not open to students who have completed two of the following courses: English 60.2, 60.3, and 60.4.)
Prerequisite: English 1 or 1.2 or 1.7.

### 62.31 American Modernism

## 3 hours; 3 credits

Artistic exploration and experiment, as in the fiction of Stein, Fitzgerald, Hemingway, Faulkner, and Wright, and in the poetry of Pound, W.C. Williams, Eliot, Moore, and Stevens. (Not open to students who have completed both English 60.4 and 60.5.) Prerequisite: English 1 or 1.2 or 1.7.

### 62.41 Contemporary American Writing

3 hours; 3 credits
Novels, stories, poems, and plays from World War II to the present; such writers as Salinger, Mailer, Ellison, Morrison, Lowell, Plath, Ginsberg, Tennessee Williams; and a sampling of recent work. (Not open to students who have completed English 60.6.)
Prerequisite: English 1 or 1.2 or 1.7.

### 63.1 Brooklyn in Literature

3 hours; 3 credits
Selected fiction, drama, and poetry set in various Brooklyn neighborhoods, with emphasis on setting, historical background, and such themes as the assimilation of immigrants and urban alienation. (Not open to students who have completed the same topic in English 59 in either spring 1983, or spring 1984.)
Prerequisite: English 1 or 1.2 or 1.7.

### 63.2 Introduction to Italian American Literature

3 hours; 3 credits
The struggle and development of a distinctive Italian American tradition in literature. Discussion of language, class, assimilation, gender, literary form, and the search for a usable past.
Prerequisite: English 1.

### 64.2 African American Literature to 1930

3 hours; 3 credits
Literature from the colonial period through the Harlem Renaissance. Slave narratives, rhetoric of abolition, formal and vernacular aesthetics. Such writers as Phyllis Wheatley, David Walker, Frederick Douglass, Harriet Jacobs, Booker T. Washington, Paul L. Dunbar, Charles W. Chesnutt, James Weldon Johnson, W.E.B. Du Bois, Countee Cullen, Jean Toomer, Claude McKay, Sterling Brown, Zora Neale Hurston, Langston Hughes. This course is the same as Africana Studies 24.1. (Not open to students who have completed Africana Studies 24.)
Prerequisite: English 1 or 1.2 or 1.7; or Core Studies 1.

### 64.3 Modern African American Literature

 3 hours; 3 creditsLiterature from 1930 to the present. Naturalism and protest, the Black Aesthetic, women's literature. Such writers as Richard Wright, Ralph Ellison, Gwendolyn Brooks, Robert Hayden, James Baldwin, Amiri Baraka, Audre Lorde, Alice Walker, Toni Morrison. This course is the same as Africana Studies 24.2. Prerequisite: English 1 or 1.2 or 1.7; or Core Studies 1.

### 64.4 Black Women's Fiction

3 hours; 3 credits
Identity of the modern Black woman novelist as seen in the works and lives of African-American women novelists. Some cross-cultural comparisons with African and Caribbean women novelists. Readings of selected essays in Black feminist criticism. A research paper is required. This course is the same as Africana Studies 27 and Women's Studies 46.
Prerequisite: one of the following: Africana Studies 24, 24.1, 24.2, 44.6; English 1, 1.2, 1.7; Core Studies 1; Women's Studies 10.7, 12, 33.

## Seminars

## 70 Seminar in British and Anglophone Authors

3 hours; 3 credits
Study of an author or authors in British and Anglophone literature with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration. (Not open to students who have completed English 90 or 91 or 92 .)
Prerequisite: English 2 or 2.7; two of the following: English 51; English 52; one English advanced elective or permission of the chairperson.

## 71 Seminar in American Authors

3 hours; 3 credits
Study of an author or authors in Anglophone literature of the Americas with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration. (Not open to students who have completed English 93 or 94, or who completed Comparative Literature 40.2 in spring, 1990.)
Prerequisite: English 2 or 2.7; two of the following: English
51; English 52; one English advanced elective or permission of the chairperson.

### 74.7 Interdepartmental Humanities Seminar

 3 hours; 3 creditsA significant recurrent theme in Western literature and philosophy, with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration. Offered jointly by the Departments of English, Classics, and Philosophy. This course is the same as Classics 84.7, Comparative Literature 74.7, Philosophy 84.7.

Prerequisite: English 2 or 2.7; two of the following: English 51; English 52; one advanced elective in the major field; and permission of the instructor(s) and the chairperson.

### 79.1 Seminar in the Middle Ages

3 hours; 3 credits
Study in a genre, theme, or movement in the Middle Ages with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration.
Prerequisite: English 2 or 2.7; English 51; one of the following: English 52, one advanced elective in the major field, or permission of the chairperson.

### 79.2 Seminar in the Renaissance

3 hours; 3 credits
Study in a genre, theme, or movement in the Renaissance with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration.
Prerequisite: English 2 or 2.7; English 51; one of the following: English 52, one advanced elective in the major field, or permission of the chairperson.

### 79.2W Seminar in the Renaissance

4 hours; 3 credits
Study in a genre, theme, or movement in the Renaissance with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration. Writing-intensive section.
Prerequisite: English 2 or 2.7; English 51; one of the following: English 52, one advanced elective in the major field, or permission of the chairperson.

### 79.3 Seminar in the Eighteenth Century

 3 hours; 3 creditsStudy in a genre, theme, or movement in the eighteenth century with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration.
Prerequisite: English 2 or 2.7; English 51; one of the following: English 52, one advanced elective in the major field, or permission of the chairperson.

### 79.4 Seminar in the Nineteenth Century and Romanticism

 3 hours; 3 creditsStudy in a genre, theme, or movement in the nineteenth century and Romanticism with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration. Prerequisite: English 2 or 2.7; English 52; one of the following: English 51, one advanced elective in the major field, or permission of the chairperson.

### 79.5 Seminar in American Literature and Culture

 3 hours; 3 creditsStudy in a genre, theme, or movement in American literature and culture with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration.
Prerequisite: English 2 or 2.7; two of the following: English 51, English 52, and one advanced elective in the major field, or permission of the chairperson.

### 79.6 Seminar in Modernism

## 3 hours; 3 credits

Study in a genre, theme, or movement in Modernism with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration.
Prerequisite: English 2 or 2.7; English 52; one of the following: English 51, one advanced elective in the major field, or permission of the chairperson,

### 79.7 Seminar in Postmodernism and Contemporary Discourses

3 hours; 3 credits
Study in a genre, theme, or movement in Postmodernism and contemporary discourses with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration.
Prerequisite: English 2 or 2.7; English 52; one of the following: English 51, one advanced elective in the major field, or permission of the chairperson.

## Honors sequence

The English Honors Sequence allows majors with strong records, specific interest, and the recommendation of an English Department faculty member to pursue a degree with honors in English. Entry into the honors sequence requires an average of $\mathrm{B}+$ or higher in major electives. The requirements for graduating with departmental honors are an average of $\mathrm{B}_{+}$ or higher in major electives; completion of one of the following seminars with a grade of B or higher: English 70, 71, 74.7, 79.1, 79.2, 79.3, 79.4, 79.5, 79.6, 79.7; Comparative Literature 74, 74.7; and completion of the senior thesis courses 89.1 and 89.2 with a grade of $B$ or higher.

## 89.1, 89.2 Senior Thesis I, II

Minimum of 9 hours conference and independent work§; 3 credits each
Individual study and research under supervision of a faculty member. Students in English 89.1 will select a topic and prepare a research prospectus, outline, and bibliography. Students in English 89.2 will conduct the research and write the final paper.
Prerequisite for English 89.1: Senior standing, an average of B or higher in advanced English Department electives, a grade of B or higher in an English department writingintensive seminar (English 70, 71, 74.7, 79.1, 79.2, 79.3, 79.4, 79.5, 79.6, 79.7, or Comparative Literature 74, 74.9), and permission of the instructor and department chairperson. Prerequisite for 89.2: A grade of B or higher in English 89.1 and permission of the instructor and department chairperson.

## Comparative literature

## Genre courses

### 13.1 Modern Short Story and Novella

## 3 hours; 3 credits

Comparative study of the shorter forms of prose fiction. Reading and discussion of such works as Gogol's The Overcoat, Dostoevski's Notes from the Underground,
Flaubert's A Simple Heart, Mann's Death in Venice, and Kafka's The Metamorphosis. (Not open to students who have completed Comparative Literature 5 or 13.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 14.3 Modern European Novel

3 hours; 3 credits
European novel from 1900 to 1935. Representative works of such authors as Proust, Gide; Thomas Mann, Kafka, Hesse; Unamuno. (Not open to students who have completed Comparative Literature 51.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 14.4 Contemporary European Novel

3 hours; 3 credits
European prose fiction from 1935 to the present. Representative works of such authors as Sartre, Camus, Robbe-Grillet; Beckett; Moravia; Grass; Solzhenitsyn.
(Not open to students who have completed Comparative Literature 52.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 16.3 Modern European Drama

3 hours; 3 credits
Development of the drama from 1870 to 1935. Ibsen to the post-World War I period. Plays by such authors as Ibsen, Strindberg; Hauptmann, Schnitzler, Hofmannsthal, Wedekind, Kaiser, Brecht; Maeterlinck, Claudel, Cocteau; Chekhov, Gorky; Pirandello; Lorca. (Not open to students who have completed Comparative Literature 70.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 16.4 Contemporary European Drama

## 3 hours; 3 credits

Development of the drama from 1935 to the present. Plays by such authors as Brecht, Durrenmatt, Weiss; Anouilh, Sartre, Camus, Genet, Ghelderode, Beckett, Ionesco, Arrabal; Betti; Lagerkvist; Mrozek. Contemporary theater theory and practice in the work of such writers as Brecht, Artaud, and Grotowski and by such groups as the Living Theater. (Not open to students who have completed Comparative Literature 71.) Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 18.1 From Epic Tradition to Epic Vision

3 hours; 3 credits
Western literature illustrating developments in the epic genre from the Middle Ages to the present. Adjustment of the epic tradition to differing cultural values through a continual process of translation, imitation, adaptation, and transformation of epic form and content which has led to expressions of the modern "epic vision." This course is the same as English 50.7. (Not open to students who have completed Comparative Literature 55.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 18.2 Tragedy

3 hours; 3 credits
The tragic mode in dramatic and nondramatic forms of literature. Aesthetic, philosophical, and psychological theories of tragedy. This course is the same as English 50.5. (Not open to students who have completed Comparative Literature 56.) Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 18.3 Comedy

3 hours; 3 credits
The comic mode in dramatic and nondramatic forms of literature. Aesthetic, philosophical, and psychological theories of comedy. This course is the same as English 50.2. (Not open to students who have completed English 58.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 18.4 Romance

3 hours; 3 credits
An examination of romance as a literary genre: the historical development of its conventions, narrative formulas, and characteristic themes; its relationships with and contributions to other forms of literature. This course is the same as English 50.9. (Not open to students who completed English 59 or Comparative Literature 40.2 in spring, 1991, or spring, 1993.) Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 18.5 Makings of Pastoral Myth

3 hours; 3 credits
Pastoral, a powerful mode of mythic imagination, studied in its roots and transformations: plots and themes (herdsmen as lovers, rulers, and poets; kings as herdsmen and poets [David]) originating in ancient Mediterranean cultures and still at work in imagination today. Return and change of basic mythemes to meet the challenges of new times and worlds. This course is the same as Classics 44 and English 50.91.
Prerequisite: Core Studies 1 or permission of the instructor.

### 19.1 The Literature of Fantasy

3 hours; 3 credits
Fantasy and its many modes, including the gothic tale, the literary fairy tale, the animal tale, surrealism and the absurd, time and space travel, and futuristic fiction. This course is the same as English 50.6.
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

## Period courses

## 21 Medieval Literature

## 3 hours; 3 credits

Readings from (a) medieval epic:The Song of Roland, The Cid, the Nibelungenlied and (b) Arthurian literature: the Welsh Mabinogion, Geoffrey's History of the Kings of Britain, the narratives of Chrétien de Troyes and Marie de France, Gottfried's Tristan, and Wolfram's Parzival. Summary accounts of the literary histories of Iceland, Ireland, Wales, and Provence.
Prerequisite or corequisite: Engish 1 or 1.2 or 1.7.

## 23 Literature of the Renaissance

3 hours; 3 credits
Such topics as the beginnings of humanism; Petrarch and Boccaccio, Florentine Platonism; the High Renaissance: Machiavelli, Ariosto, Tasso; the northern Renaissance: Erasmus, Rabelais, Ronsard and The Pléiade, Montaigne. (Not open to students who have completed Comparative Literature 25.)
Prerequisite or corequisite: English 1 or 1.2 or 1.7.

## 24 Baroque and Classicism

## 3 hours; 3 credits

Survey of the main currents of European literature in the seventeenth and eighteenth centuries. (Not open to students who have completed Comparative Literature 31.)
Prerequisite or corequisite: English 1 or 1.2 or 1.7.

## 29 Modernist Movements in Twentieth-Century Literature

 3 hours; 3 creditsImportance of such movements as Expressionism, Surrealism, and Futurism in shaping twentieth-century literature. Emphasis on the wider aesthetic, critical, and ideological backgrounds.
(Not open to students who have completed Comparative Literature 45.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7.

## Asian, African, Middle Eastern, and

Latin American literatures

### 32.2 African Literature

3 hours; 3 credits
Survey of twentieth-century fiction, drama, poetry of subSaharan Africa. Works by such authors as Achebe, Ekwensi, Emecheta, Ngugi, Oyono, Laye, Dadie, Clark, Sembene, Senghor, Soyinka. This course is the same as Africana Studies 24.8. (Not open to students who have completed Comparative Literature 15 or 15.2.)

### 36.1 Indian Literature

3 hours; 3 credits
Representative works in the context of Buddhism and Hinduism. Readings from the Vedas, epics, the Bhagavad Gita, Dhammapada, classical drama, Panchatantra, Bhakti poetry, and Tagore and other modern authors. (Not open to students who have completed Comparative Literature 75.)
Prerequisite: one of the following: English 21 or 1.2 or 1.7, or Core Studies 9.

### 38.1 New Literature of Latin America

3 hours; 3 credits
The new Latin American literature from its origins to independence and maturity. Such twentieth-century writers as Carpentier, Fuentes, Garcia Márquez, Guimaraes Rosa, and Paz. Impact abroad of the new masters of Latin American literature: Neruda's on North American poetry, Borges's on the New Criticism, Cortázar's on the cinema. (Not open to students who have completed Comparative Literature 60.) Prerequisite: one of the following: English 1 or 1.2 or 1.7 , or Core Studies 9.

### 38.3 Caribbean Literature

3 hours; 3 credits
Black culture and writing in the Caribbean. Reflections on alienation and independence. Literary liberation movements, Negrism, Indigenism, and Negritude as first emancipations from a European cultural vision. Writers from the English-, French-, and Spanish-speaking countries will be examined. All readings will be in English. This course is the same as Africana Studies 29 and Puerto Rican and Latino Studies 38. (Not open to students who have completed Puerto Rican and Latino Studies 54.)

## Interdisciplinary and thematic studies

### 40.2 Special Topics

## 3 hours; 3 credits each term

Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics. (Not open to students who have completed Comparative Literature 48 for credit twice.)
Prerequisite: one of the following: English 1 or 1.2 or 1.7, or permission of the chairperson.

## 45 Literature and Psychology

## 3 hours; 3 credits

Relationship of literature to psychological theories in specific readings. Freudian, Jungian, and/or other psychological techniques applied, compared, and evaluated as tools of literary criticism. This course is the same as English 50.3. Prerequisite: one of the following: English 1 or 1.2 or 1.7.

### 50.12 Contemporary Literary Criticism and Theory

 3 hours; 3 creditsMajor approaches to literature since 1960. Topics may include semiotics, structuralism, post-structuralism, deconstruction, narratology, new historicism, feminist theory, psychoanalytic criticism, Marxism, and social constructionism. This course is the same as English 50.12
Prerequisite: one of the following: English 2, 2.4, 2.7, 3.4, 4.4, 10.3.

### 50.13 Introduction to Postcolonial Literature and Theory

 3 hours; 3 creditsStudy of literary works and theoretical paradigms relating to the culture of European imperialism and its aftermath. Emphasis on the diversity of works from many parts of the formerly colonized world to introduce the global significance of postcolonialisim. Topics include: race and representation, Orientalism and the production of knowledge, Empire and exoticism, gender and nationalism, and multiculturalism and diasporic identities. This course is the same as Africana Studies 28.5 and English 50.13.
Prerequisite: English 1.

## 74 Cross-Cultural Seminar

3 hours; 3 credits
An author, period of literature, literary movement affecting two or more countries or cultures, or a literary problem of international scope with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department before registration.
Prerequisite: English 2 or 2.7; two of the following: English 51, English 52, and one advanced elective in the major field, or permission of the chairperson.

### 74.7 Interdepartmental Humanities Seminar

 3 hours; 3 creditsA significant recurrent theme in Western literature and philosophy with emphasis on intensive writing, critical analysis, and research methodologies. Topic is selected by the instructor. Course description may be obtained in the department office before registration. Offered jointly by the Departments of Classics, English, and Philosophy. This course is the same as Classics 84.7, English 74.7, Philosophy 84.7.
Prerequisite: English 2 or 2.7; two of the following: English 51; English 52; one advanced elective in the major field; permission of the instructor(s) and the chairperson.

## 83 Independent Research

Minimum of 9 hours independent work§; 3 credits Independent research supervised by a faculty member. Approved topic. Periodic conferences. Report or term paper or written final examination.
Prerequisite: English 2 or 2.7 and an average grade of B or higher in a program, approved by a department counselor, of advanced comparative literature courses, and permission of the chairperson.

Comparative Literature 89.1, 89.2 Senior Thesis I, II Minimum of 6 hours conference and independent work; 2 credits each
Individual study and research under supervision of a faculty member. Students in Comparative Literature 89.1 will select a topic and prepare a research prospectus, outline, and bibliography. Students in Comparative Literature 89.2 will conduct the research and write the final paper.
Prerequisite for Comparative Literature 89.1: English 2 or 2.7 and senior standing; an average of B or higher in advanced comparative literature electives, approved by the program director, and permission of the instructor.
Prerequisite for 89.2: Comparative Literature 89.1 and permission of the instructor and the program director.

## English-as-a-Second-Language Program (ESL)

## ESL 0.03 Reading Workshop

2 hours; no credit
Working with tutors in the ESL laboratory facilities to develop reading skills such as determining the main idea, identifying major details, writing summaries, answering essay questions, and reacting critically to texts.
Prerequisite: Open only to ESL students who have passed the CUNY essay test but not the CUNY reading test.

## ESL 0.04 Writing Workshop

2 hours; no credit
Working with tutors in the ESL laboratory facilities to develop the ability to write well-organized, well-developed essays with college-level content, organization, and grammar. (Not open to students who have passed the CUNY Writing Assessment Test.)
Prerequisite: Open only to ESL students who have passed the CUNY reading test but not the CUNY writing test.

ESL 0.1 Summer Institute Workshop: Integrated Reading and Writing
3 hours per day for 20 days; no credit
Integrated reading and writing workshop for ESL students.
Emphasis on rapid acquisition of fluency in reading and writing at the college level in coordination with the theme of a linked course. Summer semester.
Prerequisite: placement by Assessment Test scores and permission.

## ESL 14 Integrated Reading and Writing: High

 Intermediate Level7 hours recitation, 1 hour laboratory; 2 credits Increasing students' abilities in reading and writing at the high intermediate level of ESL through integrating these skills.
Prerequisite: program permission.

ESL 14.1 Writing: High Intermediate Level
4 hours recitation, 1 hour laboratory; 2 credits
Designed to increase the writing abilities, at the high intermediate level of ESL, of students who have passed the CUNY reading assessment test.
Prerequisite: program permission.
ESL 15 Integrated Reading and Writing: Advanced Level 6 hours recitation, 1 hour laboratory; 3 credits Increasing students' abilities in reading and writing at the advanced level of ESL through integrating these skills.
Prerequisite: program permission.
ESL 15.1 Writing: Advanced Level
4 hours recitation, 1 hour laboratory; 2 credits
Increasing students' abilities in writing at the advanced level of ESL.
Prerequisite: program permission.

## ESL 17.1 Advanced Reading for ESL Students

 3 hours; 1 creditAdvanced reading for ESL students who have reached a minimal competence in writing but need additional work in reading English. Emphasis on the comprehension and analysis of texts relevant to the humanities, sciences, and social sciences. Focus on the development of vocabulary, study skills, and critical thinking.
Prerequisite: one of the following courses: ESL 12, 14, 14.1, $15,15.1,15.2$; a passing score on the CUNY essay test but not on the CUNY reading test; and permission from the program.

## Oral communication

## ESL 1.5 Oral Communication I

3 hours; 1 credit
Special attention to developing basic skills in interpersonal communication, critical and analytic thinking, and speaking fluency in preparation for speech and listening requirements of regular college courses.
Prerequisite: permission of an ESL counselor.
The following courses are inactive and will be offered only if there is sufficient demand:

| 24.3 | History of the English Language |
| :--- | :--- |
| 24.8 | Sociolinguistics |
| 25.2 | British Folklore |
| 40.7 | Romantic and Victorian Prose |
| Comp Lit | 14.2 |
| European Novel of the Nineteenth Century |  |
| Comp Lit | 19.5 | Folk Literature and Fairy Tale 1 Comp Lit 26 | European Romanticism |  |
| :--- | :--- |
| Comp Lit 31.1 | East Asian Literature |
| Comp Lit 54 | Translation Workshop: Theory and Practice |
| Comp Lit 63 | Methods of Comparative Criticism |
| ESL 1.6 | Oral Communication II |

## Environmental Studies Program

## An interdisciplinary major

Program office: 3428 Ingersoll Hall
Telephone: 951-5418, 951-5419, 951-5420
Director: Micha Tomkiewicz, Physics Department
Deputy Director: Yehuda Klein, Economics Department
Faculty: from the departments of the college.

## B.A. degree program in environmental studies HEGIS code 4999

Program requirements ( $59^{11 / 2-73 ~ c r e d i t s) ~}$
Students must complete all of the following, A through F:
A. 1. All of the following courses:

Environmental Studies 1.
Computer and Information Science 1.5 .
Mathematics 2.9; or Mathematics 2.91 and 2.92.
2. One of the following statistics courses:

Economics 30.2 .
Health and Nutrition Sciences 60.
Mathematics 1.5.
Physical Education 75.
Political Science 57.
Psychology 40.1.
Sociology 19.1.
(Note that Health and Nutrition Sciences 60, Physical Education 75, and Sociology 19.1 have advanced prerequisites. Students not explicitly meeting these prerequisites who feel that they may be prepared for the particular course should consult the department chairperson.)
B. 1. One of the following science sequences:

Biology 3 and 4.
Chemistry 1, or 1.1 and 1.2; and Chemistry 2.
Geology 1 and 2.2.
Physics 1, or 1.1 and 1.2; and Physics 2.
2. Two of the following courses, chosen from discipline(s) other than that chosen in B.1. above:
Biology 3, 4.
Chemistry 1, 1.1 and 1.2 (count as one choice), 2, 5. Geology 1, 2.2.
Health and Nutrition Sciences 24.
Physics 1, 1.1 and 1.2 (count as one choice), 2.
C. At least 9 credits chosen from the following advanced science courses (note that some of these courses have prerequisites):
Biology 15, 52, 52.1.
Chemistry 41, 42, 51, 52.
Geology 17.21, 18, 19.1, 20, 22, 23.1, 32.5, 53. Health and Nutrition Sciences 20, 22.71 (the same course as Physical Education and Exercise Science 22.71), 40, 40.5 .

Physical Education and Exercise Science 22.71 (the same course as Health and Nutrition Sciences 22.71)
D. Economics 20.1.
E. Environmental Studies 75.
F. Students must complete either Option 1 or Option 2 below.
Option 1: Concentration in Environmental Studies

1. All of the following courses:

Philosophy 6.
Political Science 1.51.
Sociology 28.
2. Nine credits from the following advanced humanities and social science courses:

Classics 30.
Economics 60.2, 75.5.
Philosophy 15.1.
Political Science 75.1.
(Studies in) Religion 15.
Option 2: Concentration in Environmental Management

1. Business 50.1 and 50.2 .
2. Nine credits from the following: Business $50.4,50.7$, 50.8, 50.9, 76.4; Economics 60.2; Philosophy 15.1.

## Program recommendations

Other advanced electives and special topics courses relevant to environmental studies may be substituted with the permission of the program director. The list of available courses may be obtained each semester in the program office.
Environmental studies majors should complete Environmental Studies 1 as early in their careers as possible. The following courses are also recommended for majors in environmental studies: Computer and Information Science 5.2 and Health and Nutrition Sciences 8.

Environmental studies concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in environmental studies must complete at least 30 credits in the Environmental Studies Program with a grade of C or higher in each course. Students must meet with a program adviser to declare their intention to complete this sequence.

## Concentration requirements:

Environmental Studies 1.
One statistics course chosen from: Economics 30.2, Health and Nutrition Sciences 60, Mathematics 1.5, Political Science 57, Psychology 40.1, Sociology 19.1.
One of the following courses: Economics 20.1; Political Science 1.5, 1.7, 75.9.
Philosophy 15.1 and Sociology 28.
Twelve credits (at least 6 of which must come from courses numbered 20 or higher) chosen from the following: General Science 9.1, 9.2, 9.3, 9.4, 10; Geology 14.1, 19.1, 22, 23.1, 38.1; Health and Nutrition Sciences 6.1, 20, 24, 40.

Environmental Studies 75.
Other advanced electives and special topics courses relevant to environmental studies may be substituted with the permission of the program director. The list of courses available each semester may be obtained from the program office.

## Requirements for a minor in environmental studies

A minimum of 12 credits as specified below, each completed with grade of C - or higher, plus any prerequisite of the courses, including Environmental Studies 1:
Environmental Studies 75.
Philosophy 15.1.
Sociology 28.
One of the following:
Geology 22.
Health and Nutrition Sciences 24.

## Courses

*Courses marked with an asterisk (*) are not counted toward the advanced courses required for the major or the 12 credits of advanced electives required for the minor.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *1 Introduction to Environmental Studies

3 hours; 3 credits
Lectures and discussions of selected topics concerning the natural environment. Introduction to scientific and policy tools used to evaluate environmental and natural resource use. Case studies addressing global, transnational, regional, and local environmental issues.

## 75 Research Methods in Environmental Studies

2 hours lecture and 2 hours independent work§ and conference per week; 3 credits
Seminar and independent study in recent and current topics in environmental studies with focus on research methodology. Seminars by invited speakers; student seminars and discussions moderated by instructor. Selected individual research projects by students; research report and position paper required.
Prerequisite: Environmental Studies 1, junior or senior standing, major or minor in environmental studies, and permission of the director of the Environmental Studies Program.

## Film

Department office: 0314 Plaza Building
Telephone: 951-5664, 951-5665, 951-5057
Chairperson: Lindley P. Hanlon
Deputy Chairperson, CLAS: Virginia Brooks
Production Head: Virginia Brooks
Film Studies Head: Elisabeth Weis
Professors: Brooks, Hanlon, Hirsch, Weis;
Associate Professors: Danto, Gurskis;
Assistant Professors: Hornsby, Massood, Tutak, Voelpel.
The Film Department offers a major in film with concentrations in film studies, film production, screenwriting, and film marketing. The department also offers a certificate program in film.
B.A. degree program in film

HEGIS code 1010

## Department requirements

A. Film studies (33 credits)

All of the following: Film 1, 10W, 15, 16, 30.
Two of the following plus their prerequisites:
Film 20, 26, 28, 29, 31.
Four additional advanced film studies courses numbered 12 or higher plus any prerequisite of the courses. Film 40.1 is recommended for film studies majors and may be counted toward fulfillment of this requirement.
B. Film production (39 credits)

All of the following: Film 1, 10W, 40.1, 40.2, 43, 46.1, 46.2, 48, 55.1, 61.
One of the following plus its prerequisites: Film 44, 49, 50.1, 56.1, 62.1, 62.2, 63.1, 63.2, 63.3.

Two additional film studies courses plus their prerequisites.
C. Screenwriting (33 credits)

All of the following: Film 1, 10W, 15, 16, 40.1, 61, 62.1, 62.2, 70.

Students must also take any combination of two additional advanced film studies and film production courses, one of which may be substituted from the following: English 15.1 or 17.12; Television and Radio 16 or 36.1 or 36.2 or 50 ; Theater 2 or 60. Screenwriting students are encouraged to select additional electives outside the department from the courses above as well as related writing courses across the curriculum.
D. Film marketing ( 33 credits)

All of the following: Film 1, 10W, 16, 28, 29, 32.
One additional course from the film studies area. Business 50.1, 50.2, and 50.7.
One of the following: Business 50.9 or 80.1 or 80.4 or Television and Radio 19.
Students must complete each of the required courses for all concentrations with a grade of C or higher, except in specific instances in which a grade of B or higher is stipulated. All majors are expected to fulfill collegewide requirements, including those in English and the core curriculum, in a timely fashion. Any student who does not demonstrate satisfactory progress toward the completion of these requirements will be prohibited from taking upper-level courses in the major.

## Certificate program in film <br> HEGIS code 5008

## Admission requirements

Those students who do not have a baccalaureate degree must have received a high school diploma or the equivalent for admission to this program and must successfully complete the CUNY Basic Skills Assessment Tests.
Program requirements: Production track ( 30 credits) Students must complete a program consisting of Film 1, 20, 40.1, 40.2, 43, 46.1, 46.2, 48, 55.1, and 61.

Program requirements: Screenwriting track ( 30 credits) Students must complete a program consisting of Film 1, 15, $16,32,40.1,61,62.1,62.2,70$, and any film studies course numbered 12 or higher.
Students must complete each required course with a grade of C or higher except in specific instances in which a grade of $B$ or higher is stipulated. Students who have received transfer credits from other colleges must complete a minimum of 24 credits in the Department of Film at Brooklyn College.
The Department of Film will permit certificate students, on request, to enroll in some prerequisite courses as corequisites. Students who desire full-time enrollment status in the certificate program must have a plan of study approved by the chairperson of the Department of Film before registering for classes.

## Requirements for a minor in film

A program of 12 credits of advanced electives in film, with a grade of C or higher in each course. The department recommends that students confer with a departmental adviser to plan a useful sequence of courses

## Requirements for a minor in film <br> (for television and radio majors)

A major in television and radio; Film 1; and a program of 12 credits of advanced electives in film, each completed with a grade of $C$ or higher.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Film studies

*1 Language of Film I
4 hours; 3 credits
Introduction to films, filmmakers, and the vocabulary of filmmaking. The creation of movies from script to screen. Relation between form and content. Gender, genre, ethnic, and cultural approaches. Analyses and screenings of works by Hitchcock, Welles, and contemporary directors.

## 2 Language of Film II

4 hours; 3 credits
Close analysis of selected films. Detailed examinations of films of contrasting styles; the range of analytic approaches applicable to a given film.
Prerequisite: Film 1.

## *9 Introduction to Film

3 hours; 3 credits
Introduction to the formal language of film. Theoretical perspectives on the nature of film, visual perception, narrative structure, and the artist-audience interaction. Film as a tool in the teaching/learning process. (Not open to students who have completed Film 1.)
Prerequisite: Core Studies 1 and 6.

## 10W Language of Film II

4 hours; 3 credits
Close textual analysis of selected films. Detailed examinations of films of contrasting styles; the range of analytic approaches applicable to a given film. Writingintensive section. (Not open to students who have completed Film 2.)
Prerequisite: Film 1; English 2.

## 12 Literature and Film

## 4 hours; 3 credits

Investigation of significant films derived from literature through comparison of genres. Defining film as an art form in its relation to a particular literary source. Screening of such works as Ford's The Grapes of Wrath, Welles's The Trial, Bresson's Diary of a Country Priest, Visconti's The Stranger, Lean's Great Expectations, Truffaut's Shoot the Piano Player, Olivier's Henry V, and Kurosawa's Throne of Blood.
Prerequisite or corequisite: Film 1 or permission of the chairperson.

## 15 History of Film I

4 hours; 3 credits
Survey of motion pictures from 1895 to 1941. Development of film as an art form and distinctive medium of communication. Relationship of film to other arts and to social and political climates in which cinematic forms and techniques evolved.
Prerequisite or corequisite: Film 1 or permission of the chairperson.

## 16 History of Film II

## 4 hours; 3 credits

Motion pictures from 1941 to the present. International nature of cinematic development. Screening of films that illustrate major theories of cinema. Discussion of outstanding directors and critical reactions to their work.
Prerequisite or corequisite: Film 1 or permission of the chairperson.

## 17 Cultural Perspectives in Film

4 hours; 3 credits
Analysis of cultural and theoretical issues in a cross-section of thematically linked historical and contemporary films.
Topics may include specific investigations into such issues as censorship, gender, race, ethnicity, and/or sexuality in film.
Prerequisite: Film 1.

## 18 Current Cinema and Criticism

4 hours; 3 credits
Intensive analysis of contemporary films; study of major trends in contemporary film criticism. Students will be expected to attend assigned screenings at archives, festivals, and theaters.
Prerequisite: Film 1 or permission of the chairperson.

## 20 The Nonfiction Film

4 hours; 3 credits
Introduction and overview of the development of a documentary tradition in international filmmaking. Lectures, screenings, and discussions will be geared toward analyzing nonfiction film as a medium of observation, education, persuasion, activism, and aesthetic expression.
Prerequisite: Film 1 or permission of the chairperson.

### 21.2 Italian Literature and Italian Cinema

 3 hours; 3 creditsThe relationship between Italian literary works and the films they inspired. Course description available in department office prior to registration. This course is the same as Italian 30.50. Taught in Italian. (Not open to students who have completed Italian 21.)
Prerequisite: Film 1 and Italian 17.50 or permission of the chairperson of the Modern Languages and Literatures Department.

## 22 Women in Film

4 hours; 3 credits
The various images of women in film from the beginning to the present. Readings and discussions of myths, fears, and fantasies that have led to the production of such images. The star system and its relationship to women performers. Screenings include films made by and about women. This course is the same as Women's Studies 48.
Prerequisite: Film 1 or permission of the chairperson.

## 24 American Film Comedy

4 hours; 3 credits
Consideration of the masterworks of a number of major silent and sound film comedians and filmmakers. Lectures and class discussions consider such matters as the serious intent of comedy; the connections between comic form and content; the creation and repetition of the personae of major comedians; erotic, aggressive, and infantile dimensions of the comic sensibility.
Prerequisite: Film 1 or permission of the chairperson.

## 25 Experimental, Underground, and Avant-Garde Films

 4 hours; 3 creditsExamination of experiments in film technique, form, and content. Examples for screening drawn from significant works outside the commercial film industry.
Prerequisite: Film 1 and one additional film studies course.

## 26 The Director's Cinema

4 hours; 3 credits
Intensive analysis of the style and themes of one major director (such as Bergman, Fellini, or Hitchcock) or of two directors (such as Renoir and Lang or Eisenstein and Lee). Students may take this course for credit three times, but may not repeat topics.
Prerequisite: Film 1 or permission of the chairperson.

## 27 Film Technology and Aesthetics

4 hours; 3 credits
Analysis of a specific film technology and its impact on film form.
Prerequisite: Film 1.

## 28 National Cinema

4 hours; 3 credits
Survey of a major cinema reflecting the intellectual and artistic traditions of a nation such as India, Australia, or Japan. Students may take this course for credit three times, but may not repeat area studied.
Prerequisite: Film 1 or permission of the chairperson.

## 29 Film Genres

4 hours; 3 credits
Studies in genre types and techniques. Narrative structure, theory, popular appeal of archetypal patterns, character stereotypes. Each term focuses on either an individual genre (westerns, science fiction, crime) or on genre as a popular film form and method of analysis. Students may take this course for credit three times, but may not repeat topics.
Prerequisite: Film 1 or permission of the chairperson.

## 30 Film Theory, Aesthetics, and Criticism

4 hours; 3 credits
Theoretical writings of Eisenstein, Pudovkin, Kracauer, Arnheim, Bazin, Lacan, Metz, Mulvey, Cavell, and others. Their application in cinema. Writing workshop for students interested in contemporary film criticism, supplemented by historical survey of film criticism in newspapers, magazines, and film journals. Course aims at film scholarship rather than journalistic reviewing.
Prerequisite: Film 1 or permission of the chairperson.

## 31 Global Cinema

4 hours; 3 credits
Survey of a major cinema tradition that transcends national borders. Topics selected according to regional, political, social, and/or cultural traditions shared by people across the globe. Topics include African cinema, postcolonial cinema, and the cultural exchange between Hollywood and different national cinemas. Students may take this course for credit two times, but may not repeat area.
Prerequisite: Film 1.

### 60.1 Special Topics in Film

## 4 hours; 3 credits

Social or aesthetic approaches to film study. Course description may be obtained in the department office before registration. Students may take this course for credit three times, but may not repeat topics.
Prerequisite: Film 1 or permission of the chairperson.
83.1, 83.2, 83.3 Independent Research I, II, III

Minimum of 9 hours independent work§ and conference or class meetings per week; 3 credits
Research or fieldwork in an aspect of film supervised by a faculty member. (Not open to students who have completed Film 83.)
Prerequisite: completion of 15 credits of advanced Film Department courses and approval of a specific research project by the supervising faculty member and permission of the chairperson.
Prerequisite: for Film 83.2: Film 83.1.
Prerequisite: for Film 83.3: Film 83.2.
See also 85.1, 85.2, 85.3, 85.4, which are listed with film production courses.

## 88.1, 88.2 Seminars in Genres

2 hours lecture, 2 hours screening; 3 credits each term Such limited and concentrated genre areas as Japanese film, Russian film, silent film, American film of the 1930s and 1940s, western, thriller, and comedy. Critical analysis and historical development.
Prerequisite: completion of a program, approved by the chairperson, of advanced Film Department courses.

## 89.1, 89.2, 89.3 Seminars in Directors

2 hours lecture, 2 hours screening; 3 credits each term The style and vision of important film directors. Such courses as the following are offered, the subject chosen by the instructor: New Wave French film (Godard, Truffaut, Resnais, Rivette, Chabrol, and Rohmer); Italian neo-realism (Rossellini, De Sica, Visconti, and Fellini); cinema of Dreyer and Bergman; cinema of John Ford; cinema of D.W. Griffith; cinema of Jean Renoir; cinema of Buñuel and Bresson; cinema of Godard and Antonioni. Emphasis on the director's controlling vision of a film.
Prerequisite: completion of a program, approved by the chairperson, of advanced Film Department courses.

## Film production

## 32 The Business of Film

4 hours; 3 credits
The study of film as a commercial enterprise, from Hollywood studios to New York independents, from the international marketplace to ancillary markets like cable and home video. Prerequisite: Film 1.

### 40.1 Film Production I

2 hours lecture, 2 hours laboratory; 3 credits
Introduction to fundamentals of film production through demonstrations, lectures, and hands-on use of motion picture cameras, lenses, filters, lighting equipment, film stocks, and sound recording equipment. Individual and group film projects, which are evaluated and criticized.
Prerequisite or corequisite: Film 1 and 61, or permission of the chairperson.

### 40.2 Film Production II

2 hours lecture, 2 hours laboratory; 3 credits
Team writing, shooting, editing, and group criticism. Each student works as director, editor, writer, and cinematographer on sequences of 16 mm film. Concept, research, writing, cinematography, editing, and sound. Discussion of problems encountered. Must be taken concurrently with Film 43.
Prerequisite: Film 1, 40.1, and 61, and permission of the instructor.

## 43 Film Directing Workshop I

2 hours lecture, 2 hours laboratory; 3 credits
Theoretical analysis and practical laboratory application of directing. Students direct and act in prepared scenes. Critique and analysis of the exercises. Must be taken concurrently with Film 40.2.
Prerequisite: Film 1, 40.1, 61, and permission of the instructor.

## 44 Film Directing Workshop II

4 hours; 3 credits
Continuation of Film 43. Theoretical analysis and practical application of directing. Students direct and act in prepared scenes. Critique and analysis of scenes. (Not open to students who have completed Film 68.2.)
Prerequisite: Film 1, 40.1, 40.2, 43 or 68 or 68.1, 46.1, 46.2, $48,55.1$, and 61 , or permission of the chairperson.

### 46.1 The Qualifying Film: Production

2 hours lecture, 2 hours laboratory; 3 credits
Production of a short, intermediate-level synchronized sound film from development and preproduction through principal photography. Students work on individual projects, taking turns performing different roles in a film crew.
Prerequisite: Film 1, 40.1, 40.2, 43, 48, and 61.
46.2 The Qualifying Film: Postproduction

2 hours lecture, 2 hours laboratory; 3 credits
Hands-on postproduction workshop enabling the student to complete the short, intermediate-level, synchronized sound film begun in Film 46.1.
Prerequisite: Film 1, 40.1, 40.2, 43, 46.1, 48, and 61.

## 47 Sound Design

4 hours; 3 credits
Introduction to the relationship between picture and sound. The complex interactions between dialogue, music, and effects will be explored, as well as the aesthetic possibilities of sound and the basic skills to design and combine various sound sources. The major focus will be the development of an individualized sound design for a student's 16 mm film project. (Not open to students who have completed Film 47.1.)
Prerequisite: Film 40.1 or permission of the chairperson.

## 48 Location Sound

2 hours lecture, 2 hours laboratory; 3 credits
The fundamentals of sync sound recording. Acoustics, microphones, studio and location recording of dialogue, music, and effects. Hands-on use of professional recording equipment including: Nagra 4.2, Time Code Nagras, Smart Slates, DAT, radio microphones, and mixers. Assessment of dramatic and documentary scenes from an audio perspective.
Prerequisite: Film 1, 40.1, and 61, or permission of the chairperson.

## 49 Community Portraits: Documentary Production

 4 hours; 3 creditsIntroduction to the fundamentals of documentary production.
The course will guide students through the basic three stages of a documentary project: research and development, production, and postproduction. Students may choose from various moving image formats to shoot their work and will edit using nonlinear systems. This course is the same as Television and Radio 27.2. (Not open to students who have completed Film 49.1.)
Prerequisite: Film 1, 40.1, 40.2, 43, 48, and 61; or Television and Radio 27.1; or permission of the instructor.

### 50.1 Advanced Cinematography: 16mm Film

4 hours; 3 credits
Lectures, demonstrations, and workshops in equipment and materials used to film motion pictures. Operation and characteristics of cameras, lenses, accessory camera equipment, film emulsions, lighting, and laboratory processing. Prerequisite: Film 40.2.

### 50.2 Advanced Cinematography: Digital Formats

## 4 hours; 3 credits

Lectures, demonstrations, and workshops in equipment and materials used in digital format motion pictutes. Operation and characteristics of cameras, lenses, accessory camera equipment, and lighting.
Prerequisite: Film 1, 40.1, 40.2, 43, 61, and permission of the instructor.

### 55.1 Film Editing

2 hours lecture, 2 hours laboratory; 3 credits
Montage and first principles in the art of film editing: time, rhythm, visual and aural relationships. Expressive aspects of the editing process. Interconnection of concept, script, photography, and directing as related to editing. Emphasis on formal instruction in theories, techniques, and equipment use. (Not open to students who have completed Film 55.)
Prerequisite: Film 1, 40.1, and 61.

### 56.1 Film Producing

2 hours lecture, 2 hours laboratory; 3 credits
The process of producing a film from acquisition of the property through distribution. Topics include: selling an idea; working with screenwriters; assembling financing; selecting primary personnel; casting; the production process; and the postproduction process. Hands-on work in breaking down a script, creating a budget, establishing a shooting schedule, preparing production strip boards and call sheets, negotiating deals, and working (or not) with unions.
Prerequisites: Film 1, 40.1, 40.2, 43 or 68 or $68.1,46.1,46.2,48$, 55.1 , and 61 , or permission of the chairperson.

## 57 Animation I

4 hours; 3 credits
Principles of animation and techniques of working with the animation stand. Students screen films in various media and prepare weekly exercises in super-8mm using sand and gravel, clay, cutouts, and pixilation, paint-on-film, and cel-animation techniques.
Prerequisite: Film 40.1 and Art 25 or permission of the chairperson.

## 61 Screenwriting I

## 4 hours; 3 credits

An introduction to the principles of screenwriting with special attention given to traditional cinematic narrative, plot and structure, scene design, and character development. Students learn by screening and discussing relevant short films, writing short screenwriting exercises, and completing a short screenplay.
Prerequisite or corequisite: Film 1.

### 62.1 Screenwriting II

4 hours; 3 credits
An examination of theories and approaches to writing the feature-length screenplay.
Prerequisite: Film 1, 40.1, and at least one upper-level film studies elective; Film 61 with a grade of $B$ or higher; permission of the instructor.

### 62.2 Screenwriting III

4 hours; 3 credits
Advanced workshop in writing screenplays. Each student will complete a feature-length script. Maybe repeated for credit.
Prerequisite: Film 1, 40.1, 61, and at least two upper-level film studies electives; Film 62.1 with a grade of B or higher; permission of the instructor

### 63.1 Advanced Screenwriting: Adaptation

## 4 hours; 3 credits

Workshop in adapting stories, novels, and plays to screen format. Students' work is the basis of class discussion. Successful screen adaptations will be screened, read, and discussed.
Prerequisite: Film 61 or permission of the chairperson.
63.2 Advanced Screenwriting: Writing the Genre Film 4 hours; 3 credits
Workshop in techniques and approaches to writing genre films. Prerequisite: Film 62 or permission of the chairperson.

### 63.3 Advanced Screenwriting: Writing the Low Budget Film

 4 hours; 3 creditsWorkshop in techniques and approaches to writing featurelength films for the independent cinema.
Prerequisite: Film 62 or permission of the chairperson.

## 64 Advanced Film Production

4 hours; 3 credits
Preparation and shooting of a film in 16 mm or digital format including synchronized sound, with the choice of working in narrative fiction or documentary mode. Consideration of preproduction requirements, research, script breakdown, budgets, schedules, and actual production logistics leading to completion of principal photography on selected projects.
Prerequisite: Film 1, 40.1, 40.2, 43, 46.1, 46.2, 48, 55.1, 61; approval by the production faculty of the completed sound Qualifying Film.

## 65 Music for Film

4 hours; 3 credits
Practical and theoretical considerations in composing music for films. Course is taught by a practicing film composer from the Conservatory of Music.
Prerequisite: permission of the director of the Conservatory of Music.

## 66 Advanced Film Post-Production

4 hours; 3 credits
Emphasis on individual practical work and the completion of a film begun in Film 64. Open only to students who have directed or are editing a film begun in Film 64.
Prerequisite: Film 1, 40.1, 40.2, 43, 46.1, 46.2, 48, 55.1, 61, 64.

## 67 Computer-Controlled Nonlinear Film Editing

 4 hours; 3 creditsTheoretical and practical principles for AVID, a computercontrolled, non-linear editing system in post-production with sync sound film material.
Prerequisite: Film 66 or permission of the chairperson.

## 70 Senior Screenwriting Practicum

4 hours; 3 credits
Intensive workshop for film majors concentrating in screenwriting.
Prerequisite: Film 63.1, 63.2, or 63.3, and senior status, or permission of the chairperson.
83.1, 83.2, 83.3 Independent Research I, II, III

Minimum of 9 hours independent work§ and conference or class meetings per week; 3 credits
Research or fieldwork in an aspect of film supervised by a faculty member. Participation in the preproduction, production, and postproduction of an independent film project. (Not open to students who have completed Film 83.)
Prerequisite: completion of 15 credits of advanced Film Department courses and approval of a specific research project by the supervising faculty member and permission of the chairperson.
Prerequisite: for Film 83.2: Film 83.1.
Prerequisite: for Film 83.3: Film 83.2.
85.1, 85.2, 85.3, 85.4 Intensive Film Workshop I, II, III, IV 9 hours fieldwork plus conferences; 3 credits Intensive workshop for students engaged as interns or apprentices in a museum film study center; at a distribution, marketing, or production office; or on a professional production.
Prerequisite: 15 credits of advanced Film Department courses and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 21.1 French Literature and Cinema <br> 23.1 Master Class: Film Artists <br> 23.2 Master Class: Film Producers <br> 56.2 Alternate Producing <br> 58 Animation II

## General Science

General science courses are taught by faculty members in the Departments of Biology, Chemistry, Computer and Information Science, Geology, Mathematics, and Physics.

## Concentration in general science for majors in the

 following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in general science must complete a program of 30 credits in general science and one of the following departments: biology, chemistry, geology, physics. A grade of C or higher is required in each course.

## Concentration requirements:

Core Studies 7.1, 7.2, 8.1, 8.2 (or the equivalent). General Science 20 and 30. Three of the following courses: General Science 9.1, 9.2, 9.3, 9.4.
One of the following options:
a) At least 10 credits in biology, including Biology 3 .
b) At least 10 credits in chemistry, including Chemistry 5 or 1; or 1.1 and 1.2.
c) At least 10 credits in geology, including Geology 1 .
d) At least 10 credits in physics, including Physics 1, or 1.1 and 1.2.

## Courses

### 9.1 Geophysics

2 hours lecture, 2 hours laboratory; 3 credits
An inquiry- and lab-based study of the materials and structure of the earth; physical properties and states of matter, their dependence on temperature and pressure; internal structure of the earth and methods of studying it.
Prerequisite: Core Studies 7.2 and 8.2 or an approved substitute as listed in the Bulletin.
Prerequisite or corequisite: Mathematics 1.95 and Core Studies 5 or 5.2.

### 9.2 Light and Visual Perception

2 hours lecture, 2 hours laboratory; 3 credits
An inquiry- and lab-based study of the nature of light; refraction and reflection; geometrical optics; wave properties of light; optical properties of human and animal visual systems.
Prerequisite: Core Studies 7.2 or an approved substitute as listed in the Bulletin.
Prerequisite or corequisite: Mathematics 1.95 and Core Studies 5 or 5.2.

### 9.3 Chemistry and Biology in Everyday Life

2 hours lecture, 2 hours laboratory; 3 credits
An inquiry- and lab-based study of chemistry and biology in everyday life; relation to more general scientific principles.
Prerequisite: Core Studies 7.1 and 8.1, or an approved substitute as listed in the Bulletin.
Prerequisite or corequisite: Mathematics 1.95 and
Core Studies 5 or 5.2.

### 9.4 Studies in Paleobiology

2 hours lecture, 2 hours laboratory; 3 credits
An inquiry- and lab-based study of important aspects of evolutionary paleontology and the history of life as illustrated by the fossil record. Adaptation, size scaling, evolutionary processes, and paleoecology. One required field trip to study modern beach environments and to collect fossils.
Prerequisite: Core Studies 8.1 and 8.2, or an approved substitute as listed in the Bulletin.
Prerequisite or corequisite: Mathematics 1.95 and Core Studies 5 or 5.2.

## 20 Natural Science in Early Childhood and Elementary Education

1 hour lecture, 2 hours laboratory; 2 credits
Science activities, demonstrations, and experiments useful in early childhood and elementary education. Taught in coordination with Education 45 or 45.1. Emphasis on laboratory experiences using non-toxic and familiar objects and materials.
Prerequisite: General Science 10 and Education 38. Corequisite: Education 45 or 45.1.

## 30 Independent Research

1 hour lecture, 2 hours laboratory or conference; 3 credits Faculty-mentored independent library or laboratory research in one of the science disciplines or an interdisciplinary science. Students will prepare a final project for presentation. Prerequisite: permission of the General Science coordinator.

## Geology

Department office: 3131 Ingersoll Hall
Telephone: 951-5416
Chairperson: Nehru E. Cherukupalli
Deputy Chairperson, CLAS: E. Lynn Savage
Deputy Chairperson, Division of Graduate Studies:
Constantin Crânganu
Professors: Chamberlain, Cherukupalli, Friedman, Leveson, Savage, Seidemann;
Associate Professor: Aja, Crânganu;
Assistant Professor: Powell.
The Department of Geology offers two programs, one leading to a bachelor of science degree, and one leading to a bachelor of arts degree. The B.S. degree program is intended for students who plan to study geology on the graduate level or to pursue professional careers in the field of geology. B.S. students must choose one of two areas of concentration: (1) geology; or (2) environmental geology. The former focuses on preparation in classical geology; the latter focuses on applied and environmental aspects of geology. The B.A. degree program is for students interested in a broad background in the earth sciences. Depending on their objectives, students should complete the requirements of one of the degree programs described below.

## Core curriculum

The Department of Geology participates in the college's core curriculum through Core Studies 8.2.

## Selecting a Program of Study

Students who anticipate majoring in geology should consult with a departmental adviser during their first year in the department in order to plan their programs. This is particularly important in choosing between the geology and the environmental geology concentrations in the B.S. degree program.

## B.S. degree program in geology <br> HEGIS code 1914

Department requirements ( $59^{1 / 2}-60$ credits)
A. All of the following:
a) Geology 1 .
b) Geology 2.2, 12, 17.01, 41.1.
c) Chemistry 1 and 2 , or their equivalents.
d) Mathematics 3.3 .
e) Mathematics 4.3 or Computer and Information Science 1.10 or 1.20 or 1.5 or an equivalent of one of them.
f) Biology 3, or Physics 1 or 1.5 , or an equivalent.
B. Students must complete either Option 1 or Option 2 below:
Option 1: Concentration in General Geology
At least 18 credits selected from among the following courses: Geology 13.53, 17.11, 17.21, 22, 25.1, 31.1, 32, 33.1, 36.11, 39.11, 43, 70.1 (once).

Option 2: Concentration in Environmental Geology
a) at least 9 credits selected from among the following courses: Geology 13.53, 17.11, 17.21, 22, 25.1, 31.1, 32, 33.1, 36.11, 39.11, 70.1 (once).
b) at least 9 credits selected from among the following courses: Geology 18, 19.1, 20, 23.1, 32.5, 43, 53, 70.2 (once).

All required geology courses numbered 10 or higher must be completed with a grade of C - or higher in each course.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in geology must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Geology Department. These 24 credits must be completed at Brooklyn College with a grade of C - or higher in each course. Specific course requirements for a B.S. degree are described above.

The following courses may be applied toward the 60 credits in science and mathematics:
a) All courses in the departments of biology, chemistry, computer and information science, geology, mathematics, physics, and psychology.
b) Courses marked with a (•) symbol in the Department of Health and Nutrition Sciences.
c) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3.
Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2.
Economics 30.2, 30.3, 31.1, 31.2.
Philosophy 13, 33, 42.
Physical Education 22.71, 22.75, 23, 30, 51.
Sociology 77.1

## B.A. degree program in geology <br> HEGIS code 1914

Department requirements (35-36 credits)
All of the following:
a) Geology 1 .
b) Geology 2.2.
c) Eighteen credits in geology courses numbered 10 or above.
d) Chemistry 1 or its equivalent.
e) Mathematics 3.3, or Computer and Information Science 1.10 or 1.20 or 1.5

All required geology courses numbered 10 or higher must be completed with a grade of C - or higher in each course

## Recommendation for prospective graduate students

Students who plan graduate study in general geology should select advanced electives pertinent to their planned course of study, and should, if possible, include in their B.S. program elective courses in the following subjects: petrology, geomorphology, paleontology, sedimentology, stratigraphy, and geochemistry. All B.S. students planning graduate study, regardless of the concentration track selected, should also develop reading competence through course 2 in at least one foreign language chosen from French, German, and Russian.

## Requirements for a minor in geology

A program of 12 credits of advanced electives in geology, each completed with a grade of C- or higher at Brooklyn College.

## Division of Graduate Studies

The Geology Department offers a master of arts degree program in geology and a master of arts degree program in applied geology. The department also offers courses creditable toward the CUNY doctoral degree program in earth and environmental studies. For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
Field trips or similar extra-classroom activity may be required in any course.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Workshops

No credit
Voluntary sessions for students enrolled in Core 8.2 and Geology 1 who need additional assistance. Emphasis on solution of problems encountered in the courses.

## *0.1 Introductory Environmental Geology

## 3 hours; 3 credits

Environmental aspects of atmosphere, hydrosphere, and lithosphere; living earth ecosystem; geological pollution of the atmosphere and hydrosphere and its implications; geological hazards, hostile environments, and their control; and environmental planning and management.

## *0.5 Introductory Oceanography

3 hours; 3 credits
Introduction to the sciences of the sea. Unity of the marine sciences and their importance to human society. Relationships between oceanography and biology, chemistry, geology, and physics. (Not open to students who have completed Geology 44.)

## *0.8 Exploring the Boundaries of Time

3 hours; 3 credits
Exploration of the meaning of time; history of the measurement of time; cultural perspectives of time; calendars; absolute and relative time; geologic and other methods of age determination.

## *1 General Geology I

3 hours lecture, 3 hours laboratory; $41 / 2$ credits Earth origin, crustal development (lithosphere, hydrosphere, atmosphere), vulcanism, and plutonism; evolution and equilibrium of the continental masses and ocean basins; mountain building; geologic time. Laboratory work includes study of minerals, rocks, topographic and geologic maps, and field trips.

## *2.2 General Geology II

3 hours lecture, 3 hours laboratory; $41 / 2$ credits
Historical geology; principles and concepts of geologic time, sedimentation, and stratigraphy; origin of life; plate tectonics; organic evolution; regional geology of North America. Laboratory work includes the study of evolution, paleoecology, paleogeography, regional geology of North America. Laboratory work includes one or more field trips.
Prerequisite: Geology 1.

## 12 Field Mapping

120 hours supervised field and laboratory work; 4 credits Approximately three to four weeks of supervised field and laboratory work in the Folded Appalachians or another region. Field preparation of geologic maps and sections by means of the Brunton compass, topographic base maps, and aerial photographs of the region selected. Required final report including maps, sections, description of physiography, stratigraphy, and structure. Expenses approximately $\$ 500$.
(Not open to students who are enrolled in or have completed Geology 12.1.) Summer session.
Prerequisite: Geology 2.2, 41.1; or permission of the chairperson.

### 13.53 Igneous and Metamorphic Petrology

2 hours lecture, 4 hours laboratory; 4 credits
Occurrence, classification, evolution, and origin of igneous and metamorphic rocks; plate tectonic associations; phase diagrams and their use in petrogenesis; origin, evolution, and emplacement of magmas; metamorphic belts; laboratory work includes petrographic study of rock in thin section, hand specimen, and in the field. Laboratory work includes one or more field trips. (Not open to students who have completed Geology 13.5.)
Prerequisite: Geology 17.01 or equivalent.

## *14.2 The History of Life

3 hours; 3 credits
The history of life on earth demonstrated by fossils; origin and evolution of early life forms; the oxygen revolution; the rise of animals and diversification of life; origins of vertebrates; life on land; dinosaurs and the reptile zenith; origin and diversification of mammals; primates and human ancestry; mass extinction and the future.

## *14.3 Geology of the National Parks

3 hours; 3 credits
Geologic history, processes, and features of National Parks and wilderness areas in the United States; the role of park lands in modern society; parks as preserves and natural geologic laboratories.

### 17.01 Mineralogy

2 hours lecture, 4 hours laboratory; 4 credits
Crystallographic, chemical, and physical properties of minerals with emphasis on crystal structure. Introduction to recognition of minerals using transmitted light and X -ray diffraction analysis. Laboratory work includes one or more field trips. (Not open to students who have completed Geology 17.)
Prerequisite: Geology 1 or equivalent.
Prerequisite or corequisite: Chemistry 1.

### 17.21 Economic Geology and Energy Resources

 3 hours lecture; 3 creditsEarth's mineral and energy resources; their occurrence, associations, genesis, recovery, and use. (Not open to students who have completed Geology 17.2 or 21.)
Prerequisite: Geology 1.
18 Medical Geology
3 hours; 3 credits
Geological considerations in health hazards caused by materials of natural origin, including pollutants and radioactive substances in the solid, liquid, and gaseous realms. (Not open to students who completed Geology 70.1 during the spring, 1983 term.)
Prerequisite: Geology 1; or permission of the chairperson.

### 19.1 Geologic Aspects of Waste Disposal

2 hours lecture, 2 hours laboratory; 3 credits
Environmental effects of waste disposal; geological characterization of nonhazardous and hazardous waste; ground water regime and leaching problems; geological criteria for hazardous and nonhazardous disposal site selection. Sampling and evaluation of geological data;
case history studies; monitoring, remediation, clean-up procedures; and environmental regulations.
Prerequisite: Geology 1.

## 20 Geological Aspects of Conservation

3 hours; 3 credits
Methods of control and conservation of renewable resources: soils, groundwaters, and surface waters; and nonrenewable resources; ore deposits, petroleum, coal, and related natural resources. Natural resource planning and management: policy, inventory and development, environmental impact statements. Land-use planning: purpose, carrying capacity, and methodology.
Prerequisite: Geology 1 or 4 or 5.1.

## 22 Geological Problems and Opportunities in Urban Areas

2 hours lecture, 2 hours laboratory; 3 credits
Geologic aspects of environmental problems and opportunities of urban areas: water supply, waste disposal, construction materials, foundations, ground stability, stream floods, and coastal processes. Geology and urban and regional planning. Geology and the origin, evolution, and future of cities. Laboratory work includes the construction and use of observational and judgmental maps.
Prerequisite: Geology 1; or permission of the chairperson.

### 23.1 Hydrogeology of Water Resources

2 hours lecture, 2 hours laboratory and fieldwork; 3 credits
The global hydrologic cycle and its interrelations with climates, soils, and vegetation. Physical properties of surface and groundwater flow. Hydrologic analysis of surface water and groundwater resource management, groundwater geology. Major waste resource quantity and quality issues in the United States. Numerical calculations and problems will be emphasized. Discussion of case studies that describe different types of hydrologic systems and the development and management of groundwater resources. Supervised fieldwork in determining the extent of groundwater contamination. (Not open to students who have completed Geology 70.1 in spring, 1988.)
Prerequisite: Geology 1.

### 25.1 Geomorphology

2 hours lecture, 2 hours laboratory; 3 credits
Descriptive and analytical study of landforms and landscape evolution. Use of topographic maps and stereo aerial photographs. (Not open to students who have completed Geology 25.)
Prerequisite: Geology 1; or permission of the chairperson.

### 31.1 Invertebrate Paleontology

2 hours lecture, 2 hours laboratory; 3 credits
Paleobiology, paleoecology, classification, and biostratigraphy of fossil invertebrates. Laboratory work in collection, identification, and preparation techniques. Includes one or more field trips. (Not open to students who have completed Geology 31 or 39.3.)
Prerequisite: Geology 2.2; or Biology 3 and Core Studies 8.2; or permission of the chairperson.

## 32 Introduction to Geochemistry

3 hours; 3 credits
Survey of geochemistry including; chemical and isotopic abundances; geochemistry of rocks and natural waters; introduction to thermodynamics, crystal chemistry, and organic geochemistry. (Not open to students who are enrolled in or
have completed Chemistry 77 or Geology 77.)
Prerequisite or corequisite: Geology 1 or Core Studies 7.1; or permission of the chairperson.

### 33.1 History of Geology

3 hours; 3 credits
Study of changing ideas about the earth; emphasis on religious and sociological influences. Problems considered include: how earth study became scientific; the role of "fantastic" theories of the earth; the discovery of time; the nature of change; the meaning of fossils; the construction of modern geologic beliefs. Evaluation of different histories of geology.
Prerequisite: Geology 2.2 or permission of the chairperson.

### 36.11 Sedimentology and Sedimentary Petrology

2 hours lecture, 2 hours laboratory; 3 credits
Sediments and sedimentary rocks, their conditions of formation, basis of classifications; methods of mechanical, chemical, mineralogic, graphic, and statistical analysis, including binocular and petrographic microscopy; application of paleodirectional structures. Laboratory work includes one or more field trips. (Not open to students who have completed Geology 36.1 or 37.1.)
Prerequisite or corequisite: Geology 1 or equivalent.

### 38.1 Earth Science: Planetology-The Earth Perspective

 2 hours lecture, 2 hours laboratory; 3 creditsThe solar system; planetary bodies: sizes, composition, interior; meteorites; Sun-Earth-Moon relations; planetary environments; surface processes; heat balance and climates; earth's climatic and environmental features.
Prerequisite: Geology 1.

### 41.1 Structural Geology

2 hours lecture, 2 hours laboratory; 3 credits
Mechanical properties of rocks; rock deformation; folds; faults; joints; igneous, sedimentary, and metamorphic structures; diapirs and salt domes. Laboratory work includes structural maps and cross sections, stereographic projections and one or more field trips involving use of the Brunton compass. (Not open to students who have completed Geology 41.) Prerequisite: Geology 1.
Prerequisite or corequisite: Geology 2.2 or permission of the chairperson.

## 43 General Geophysics

3 hours, 3 credits
Study of the gravitational, magnetic, seismic, and electrical principles involved in geophysics; geophysical exploration; earthquakes; structure and composition of the earth's crust and interior; geodesy; submarine geophysics.
Prerequisite: Physics 2 or 2.5 or Geology 1 or permission of the chairperson.

### 70.1 Special Topics in Geology

3 hours; 3 credits
A special topic in geology not covered in the regular curriculum. Topics vary and reflect the interest of students and faculty. Subject matter is announced before registration. This course is intended primarily for students choosing Option 1 for the B.S. degree. Topics include geochemistry, geophysics/tectonophysics, mineralogy/petrology, paleobiology/stratigraphy, sedimentology, geomorphology, and oceanography. A student may take this course and Geology 70.2 at most three times in total, but may not repeat topics.

Prerequisite: at least nine credits of advanced electives as established by the instructor and permission of the chairperson.

### 70.2 Special Topics in Environmental Geology 3 hours; 3 credits

A special topic in environmental geology not covered in the regular curriculum. Topics vary and reflect the interest of students and faculty. Subject matter is announced before registration. This course is intended primarily for students choosing Option 2 for the B.S. degree. Topics include environmental geochemistry, hydrogeology, medical geology, environmental geology, environmental policy, and other related environmental subjects. A student may take this course and Geology 70.1 at most three times in total, but may not repeat topics.
Prerequisite: at least nine credits of advanced electives as established by the instructor and permission of the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83.1, 83.2, 83.3 Independent Research I, II, III

 Minimum of 9 hours conference and independent work§; 3 credits each termIndependent research supervised by a faculty member. Weekly conference. Thesis or report.
Prerequisite of 83.1: completion of an approved program of advanced Geology Department courses and permission of the instructor and the chairperson.
Prerequisite of 83.2: Geology 83.1 and permission of the instructor and the chairperson.
Prerequisite of 83.3: Geology 83.2 and permission of the instructor and the chairperson.

## 84.1, 84.2, 84.3 Seminar I, II, III

Minimum of 9 hours conference and independent work§; 3 credits each term
Group study of some fundamental geological problem. Thesis or examination.
Prerequisite: completion of an approved program of advanced Geology Department courses and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 2.1 Dinosaurs Past and Present

4 Geology and the Urban Environment
5.1 Principles of Physical Geography

9 Evolution of Man
14.1 Geology of New York City and Environs
17.11 Optical Mineralogy
32.5 Environmental Geochemistry

38 Planetology
39.11 General Stratigraphy
44.5 General Oceanography

45 Oceanographic Laboratory Techniques
53 Environmental Aspects of Soils Geology

## Health and Nutrition Sciences

Department office: 4123 Ingersoll Hall
Telephone: 951-5026, 951-5027
Chairperson: Leslie Jacobson
Deputy Chairperson, CLAS and SGS: Craig P. Bell
Deputy Chairperson, Division of Graduate Studies, Health: Catherine Stayton
Deputy Chairperson, Division of Graduate Studies, Nutrition: Kathleen V. Axen
Professors: Axen, Bell, Friedmann, Greene, Jacobson, Levin, Mirotznik, Oppenheimer;
Associate Professors: Antoniello, Eastwood, Greenberg, Grommet, Hauck-Lawson, Schnoll, Sirota;
Assistant Professors: Grassman, Koizumi, Stayton, Weston;
DPD Program Director: Annie Hauck-Lawson.
DI Program Director: Roseann Schnoll

## B.A. degree program in health and nutrition sciences

 HEGIS code 1299Department requirements ( $57^{1} / 2-59^{1} / 2$ credits)
Health and Nutrition Sciences 6.1.
All of the following: Health and Nutrition Sciences 20, 21, $22.71,22.72,24,25.1$ or $29,26,60$, and one fieldwork course chosen from 56, 58.1 or 58.2.
A minimum of 12 credits in Health and Nutrition Sciences courses numbered in the 30s and/or 40s.
A minimum of 6 credits from the following courses: Health and Nutrition Sciences 50, 50.5, 55, 56.5, 57, 59, 60.1, 68, and courses numbered in the 70s.
Biology 4 and Chemistry 1 or 5.

## Department recommendation

Prospective health and nutrition sciences majors should consult a department counselor before choosing a program of study leading to a B.A. degree.

## B.S. degree program in health and nutrition sciences HEGIS code 1299

Department requirements ( $671 / 2-73$ credits)
Health and Nutrition Sciences 6.1, 22.71, 60.
Biology 4.
Biology 52 and 52.1.
A collegewide minimum of 24 credits in advanced courses in one department must be completed at Brooklyn College with a grade of C or higher in each course.
In addition, all students must complete the requirements in one concentration: health science or foods and nutrition.

## Concentration in health science

Biology 3.
Chemistry 1 and 2 ; or 5 and 50 .
All of the following: Health and Nutrition Sciences 20, 21, $22.72,24,25.1$ or $29,26$.
A fieldwork course chosen from Health and Nutrition Sciences 56, 58.1, 58.2.
A minimum of 12 credits in health and nutrition sciences courses numbered in the 30s and/or 40s.
A minimum of 6 credits from the following: Health and Nutrition Sciences 50, 50.5, 55, 56.5, 57, 59, 60.1, 68, and courses numbered in the 70 s .

## Concentration in foods and nutrition

Students who complete this concentration will meet the requirements for the Didactic Program in Dietetics (DPD) of the American Dietetic Association (ADA). DPD is a term used by the American Dietetic Association to describe the program fulfilling the academic component of membership in the society as well as the eligibility requirements for the registration examination.
Chemistry 1 and 2 , or 5 ; and 50 .
All of the following: Health and Nutrition Sciences 29, 41.1, $41.2,47,51,52$ or $63,53.1,54.1,54.6,54.7,68$, and 73.

## Recommendation

Because ADA requirements are subject to change, students who wish to become members of the ADA or registered dietitians should consult with the DPD program director in the department to determine minimum academic requirements. For the purpose of ADA verification all required courses for the degree must be completed with a grade of C or better. Prospective health and nutrition sciences majors should consult a department counselor before choosing a program of study leading to a B.S. degree.

Health and nutrition sciences concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in health and nutrition sciences must complete at least 30 credits in the Health and Nutrition Sciences Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

Health and Nutrition Sciences 6.1. Health and Nutrition Sciences 14 or Physical Education and Exercise Science 23. Health and Nutrition Sciences 25.1, 35, 36, 37, and 50. One of the following courses: Health and Nutrition Sciences 2, 12, $20,38,39,40$. One of the following courses: Health and Nutrition Sciences 21, 34, 44. One of the following courses: Health and Nutrition Sciences 47, 55, 56, 57, 59.

## Requirements for a minor in health and nutrition sciences

A minimum of 12 credits in at least four courses of advanced electives in health and nutrition sciences, each completed with a grade of C or higher. Courses numbered below 20 may not be used; at least one course must be in the 20s sequence.

## Division of Graduate Studies

The Health and Nutrition Sciences Department offers the following graduate programs: master of arts in community health with concentrations in community health education and thanatology; master of public health in community health with concentrations in community health, health care policy and administration, and health care management; master of science in nutrition; master of science in computer science and health science (cosponsored with the Computer and Information Science Department); master of science in health and nutrition sciences: health teacher (all grades). The department also offers a dietetic internship (DI) accredited by the American Dietetic Association.
For information, students should consult the department's deputy chairperson for graduate studies or the DI program director. A Graduate Bulletin may be obtained in the office of admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
Courses marked with a dot ( $\cdot$ ) are applicable to the 60 -credit science and mathematics requirement for the B.S. degrees in biology, chemistry, computer and information science (including computational mathematics), geology, mathematics, physics, psychology, and the interdepartmental major in science.
The dot ( $\cdot$ ) does not affect the requirements for the B.S. degree program in health and nutrition sciences.
§Independent work means not less than three additional hours each week of conference, research, reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## -*2 Death, Life, and Health

3 hours; 3 credits
Individual and societal attitudes concerning death and life. How attitudes about death influence the quality of life and health. Impact of bereavement on survival and health. Medical concerns in treatment of the terminally ill. Hospices. The living will. Organ transplantation. Impact of technology on the care of the dying.

## -*6.1 Personal and Community Health

3 hours; 3 credits
Basic health concepts. Personal responsibility for health maintenance and improvement for individuals, families, and communities.

## *8 Nutrition and World Hunger

3 hours; 3 credits
Principal elements of food production and distribution.
Determinants of the adequacy of the world's food supply.
Nutritional consequences of inadequate food supply.

## -*12 Contemporary Health Problems of Children and Youth <br> 3 hours; 3 credits

Factors influencing health throughout the school years. Identification of basic issues. Alternative and conflicting approaches to solving health problems. The School of Education recommends that prospective teachers take Health and Nutrition Sciences 12 in conjunction with all education sequences (early, elementary, and secondary). (Not open to students majoring in health and nutrition sciences.)
Prerequisite: candidacy for New York State teacher certification.

## - 20 Health and Human Ecology

3 hours; 3 credits
Ecological factors of health. Theories of adaptation to a changing environment. Technological advances and environmental reaction. Air, water, noise, and waste pollution. Needs and responsibilities of the individual as a user of the environment.
Prerequisite: Health and Nutrition Sciences 6.1.

## -21 Principles in Health Science

3 hours; 3 credits
Scientific and philosophical bases of health principles. Social conditions influencing health. Principles affecting health programs.
Prerequisite: Health and Nutrition Sciences 6.1.

## -21.1W Principles in Health Science

2 hours lecture, 2 hours laboratory; 3 credits
Scientific and philosophical health principles. Social conditions influencing health. Principles affecting health programs. Writing-intensive section.
Prerequisite: Health and Nutrition Sciences 6.1 and English 2.

## -22.71 Human Physiology

## 3 hours; 3 credits

Application of physiological concepts to health and life.
The mechanism and control systems that allow for functional harmony. Systemic approach to the physiology of bone, muscle, nerve, special senses, circulation, respiration, digestion, metabolism, the endocrine glands, and reproduction. This course is the same as Physical Education 22.71. (Not open to students who are enrolled in or have completed Biology 6.1 or 6.2.)
Prerequisite: Biology 1 or 4, and 2 or 3.

## -22.72 Physiology Laboratory

1 hour lecture, 2 hours supervised laboratory and/or supervised fieldwork; 2 credits
Development of skill in the use of clinical and research apparatus and techniques. Students work with practical electrophysiological measures such as EEG and EKG. Application of material covered in Health and Nutrition Sciences 22.71. (Not open to students who are enrolled in or have completed Biology 6.1 or 6.2.)
Prerequisite or corequisite: Health and Nutrition Sciences 22.71.

## - 24 Introduction to Epidemiology: Laboratory

 3 hours recitation, 2 hours laboratory; 4 creditsInternational, national, and local issues in public health; demography; prevention and control of disease; health problems of disadvantaged and displaced people. Laboratory experiences in data analysis, disease surveillance, investigation of disease outbreaks, and causal analysis of chronic diseases.
Prerequisite: Health and Nutrition Sciences 6.1.

## -25.1 Fundamentals of Nutrition

3 hours; 3 credits
Fundamental principles of nutrition as they relate to optimum health of the individual and the family. Social, economic, and educational implications. Evaluation of various mass media relating to the field. This course does not satisfy the department requirement for students majoring in foods and nutrition. (Not open to students who are enrolled in or who have completed Health and Nutrition Sciences 29.)

## -26 Introductory Field Survey in Health Science

2 hours recitation, 2 hours supervised field service; 3 credits Introductory examination of services provided in the health care delivery system. Introduction to the organization, administration, financing, delivery, and evaluation of services, and the experience of patients. Application and analysis of theory through site visits and examination of professional roles.
Prerequisite: Health and Nutrition Sciences 6.1.

## - 29 Human Nutrition

## 4 hours; 4 credits

Utilization of food by the body. Nutrient requirements under varying conditions of growth, occupation, and climate. Energy metabolism and weight control. Calculation and computation of nutrient composition of selected foods, food groups, and diets.
Prerequisite: Biology 1 or 4 , and 2 or 3 .

## 30 Psychological Aspects of Health

## 3 hours; 3 credits

Contributions of psychology to the promotion and maintenance of health; prevention and treatment of illness; causes and correlates of health, illness, and related dysfunctions. Evaluations of research about psychological contributions to health. (This course is the same as Psychology 16.)
Prerequisite: Health and Nutrition Sciences 6.1; or Psychology 1.1 and one of the following: Psychology 10, 30.2, or 65.1.

## 31 Child Development: Typical and Atypical

3 hours lecture, 3 credits
Health perspectives on development of the child from birth through middle childhood with focus on young children. Emotional, physical, and social development. Deviations from normal patterns of development, and study of specific disabilities. Environmental factors of particular importance in guiding growth. Course includes a child observation project.
Prerequisite or corequisite: Health and Nutrition Sciences 6.1 or Education 34 or Psychology 1.1.

## -32 Physiology of Health and Disease

3 hours; 3 credits
Interdependence and function of body mechanisms in the daily processes of adapting to the stress of life.
Prerequisite: Health and Nutrition Sciences 22.71 or Physical Education 22.71.

## 33 Current Concerns in Nutrition

3 hours; 3 credits
Principles of nutrition used to evaluate current issues and controversies. Topics include a basic overview of nutrition and nutrients, fad diets, cholesterol, sugar, megavitamins, nutrition labeling, food additives, health foods, nutrition and drug relationships, mass media and nutrition, and dietary fibers. (Not open to students concentrating in foods and nutrition or to students who have completed Health and Nutrition Sciences 4.)
Prerequisite: Health and Nutrition Sciences 25.1 or 29.

## 34 Women and the Medical System:

## A Feminist Perspective

 3 hours; 3 creditsModern medical systems and women's places as medical workers and consumers of medical services. History of women healers and health workers. Influences of race, class, ethnicity, and sexual preference on illness and treatment of women. Politics of contraception, sterilization, abortion, and childbirth. Self-help care movement. This course is the same as Women's Studies 35.
Prerequisite: Health and Nutrition Sciences 6.1 or Women's Studies 10.7 or 10.8 ; or permission of the chairperson.

## - 35 Human Sexuality

3 hours; 3 credits
Development of awareness and understanding of one's sexuality. Differences in sexual expression. Relationship between sexuality and health. Effect of sterility, infertility, contraception, and abortion on the individual and on sexual responsibility.
Prerequisite: Health and Nutrition Sciences 6.1.

## -36 Family Influences on Child Health

3 hours; 3 credits
Parenthood, prenatal care; development and health of the child from birth to adolescence; school environment; physical handicaps.
Prerequisite: twelve credits in the department, including Health and Nutrition Sciences 6.1. A course in developmental psychology or child development is recommended.

## -37 Fundamentals of Health Counseling

3 hours; 3 credits
Role of the health counselor. Application of basic counseling skills to the solution of health problems.
Prerequisite: twelve credits in the department, including Health and Nutrition Sciences 6.1; or permission of the chairperson.

## -38 Health Appraisal

3 hours; 3 credits
Health problems of children and adults. Theoretical basis for health appraisal and screening. Techniques of health appraisal and screening, recording, interpreting, and counseling about test results; cooperation with public health services; confidentiality and consent; follow-up. Duties and limitations of the health appraiser.
Prerequisite: Health and Nutrition Sciences 6.1; and Health and Nutrition Sciences 22.71 or Physical Education 22.71.

## -39 Drugs and Society

3 hours; 3 credits
Exploration of drug use in our society and in earlier cultures. Nature and effects of various drugs. Psychological,
sociological, and legal aspects of drug use abuse.
Prerequisite: Health and Nutrition Sciences 6.1.

## -40 Environmental Health

3 hours; 3 credits
Environmental factors affecting health; community sanitation; heating, lighting, ventilation; camp, resort, swimming pool, and restaurant sanitation. Local conditions.
Prerequisite: Health and Nutrition Sciences 6.1.

## -40.5 Occupational Safety and Health

3 hours; 3 credits
Occupational safety, health programs, and services; hazards and control procedures; reporting and investigating of industrial accidents; legislation, standards, rules, and compliance procedures in achieving safety for workers.
Prerequisite: Health and Nutrition Sciences 6.1.

### 41.1 Fundamentals of Food

3 hours; 3 credits
Nutritional, functional, and chemical components of food. Factors in food selection and methods of preparation. Discussion of cultural, economic, and ecologic factors in food production, preparation, and consumption. (Not open to students who have completed Health and Nutrition Sciences 41.)
Prerequisite or corequisite: Health and Nutrition Sciences 25.1 or 29.

### 41.2 Fundamentals of Food Laboratory

4 hours laboratory; 2 credits
Development of skill in food selection, handling, preparation, and equipment use. Exploration of cultural food resources and food production systems. Application of material covered in Health and Nutrition Sciences 41.1. (Not open to students who have completed Health and Nutrition Sciences 41.)
Prerequisite or corequisite: Health and Nutrition Sciences 25.1 or 29; and Health and Nutrition Sciences 41.1.

### 42.5 Family Health and Relationships

3 hours; 3 credits
Family interaction, attitudes, and roles as they relate to major health problems and special needs of individuals throughout the family life cycle. Family health as it relates to and is influenced by other institutions in society.
Prerequisite: Health and Nutrition Sciences 6.1.

## 44 Contemporary Issues in Public Health and Health Care: Race, Class, and Gender

3 hours; 3 credits
Examination of the influence of race, class, and gender on health and medical care in the United States.
Prerequisite: Health and Nutrition Sciences 6.1.

## -46 Health Aspects of Maturity and Aging

3 hours; 3 credits
Development of awareness and understanding of the aging process. Health and health-related needs of the aging. Preventive, restorative, and rehabilitative services for the aged. Health education and long-term care for the disabled.
Prerequisite: twelve credits in the department, including Health and Nutrition Sciences 6.1.

## -47 Life Cycle Nutrition

3 hours; 3 credits
Basic nutrition concepts as they apply to the stages of the life cycle: pregnancy, infancy, childhood, adolescence, adulthood, and old age.
Prerequisite: Health and Nutrition Sciences 6.1; and 25.1 or 29.

## 50 Techniques of Community Health Education

 3 hours; 3 creditsIdentification and analysis of various techniques, media, approaches used in community health education. Analysis of health education campaigns.
Prerequisite: fifteen credits in advanced courses in the department, including one fieldwork course.

## -50.5 Geriatric Nutrition

## 3 hours; 3 credits

Integration of basic nutritional concepts with current knowledge of the aging process. Healthy and diseased states as they relate to nutritional needs and consumer concerns.
Prerequisite: Health and Nutrition Sciences 25.1 or 29.

## 51 Institutional Food Service Management

3 hours lecture, 3 hours fieldwork; 4 credits
Planning, purchasing, storage, preparation, and distribution of food in varied institutional settings. Principles of safety and sanitation in food services. Classic management theory as applied to food service systems. Supervised fieldwork component. (Not open to students who have completed both Health and Nutrition Sciences 66.1 and Health and Nutrition Sciences 66.2. Students who have completed Health and

Nutrition Sciences 66.1 may take this course, but will receive only 2 credits.)
Prerequisite: Health and Nutrition Sciences 41; or 41.1 and 41.2.

## - 52 Introduction to Experimental Foods

1 hour lecture, 4 hours laboratory; 3 credits
Experimental techniques including factors affecting preparation of standard food products and comparative methods and materials.
Prerequisite: Health and Nutrition Sciences 41; or 41.1 and 41.2.
Prerequisite or corequisite: Chemistry 50 or 51.

## -53.1 Community Nutrition Education

3 hours lecture, 2 hours supervised fieldwork; 4 credits Knowledge of education theories, health behaviors, human and group dynamics, and public policy in dietetics. Application of the principles of nutrition as they relate to the problems of different community groups at the local, national, and international level using nutritional assessment, program planning, education, and program evaluation techniques. Introduction to the public health approach to nutrition. Supervised field observations to study nutrition services in varied communities. (Not open to students who have completed Health and Nutrition Sciences 45 or 53.)
Prerequisite: Health and Nutrition Sciences 47.

## -54.1 Nutritional Chemistry

## 4 hours lecture; 4 credits

Biochemistry of carbohydrates, lipids, proteins, inorganic salts, enzymes, vitamins, hormones. Bioenergetics and oxidation reactions. Pathways of intermediary metabolism.
(Not open to students who are enrolled in or have completed Health and Nutrition Sciences 54 or Chemistry 58.)
Prerequisite: Health and Nutrition Sciences 29 and
Chemistry 50 or 51.

## -54.6 Medical Nutrition Therapy

4 hours; 4 credits
Pathophysiological basis for nutritional care in specific diseases; theoretical basis for therapeutic diets. (Not open to students who have completed Health and Nutrition Sciences 54.5.)
Prerequisite: Health and Nutrition Sciences 22.71, 29, and 47; or permission of the chairperson.
Corequisite: Health and Nutrition Sciences 54.7.

## -54.7 Applied Medical Nutrition

2 hours lecture, 2 hours supervised fieldwork; 3 credits
An introduction to the profession and practice of dietetics. Topics include: interpersonal communication skills; counseling theory and methods; screening for nutritional risk; nutritional assessment and evaluation; documentation methods; medical terminology; laboratory parameters; ethics of care; reimbursement issues; calculation of diets; enteral and parenteral nutrition; nutrient-nutrient and drug-nutrient interactions.
Prerequisite: Health and Nutrition Sciences 22.71 and 47; or permission of the chairperson.
Corequisite: Health and Nutrition Sciences 54.6.

## - 55 Sex Information and the Health Professional

## 3 hours; 3 credits

Developing an awareness of problems inherent in presentation of sex information. Dealing with the phenomena of responsible sexual behavior. Consideration of controversial issues as they relate to the individual, the family, and to community organizations.
Prerequisite: fifteen credits in advanced courses in the department; and a grade of C or higher in Health and Nutrition Sciences 35.

## 56 Health and the Hospitalized Child

2 hours recitation, 4 hours fieldwork; 4 credits
Physical, social, and emotional factors that affect hospitalized children and their families. Application of techniques and skills in dealing with children and health problems. Supervised fieldwork in a hospital setting.
Prerequisite: Health and Nutrition Sciences 36 and 37.

## - 57 Leadership in Health Action Groups

3 hours; 3 credits
Use of groups in influencing health behavior. Dynamics of effective health action groups. Group participation to demonstrate leadership skills, relationships, blocks to effective action. Learning to assess group needs. Capitalizing on individual personalities for change and growth. Ethics of teacher involvement.
Prerequisite: Health and Nutrition Sciences 6.1; and completion of 6 credits in advanced courses in health and nutrition sciences.

## - 58.1, 58.2 Community Health Service I, II

 6 hours; 3 creditsSupervised fieldwork in a designated health service agency. Conferences with instructor. Report or term project. Either course may be taken alone or first. Students are encouraged to meet with instructor one term prior to registration to discuss and arrange placement.
Prerequisite: completion of 12 credits in advanced elective courses in health and nutrition sciences with a minimum grade of $C$, or permission of the chairperson.

## 59 Internet Community Health Education

## 3 hours; 3 credits

This is a project-oriented course that introduces the student to community health education on the Internet. The theoretical basis for Internet community health education is discussed. Traditional program planning and evaluation models are adapted to the Internet, and skills unique to Internet community health education are developed.
Prerequisite: Health and Nutrition Sciences 6.1 and completion of six credits in advanced courses in the department

## - 60 Evaluation in Health Education

 3 hours; 3 creditsElementary statistical techniques applied to tests and measurements in health education. Design and evaluation of tests to measure health attitudes, knowledge, and behavior. Development and use of tests to augment the teaching of health. (Not open to students who are enrolled in or have completed Physical Education 75.)
Prerequisite: 12 credits in advanced health and nutrition sciences courses.

## -60.1 Program Planning and Community <br> Health Education

3 hours; 3 credits
Introduction to concepts of program planning for health education in the community. Program development, implementation, and evaluation of currently functioning community health education programs.
Prerequisite: Health and Nutrition Sciences 20, 21, 24, and six credits chosen from courses in the department numbered in the 30s and/or 40s.

## -63 Advanced Nutrition

## 3 hours; 3 credits

Biochemical and physiological functions of the nutrients. Metabolic interrelationships applied to the study of human nutrition. Nutrient requirements of individuals in various environments and stages of life. Nutritional status of individuals and population groups. Dietary, biochemical, and clinical methods of appraisal. Programs for improvement of nutritional status.
Prerequisite: Health and Nutrition Sciences 54; or 54.1; or 54.6 and 54.7.

## -68 Organization, Administration, and Supervision of Health Services

3 hours; 3 credits
Increasing demands for health services; determinants of health policy making; utilization of health care resources; health expenditures in the total economy; structuring health care systems; quality controls of services.
Prerequisite: Health and Nutrition Sciences 21 or 26 or 53.1.

## Seminars

## -72.1 Seminar in Current Literature in Philosophy of Health

3 hours; 3 credits
Exploration of current literature in the philosophy of health as it relates to human development. Project or report.
Prerequisite: eighteen credits in advanced courses in the department and permission of the chairperson.

## -72.2 Seminar in Current Literature in the Science of Health <br> 3 hours; 3 credits

Exploration of current literature in science related to health and human development. Project or report.
Prerequisite: eighteen credits in advanced courses in the department and permission of the chairperson.

## -73 Seminar in Recent Trends in Nutrition

3 hours; 3 credits
Critical survey of current literature in the field. Discussion of concepts of research methodology. Interpretation and application of research findings to the nutritional well-being of individuals and population groups.
Prerequisite: nine credits in advanced courses in nutrition, and Health and Nutrition Sciences 22.71 and 60.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## -83.1, 83.2, 83.3 Directed Research I, II, III

Minimum of 9 hours conference and independent work§; 3 credits
Structuring of research topic and completing research in any area within the field of health science: designing, testing, and evaluating research data. Report on term project.
Prerequisite of 83.1: completion of an approved program of advanced health and nutrition sciences courses and permission of the chairperson.
Prerequisite of 83.2: Health and Nutrition Sciences 83.1 and permission of the chairperson.
Prerequisite of 83.3: Health and Nutrition Sciences 83.2 and permission of the chairperson.

## -88.1 Independent Study in the Health and Nutrition Sciences

6 hours conference and independent work§; 2 credits Independent study in an area of health and nutrition sciences. Conferences. Report or project.
Prerequisite: junior or senior standing and permission of the chairperson.

## -88.2 Independent Study in the Health and

 Nutrition Sciences9 hours conference and independent work§; 3 credits Independent study in an area of health and nutrition sciences. Conferences. Report or project.
Prerequisite: junior or senior standing and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 51.1 Advanced Foods: Cultural Perspectives 56.5 Child Growth and Health

## History

Department office: 524 Whitehead Hall
Telephone: 951-5303, 951-5304
Chairperson: Philip F. Gallagher
Deputy Chairperson, Administration and Counseling: Gunja SenGupta
Director of Graduate Studies: Philip F. Gallagher Professors: Anderson, Berger, Burrows, Gallagher, Johnson, Kimmich, King, Schaar;
Associate Professor: SenGupta;
Assistant Professors: Meyer, Napoli, Remy, Wills.

## Core curriculum

The Department of History participates in the college's core curriculum through Core Studies 4. It shares responsibility for Core Studies 9 with other departments.

## Department counseling

History Department counselors are available on a regular basis to all students for advice on majors, programs, and career opportunities. Prospective majors are urged to consult a department counselor as soon as possible to plan a balanced program.

## B.A. degree program in history

HEGIS code 2205
Department requirements (33 credits)
History 10. History 10 is a prerequisite of all history courses numbered in the 60s, 70 s , and 80 s with the exception of History 69.1, 69.2, 78.1, and 78.2.
Twenty-four credits in lower-division courses including at least three credits in each of the following groups:
a) Ancient, medieval, and early modern European history
b) Modern European history
c) Transnational and comparative history
d) United States history
e) African, Asian, Caribbean, Latin American, and Middle Eastern history.
Six credits in upper-division courses with a grade of C or higher in each course. One of these courses must be a colloquium.
History majors fulfilling program requirements described in earlier Bulletins should validate their programs with a department counselor at the time they declare the major.

## B.A. degree program in adolescence education: social studies teacher <br> HEGIS code 2201.01; SED program code 26754

The B.A. degree program for social studies teacher requires a social studies major, including study in economics, government, and at least 21 credits of study in the history of the United States and the world. The requirements of the History Department and the School of Education for students who wish to qualify for initial certification as social studies teacher are shown below. Students are advised to see the "Social Studies" and "Education" sections in this Bulletin. Additional information may be obtained from the School of Education or the Department of History. Students should consult a counselor as early as possible to plan their programs.
Program requirements ( 54 credits)
History 10. History 10 is a prerequisite of all history courses numbered in the $60 \mathrm{~s}, 70 \mathrm{~s}$, and 80 s with the exception of History 69.1, 69.2, 78.1, and 78.2.
Twenty-four credits in lower-division courses, including at
least 3 credits in each of the following groups:
Ancient, medieval, and early modern European history; Modern European history; Transnational and comparative history; United States history; African, Asian, Caribbean, Latin American, and Middle Eastern history.
Six credits in upper-division courses with a grade of $C$ or higher in each course. One of these courses must be a colloquium.
In accordance with state requirements that students preparing to teach social studies in grades 7 through 12 prepare themselves in government and economics, history majors in this degree program must include at least one course ( 3 credits) from among History 41.2, 41.6, 41.7, 43.2, 51.5, 53,65 , and one course from History 27 and 43.6.
The following pedagogical courses: Education 16, 34, 64.1, 69, 71.02, 72.02.
These courses are described in the "Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree program for social studies teacher.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

## History concentration for majors in the following programs: early childhood education teacher

 (birth-grade 2); childhood education teacher (grades 1-6)The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in history must complete 30 credits in the History Department with a grade of C or higher in each course. Students must meet with a History Department adviser to declare their intention to complete this concentration. They should also meet with an adviser in the School of Education regarding the appropriate sequence of teacher education courses.

## Concentration requirements:

History 30.4 and either History 44 or 44.1. One course in ancient, medieval, and early modern European history chosen from the following: History 11, 12, 21.4, 21.5, 21.6, 22, 23.3, 24, 24.1, 24.2, 24.5, 24.9. One course in modern European history chosen from the following: History 25.2, 25.3, 25.7, 25.8, 26.4, 26.6, 26.7, 27, 27.7, 27.8, 28.3, 28.9. Two courses in transnational and comparative history chosen from the following: History 30.1, 30.2, 30.21, 30.3, 30.5, 30.6. Three courses in United States history chosen from the following: History 13, 14, 41.1, 41.2, 41.3, 41.4, 41.6, 41.7, 43.1, 43.2, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 43.11, 43.13, 43.14, 43.15, 43.16, 44.1. One course in African, Asian, Caribbean, Latin American, and Middle Eastern history chosen from the following: History 16, 17, 18, 50, 51.4, 51.5, 51.6, 53, 53.4, 53.7, 53.11, 54, 55.1, 55.2, 58.9.

## Requirements for a minor in history

A minimum of 12 credits in history, each completed with a grade of $C$ or higher. At least six of these credits must be completed at Brooklyn College. Students should meet with a History Department counselor to plan a program suited to their individual interests or career plans.

## Requirements for a minor in archival studies and community documentation

The minor in archival studies and community documentation is offered in conjunction with the Department of the Library. Fifteen credits.
History 69.1 and 69.2.
One course from a department other than the student's major chosen from the following: Africana Studies 41, American Studies 61, Anthropology and Archaeology 2.21 or 37, Art 15.2, History 43.16, 44, or 44.1, Judaic Studies 48.5, Music 3, Political Science 25 or 38 or 75.2 , Psychology 10, Puerto Rican and Latino Studies 32.5, Sociology 26.
History 78.1 and 78.2.

## Department honors

Honors in history are recommended by vote of the department faculty members.
To be considered for honors in history, a major must achieve a 3.5 index in history courses and complete at least 3 credits of honors work.
The History Department gives a number of awards to outstanding and deserving students every year. Details are available in the History Department office and from department counselors.

## Recommendation for prospective graduate students

History majors who intend to continue their studies at the graduate level should develop reading comprehension at Level 4 or above in at least one foreign language pertinent to their field. It is also strongly advised that prospective graduate students in history complete at least one seminar in addition to other requirements.

## Candidates for law, business, or journalism school

History students preparing for a career in law, business, or journalism should consult a department counselor about courses especially relevant to those fields.

## Division of graduate studies

The History Department offers a master of arts degree program in history. Some courses may be creditable toward the CUNY doctoral degree. For further information, students should consult the department chairperson or deputy chairperson for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

§Independent work means not less than three additional hours each week of conference, research, reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 10 Introduction to the Study of History

3 hours; 3 credits
The nature, variety, and use of historical sources; the development of history as a profession; leading theories of history; recent trends and controversies in historical scholarship; basic techniques of critical reading, research, and historical writing; taking notes and preparing bibliographies. History 10 is a prerequisite of all history courses numbered in the 60s, 70 s , and 80 s with the exception of History 69.1, 69.2, 78.1, and 78.2.
Prerequisite: Core Studies 4.

## Lower-division courses

## Surveys

## 11 Civilization of Medieval Europe

## 3 hours; 3 credits

Society, culture, and politics in western Europe from late antiquity to the early Renaissance. Classical, Jewish, and Christian influences. The Germanic invasions. Rural environment and its economy, the revival of urban life, varieties of lordship and community, Gothic art and architecture. Extensive use of visual/computerized materials.
Prerequisite: Core Studies 4 or permission of the chairperson.

## 13 America to 1877

3 hours; 3 credits
American history to 1877. Political and economic developments from the colonial origins of American institutions through the Revolutionary era and the periods dominated by Federalism, Jeffersonianism, and Jacksonianism. Consideration of the issues of the Civil War and the Reconstruction era. (Not open to students who have completed History 3.)
Prerequisite: Core Studies 4 or permission of the chairperson.

## 14 America since 1865

3 hours; 3 credits
American history from the Civil War to the present. The Reconstruction era, emergence of big business, populism, progressivism, imperialism, the new freedom, World War I, the 1920s, the New Deal, World War II, and the postwar decades. (Not open to students who have completed History 4.)
Prerequisite: Core Studies 4 or permission of the chairperson.

## 18 Latin America since the European Conquest

3 hours; 3 credits
Spanish and Portuguese empires in the Americas. The roots of dependency and the movements for political independence. Consolidation of national states in the nineteenth century.
The twentieth-century battle for socio-economic development. Topics include: urbanization; the environment; religion; the military; indigenous peoples; women; and neo-liberalism. Prerequisite: Core 4 or permission of the chairperson.

## Ancient, medieval, and early modern European history

### 21.4 Ancient Greece

## 3 hours; 3 credits

Greek civilization from the Mycenaean age to the death of Alexander the Great. Development of artistic, literary, moral, and social values from Homer to Aristotle. Myth, science, and philosophy in the Greek vision of the cosmos. The city, the family, roles of women and children.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 21.5 Rome and the Mediterranean World

## 3 hours; 3 credits

Civilization of the Mediterranean world from the death of Alexander the Great to the fall of Rome in the West. Diffusion of Hellenistic art, literature, and thought and their appropriation by Rome. Roman society, women and family, war and politics from Republic to Empire. Roman civilization at its height. Interaction of Christian and classical values in late antiquity.
Prerequisite: Core Studies 4 or permission of the chairperson.

## 22 Christianity and the Church in Medieval Europe

 3 hours; 3 creditsLife and spirituality of Christian communities and their impact on Western society from the third century through the Middle

Ages. Martyrs, monks, relics, pilgrims, crusaders, mystics. Papacy and kingship, faith and reason, heresy and inquisition, art and architecture. Multi-disciplinary focus on historical, literary, and artistic records. (Not open to students who have completed History 22.1 or 22.2.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 23.3 Medieval Jewish History

3 hours; 3 credits
Medieval Jews and their interaction with the Christian and Muslim worlds. Crusades, blood libels, and expulsions; philosophers, Talmudists, and religious debaters; forced converts, moneylenders, and courtiers.
Prerequisite: Core Studies 4 or permission of the chairperson.

## 24 The European Renaissance

3 hours; 3 credits
Society and culture of the European Renaissance from 1300 to 1650 . Topics include the emergence of the northern Italian city-states and consequent cultural renewal; courtly and civic culture; neighborhoods, guilds, and confraternities; women's roles and private life; the papacy, lay piety, heresy; medicine, law, and the universities; humanism and the arts; printing, literacy, and education; the cultural effects of religious reform and absolute monarchy.
Prerequisite: Core Studies 4 or permission of the chairperson.
24.1 Kings, Courts, and Armies in Early Modern Europe 3 hours; 3 credits
The role of monarchs, their courts, and their armies in the shaping of European politics from 1500 to 1750. Theories of kingship, the education and self-image of royalty, management of nobility, changes in military technology and organization, and the development of bureaucracy, taxation strategies, and mercantilist policies.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 24.5 England from the Wars of the Roses to the Glorious Revolution

3 hours; 3 credits
Wars of the Roses; Henry VIII's diplomacy, marriages, and break with Rome; Elizabeth I; the Spanish armada; Elizabethan culture; Stuart succession; English civil war; execution of Charles I; Oliver Cromwell and the Puritan revolution; the Restoration; the "Glorious" Revolution of 1689. (Not open to students who have completed History 24.9 in fall, 1990.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 24.9 Special Topics in Ancient, Medieval, and Early Modern European History

3 hours; 3 credits
Topics vary from term to term. Course descriptions may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: Core Studies 4 or permission of the chairperson.

## Modern European history

25.2 England from the Age of Revolution to the

## Welfare State

3 hours; 3 credits
Development of British civilization and institutions from the early eighteenth century to the present. Eighteenth century political stability and overseas expansion; the industrial revolution; the growth of empire; democracy, feminism, socialism, and unionism; the two world wars; decolonization. Prerequisite: Core Studies 4 or permission of the chairperson.

### 25.3 France from Napoleon to the Present

3 hours; 3 credits
Heritage of the Revolution and Napoleon. Changing meaning of Left and Right; their struggles. Revolutions, authoritarianism, republics in the nineteenth century. Impact of wars and industrialism in the twentieth century. Continuing political transformations.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 25.7 Russia from the Era of Reforms

## 3 hours; 3 credits

Reforms of the 1860s and 1870s. Industrialization and its effects in undermining the basis of the Russian social order. Russian Revolution of 1917. Economic, social, political development of Soviet Russia.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 25.8 Modern Germany: 1870 to the Present

3 hours; 3 credits
German history from national unification under Bismarck through political division after Hitler and reunification in 1989. Wilhelmine Empire, Weimar Republic, Nazi dictatorship. Germany's role in European affairs and in the origins of the two world wars. Reconstruction after 1945, divergent development of the two Germanies, politics of reunification. Germany and European Union.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 25.11 Modern Italy

3 hours; 3 credits
Major economic, social, political, and cultural events of Italian history from the Risorgimento to the present. Emphasis on Italian cultural heritage and contributions. Eighteenth-century and nineteenth-century background to unification. Italy as a national state. Italy and the Great War, Fascism, and the new Italy.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 26.4 Age of the French Revolution and Its Aftermath 3 hours; 3 credits

The old regime in the 1780s. French revolutions of 1789 and 1792. Struggles and compromises between revolutionary and counterrevolutionary forces to 1815. The Restoration.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 26.6 The Ordeal of Europe, 1880-1945

## 3 hours; 3 credits

Europe from the rise of the new imperialism to the end of World War II. Second industrial revolution. Cultural revolt and intellectual ferment. The two world wars and inter-war instability. Bolshevik revolution, Soviet Russia, and the origins of the Cold War. Nazism and Fascism.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 26.7 Europe Since 1945

3 hours; 3 credits
The history of Europe since the end of World War II, including the reconstruction of war-torn societies, the separate development of eastern and western European nations, the impact of the Cold War, the domestic effects of decolonization, the development of a European Union. International social issues, such as the rise of feminism, the new immigration, and changing class structures will be emphasized.
Prerequisite: Core Studies 4.

## 27 The Industrial Revolution

3 hours; 3 credits
Origins and development of industrialization in western Europe and the United States since 1750. Effects on the organization of work, social classes and social relations, business, women, family life, and the environment. Political implications and the role of government. Reflections in art and literature.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 27.6 Terror and Terrorism in Modern Europe

3 Hours; 3 credits
Beginning with the French Revolution, this course will study both state-sponsored terror and terrorist movements in Europe. Topics will include definitions of terrorism, anarchism, Nazi and Soviet terror, modern separatist movements, domestic terrorism, and an examination of the West and Islamic fundamentalism.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 27.7 Socialism, Anarchism, and Marxism in Europe, 1789 to the Present <br> 3 hours; 3 credits

The ideas, leading figures, and movements of the Left. Emergence of the Left in the French Revolution, utopian socialism, Marxism, anarchism, revolutionary syndicalism, Fabian socialism, national Left parties, the Internationals, revisionism, communism, and contemporary socialism.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 27.8 Women in Modern Europe

3 hours; 3 credits
History of women in Europe from the Industrial and French Revolutions to the present. Change in and interaction of women's economic, social, and political roles, and relationship of these to contemporary concepts of women's nature. This course is the same as Women's Studies 42.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 28.3 The Jews in Modern Europe

3 hours; 3 credits
From the shattering Messianic movement of 1666 to the establishment of the state of Israel. Impact on modern Jewish history of emancipation, the Enlightenment, anti-Semitism, Reform Judaism, assimilation, and Zionism.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 28.9 Special Topics in Modern European History

## 3 hours; 3 credits

Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics. Prerequisite: Core Studies 4 or permission of the chairperson.

## Transnational and comparative history

30.1 Main Currents in Contemporary World History

## 3 hours; 3 credits

The history of the major world regions and their interrelationship since 1945. Breakdown of the wartime alliance; confrontation between the West and the Soviet system; the era of the cold war and peaceful coexistence. The end of colonial rule and the rise of new states in Asia and Africa. Historical context of modern revolutions and wars, and political and economic changes. (Not open to students who have completed History 20.)
Prerequisite: Core 4 or permission of the chairperson.

### 30.2 Jesus and the Christian Tradition

## 3 hours; 3 credits

A cultural history of Christianity from the first century to the present; quest for the historical Jesus; images of Jesus in major eras of world history in scripture, theology, literature, art, and music; the place of Christian culture in the history of world civilization. This course is the same as Studies in Religion 19. (Not open to students who have completed History 19.)
Prerequisite: Core Studies 4 or Studies in Religion 1.1, or permission of the chairperson and/or the director of the Program of Studies in Religion.

### 30.21 Pagans, Christians, and Jews

3 hours; 3 credits
Religious conflict in the Roman Empire. Relation of Judaism and Christianity to their pagan environment. This course is the same as Classics 37.
Prerequisite: Core Studies 1 or Core Studies 4 or Religion 1.1 or permission of the chairperson.

### 30.3 History of Feminism

## 3 hours; 3 credits

Definitions of feminism; feminists in the Renaissance and early modern Europe; feminist demands arising from the French Revolution; early radical feminism in the United States, France, and the Germanies; liberal and Marxist feminism; women's movements from the 1850s to World War I in the West; the development of women's movements outside of Europe and America; imperialism, feminism, and national independence; the "second wave": women's liberation movements since 1968. This course is the same as Women's Studies 51.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 30.4 Childhood in the Western World

3 hours; 3 credits
Children's place in society and thought from antiquity to the present with emphasis on the preindustrial Western world. Child-rearing practices, childhood disease and mortality, the education of children, literary reflections of childhood experiences in relation to the history of society and culture of the family, and of women. (Not open to students who have completed History 24.7.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 30.5 The Modern City in the Western World

## 3 hours; 3 credits

An exploration of city development in the West, from the Enlightenment to the present, and its transformative effect on the lives and thought of urban dwellers. Topics include the impact of industrialization, the built environment, class and gender relations, population growth, and utopian projects, as well as perceptions of the city and the emergence of modern sensibilities and culture.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 30.7 The International Relations of the Western Hemisphere

## 3 hours; 3 credits

This course will examine the international relations of the Western Hemisphere through a comparative approach from 1750 to the present. This course will focus on the debates and ramifications of U.S. policy toward the hemisphere; the responses of the Latin American countries-and Canadato the changing international environment; the role of international organizations in hemispheric affairs; and the effect of movements or issues that crossed national boundaries. (This course is not open to students who have completed History 51.4.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 30.9 Slavery in the Atlantic World

3 hours lecture, 3 credits
Slavery in the Americas from an Atlantic perspective (including developments in Africa and Europe) from the fifteenth century until abolition. Slavery in Mediterranean Europe, the changing nature of slavery in Africa, the slave trade, the economics of slavery, the plantation system, daily life among slaves and slave owners, slavery and race, hegemony, resistance, slave revolts, the Haitian Revolution, abolition in the Americas, and post-emancipation challenges.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 38.9 Special Topics in Transnational and Comparative History

## 3 hours; 3 credits

Topics vary from term to term. Course description may be obtained in the department office before registration.
Students may take this course for credit twice, but may not repeat topics.
Prerequisite: Core Studies 4 or permission of the chairperson.

## United States history <br> 41.1 The Colonial World <br> 3 hours; 3 credits

European empires and colonies in the Americas. Patterns of conflict and interaction with Amerindian societies. Slavery and the slave trade. Origins and development of the mainland English colonies to 1763.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 41.2 The Revolutionary Generation

3 hours; 3 credits
The era of the American Revolution and the early national period as observed through the lives of representative men and women. War, loyalism, and republicanism. The establishment of the Constitution and the emergence of political parties. Cultural and social life of the new nation. Prerequisite: Core Studies 4 or permission of the chairperson.

### 41.3 Civil War and Reconstruction

## 3 hours; 3 credits

History of the U.S. Civil War and its meaning for the debate over states' rights as well as citizenship. Slavery as the mark of southern distinctiveness; westward expansion; new forms of mass politics, and economic and cultural changes within northern society that shaped antislavery. The impact of class, gender, and racial affiliations. Reconstruction as America's "unfinished revolution."
Prerequisite: Core Studies 4.

### 41.4 Emergence of Modern America

3 hours; 3 credits
From 1877 to 1920. Politics following the compromise of 1877. Problems of continental development in business, labor, and agriculture. Immigration, internal migration, and the growth of cities. Philanthropy. Overseas expansion and responsibilities. State and national reforms in the progressive era. World War I and its immediate consequences.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 41.6 Twentieth-Century America: 1914-1950

3 hours; 3 credits
United States history from the Wilson presidency through the U.S. entry into the Korean War and the onset of McCarthyism: consolidation of progressivism and the Wilson presidency; entry into World War I and the Wilsonian agenda; the rise of the corporatist state; the United States and the world of the 1920s; clashes of culture in interwar America; the Depression
and the emergence of a Democratic majority; the importance of dissenters; Franklin Roosevelt and American reform; the battle over the role of the Supreme Court; the United States and World War II; postwar politics; nuclear weapons and the militarization of the Cold War. (Not open to students who have completed History 41.5.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 41.7 Twentieth-Century America: 1950-present

 3 hours; 3 creditsThe Korean War and American society; nuclear weapons and U.S. foreign policy; McCarthyism and the culture of the Cold War; the presidency of Dwight Eisenhower; the emergence of the civil rights movement; liberalism and the dilemmas of the 1960s; Lyndon Johnson and the Great Society; the United States in Vietnam; the counterculture and student dissenting movements; 1968 and the collapse of the New Deal coalition; Richard Nixon and Watergate; environmentalism, feminism, and new social movements; the revitalization of American conservatism; the Reagan presidency; the intersection of law and politics; the United States after the Cold War.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.1 United States Foreign Relations since 1898

 3 hours; 3 creditsThe emergence of the United States as a major world power; the debate over imperialism; progressivism and U.S. foreign policy; Wilsonianism; the United States and the 1920s world; the Depression and American foreign policy; the debate over isolationism and presidential power; the United States and World War II; the onset of the Cold War; the militarization of the Cold War; nuclear weapons and U.S. foreign policy; Kennedy and Latin America; Vietnam and the collapse of the liberal consensus; Richard Nixon and détente; American foreign policy in an age of uncertainty; Ronald Reagan and the politics of anticommunism; beyond the Cold War. Special attention will be paid to the viewpoints presented by dissenters on both the right and the left.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.2 American Constitutional History

## 3 hours; 3 credits

Colonial origins of the ideas and forms of American constitutional development. Drafting and establishment of the Constitution. Study of its changing interpretation in the context of changing global political, economic, and social conditions of the nineteenth century and twentieth century, particularly concerning class, race, and gender. Evolving concepts of federalism and liberty.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.3 American Social History through the Civil War

 3 hours; 3 creditsColonial period through the Civil War. Origins and growth of American society during the colonial and early national eras. Population, immigration, and migration. Races, religions and nationalities. Class, status, and mobility. The family and other social institutions.
Prerequisite: Core 4 or permission of the chairperson.

### 43.4 American Social History from Reconstruction

 3 hours; 3 creditsCauses and effects of social changes including problems of Reconstruction, rise of big business, role of the courts, Jim Crow, immigration and migration, progressivism, prohibition, patriotism, personal liberties in time of war, major issues in the Great Depression and New Deal, affluent society, and increased social concerns.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.5 Afro-American History

3 hours; 3 credits
Origins and development of American thought on the role of Blacks in American history. Consideration of such topics as African heritage, Blacks in the plantation society, slavery and the American idea of equality, Black Reconstruction, rise of Jim Crow, the myth of white supremacy, and the nature and origins of the Black revolution. Colonial era to the present.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.6 American Economic History

3 hours; 3 credits
The nature and sources of American economic growth from the Colonial period to the present. The development of colonial economy; economic growth before the Civil War; industrialization of the American economy and the rise of big businesses, government, business, and labor, including the changing participation of women and minorities in the era of industrial maturity; the creation of a managed economy in the mid-twentieth century. (This course is the same as Economics 65.3.)
Prerequisite: Core Studies 4 or Economics 10.1 or permission of the chairperson.

### 43.7 Ideas That Made America, 1607-1865

3 hours; 3 credits
Major ideas shaping American society from the colonial age to the civil war. Puritanism, entrepreneurship, and the idea of success; republicanism; America vs. Europe; democracy; reform.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.8 American Thought from the Civil War

## 3 hours; 3 credits

American thought in the industrial age. The idea of America and Europe from 1865 to 1920. Reformist perception in the populist and progressive eras. Immigration and acculturation. Concepts of America in the New Era and in the New Deal.
Changing perspectives of postwar and contemporary America.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.9 Special Topics in American History

## 3 hours; 3 credits

Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics. Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.11 Religious Experience in America

3 hours; 3 credits
Development of the major American traditions of Protestantism, Catholicism, and Judaism. Puritanism and its legacy; the Great Awakening; Christianity, slavery and the Civil War; the religious experience of Black Americans. Interaction between religious thought and such other aspects of American culture as ethnicity, social change, sexual mores, intellectual life. This course is the same as American Studies 62.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.13 The American Frontier

3 hours; 3 credits
Development of the frontier from the seventeenth-century colonies to twentieth-century California; issues of land and water use; role of the federal government; the myth of the cowboy and the frontier image in national self-definition; Indian culture and Indian wars; the culture of La Raza in the southwest. This course is the same as American Studies 20.3. (Not open to students who have completed History 43.9 in spring, 1988.)

Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.14 Daughters of the Promised Land: Women in American History

## 3 hours; 3 credits

The history of women in the United States, with emphasis on the last two centuries. Gender intersections with race, class, and ethnicity in the areas of work, personal relationships, and control over reproduction. Women in organizations of labor, religion, and politics, including the feminist movements. Changing images of women. (Not open to students who have completed History 43.9 topic: Daughters of the Promised Land: Women in American History.) This course is the same as Women's Studies 43.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.16 Immigration and Ethnicity in American History

 3 hours; 3 creditsHistory of immigration to America from the first European settlers to the present. Old and new waves of immigrants; immigration and citizenship in the age of Revolution; the rise of nativism; immigration policy; assimilation, ethnic resilience, and cultural hegemony in immigrant communities; the impact of race on ethnic identities; culture, politics, work, and gender in immigrant communities; post-World War II immigrants, migrants, and refugees; America's newest immigrants.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 43.17 The Public and the Past: Encountering History Outside the Classroom <br> 3 hours; 3 credits

Introduction to the field of public history. Films, television, living history, archives and archaeology; local and business history.

### 43.18 American Popular Culture

3 hours; 3 credits
Introduction to the history and interpretation of American popular arts and culture. Popular music, theater, radio, film, television, and advertising. Popular expressions as shapers and reflectors of American ideas about nationalism, class, gender, ethnicity/race, region, and generation. This course is the same as American Studies 68.

## 44 The History of New York City

3 hours; 3 credits
New York City from its origins to the present. Amerindian inhabitants before the European invasion; Dutch and English imperial periods; the American Revolution; slavery; mercantilism and capitalism; immigration, ethnicity, and neighborhood; ruling and working classes; parks and recreation; housing and architecture; crime and violence; the fiscal crisis of the 1970s.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 44.1 Brooklyn History

3 hours; 3 credits
The history of Brooklyn with an emphasis on the period from Consolidation to the present. The Lenape and early settlers; culture and community in rural Brooklyn; preindustrial Brooklyn, New York's "first suburb," industrialization and work in the nineteenth century; the Consolidation and urban growth; the borough's icons: The Brooklyn Bridge, Coney Island, and the Brooklyn Dodgers; immigration, ethnic succession, and race relations; deindustrialization and the post-World War II economic, political, and cultural landscape. Students will explore various methodological tools for the study of local history and will use Brooklyn as their laboratory for examining its history and conducting research.
Prerequisite: Core Studies 4 or permission of the chairperson.

## African, Asian, Caribbean, Latin American, and <br> Middle Eastern history

## 50 Ancient Jewish History

3 hours; 3 credits
Religious beliefs and political institutions from Saul and David until the destruction of the First Temple. Second Temple Israel under Persians, Greeks, and Romans. The Maccabean uprising, the authors of the Dead Sea Scrolls and other varieties of Judaism, the rise of Christianity, the revolts against Rome, and the victory of Rabbinic Judaism. (Not open to students who have completed History 21.7.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 51.1 Colonial Latin America

3 hours; 3 credits
Latin American history from 1492 to 1880. Discovery and conquest of America; Spanish and Portugese organization of government, church, and economic institutions. Colonization, settlement, and expansion of frontiers. Economic evolution of colonial America. Rise of the cities of Latin America. Education, universities, secular culture, and the Enlightenment. Reform movements of the eighteenth century. Background of the movements for independence. Establishment of modern nation states. (Not open to students who have completed History 66.1.)
Prerequisite: one of the following: History 1, 2, 3, 4, 41.8, 41.9, or permission of the chairperson.

### 51.2 Modern Latin America

## 3 hours; 3 credits

Latin America since 1880. Growth of selected countries: Argentina, Brazil, Chile, Cuba, and Mexico. Regionalism, dictatorship, land reforms, and constitutional issues. Growth of nationalism, liberalism, dictatorships, and democracy from the standpoint of local conditions, domestic history, and interAmerican and world politics. (Not open to students who have completed History 66.2.)
Prerequisite: one of the following: History 1, 2, 3, 4, 41.8, 41.9 , or permission of the chairperson.

### 51.5 The History of Caribbean Societies from the European Conquest to the End of Slavery 3 hours; 3 credits

Conquest and settlement by the European powers in the sixteenth and seventeenth centuries. European rivalries; rise of the sugar economy and slavery as a socioeconomic system. Comparative development of the English, French, and Spanish slave-holding colonies. The Haitian Revolution; the abolition of the slave trade and emancipation in the British colonies; the Ten Years' War and Emancipation in Cuba.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 51.6 History of the Modern Caribbean

3 hours; 3 credits
Historical forces in the evolution of Caribbean nations from the nineteenth century to the present. Includes material on Cuba, the Dominican Republic, Guyana, Haiti, Jamaica, TrinidadTobago among other nations. Concentrates upon national and international factors influencing each society as well as comparative analysis.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 51.7 History of Social Movements in Latin America

 3 Hours; 3 creditsThis course will examine the changing nature of social movements in Latin America from the nineteenth century to the present. Topics include social movements concerning citizenship, religion, unions, feminism, torture, poverty, indigenous rights, and environmentalism. This course is the same as Puerto Rican and Latino Studies 28.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 51.7W History of Social Movements in Latin America

 4 Hours; 3 creditsThis course will examine the changing nature of social movements in Latin America from the nineteenth century to the present. Topics include social movements concerning citizenship, religion, unions, feminism, torture, poverty, indigenous rights, and environmentalism. Writing-intensive section.
Prerequisites: English 2; and Core Studies 4 or permission of the chairperson.

## 53 Revolutionary China

3 hours; 3 credits
Origins, development, and present state of the Chinese revolution. Social and ideological patterns in the breakdown of the Confucian order. The Revolution of 1911. Urban nationalism and the warlords. Rise of the Guomindang and the Communist Party. The Japanese invasion, Maoist ideology, and the Communist conquest. The People's Republic since 1949. Political, social, economic and ecological crises in the struggle to modernize. China's global impact. (Not open to students who have completed History 53.2 or History 53.10.) Prerequisite: Core Studies 4 or permission of the chairperson.

### 53.1 Land of the Dragon Throne: Imperial China and its Origins 3 hours; 3 credits

Chinese civilization from its Neolithic beginnings through the late sixteenth century C.E. The earliest Yellow River civilizations, beginnings of royal institutions, foundations of Chinese religion, the cultural, social, and economic revolution of the Warring States, the establishment and evolution of the imperial state, China and Inner Asia, the spread of Buddhism, the growth of commerce, the flourishing of art and literature, the social order and ideology of the late empire.
Prerequisite: Core Studies 4 or permission of the chairperson.
53.3 Land of the Rising Sun: Ancient and Medieval Japan 3 hours; 3 credits
Japanese civilization from prehistoric times to the late sixteenth century. Earliest Neolithic civilizations on the Japanese archipelago. Beginnings of agriculture and bronze technology. Cultural interaction with mainland Asia. Development of imperial institutions and Shinto. Adaptation of Buddhism, development of indigenous Buddhist schools (Nichiren, Zen). Evolution of Japanese literature, drama, and art. Rise of the samurai.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 53.4 Modern Japan

3 hours; 3 credits
Development of Japan as a modern nation. Tokugawa origins of modern institutions; emergence of the imperial state in the Meiji period; expansion on the Asian continent; nationalism, liberalism, and militarism between the wars. Destruction in World War II; recovery and the rise to affluence. Japan as a post-industrial power; its regional and global influence.
Prerequisite: Core Studies 4 or permission of the chairperson.
53.5 Mysticism, Magic, and Ritual in Ancient China 3 hours; 3 credits
The history of Daoism, the indigenous religion of China, from ancient times to the fifth century C.E. The roots of Daoism in ancient Chinese shamanism. Early mystical practices such as meditation, spirit journeying, macrobiotic diet, sexual yoga. The classical philosophy of Laozi and Zhuangzi. The political Daoism of the late Warring States and Han. The Daoist rebellions of 184 C.E. Magic and ritual practices of the Daoist church. Medieval Chinese alchemy. This course is the same as Religion 18.
Prerequisite: Core Studies 4 or permission of chairperson.

### 53.7 The Jewel in the Crown: British Imperialism and Indian Nationalism

## 3 hours; 3 credits

The decline of the Mughal Empire and the competition for succession won by the British East India Company; the structure and ideology of the Raj; social, economic, and cultural changes during the Raj including the role of race and the changing place of women. Rise of Indian nationalism and Muslim separatism viewed from above and below. Leadership, organization and ideology of early nationalists and the Congress party under Gandhi. Partition and independence of India, Pakistan, and Bangladesh.
Prerequisite: Core Studies 4 or permission of the chairperson.

### 53.11 India and Vietnam: The Struggle for Freedom

 3 hours; 3 creditsComparisons of British rule in India and French rule in Indochina in the nineteenth century. The rise of nationalism in the two areas in the later nineteenth century. Comparative historical analysis of these movements, especially the development of leadership, organization, and ideology, and the interplay of violent and nonviolent techniques of struggle. Impact of World War II on European imperial rule in Asia and on nationalist movements. Independence in the postwar generation and consequences for the new nations. Extensive use of slides and films of both areas.
Prerequisite: Core Studies 4 or permission of the chairperson.
54 History of the Middle East in the Twentieth Century 3 hours; 3 credits
Ottoman and colonial heritage of the Middle East; competing ideologies; oil and its impact, origins and development of the Arab-Israeli conflict; Iran under shahs and clergy; roots of radical nationalism in Turkey, Egypt, Iraq, and Syria, sectarianism and class conflict in Lebanon; Islamic reform and revivalism; changing role of women and minorities. (Not open to students who have completed History 57.3 or 57.4.)
Prerequisite: Core Studies 4 or permission of the chairperson.

### 55.1 Africa to 1800

3 hours; 3 credits
Exploration of themes in the history of Africa south of the Sahara from earliest times to 1800. Salient themes include trans-Saharan linkages in classical times, Sudanic empires, forest states, Kongo, Ndongo, east African coastal city-states, Mwenemutapa dynasty. Origins, development, and consequences of the Atlantic slave trade; abolition. This course is the same as Africana Studies 11.1. (Not open to students who have completed Africana Studies 18.11.) Prerequisite: Core Studies 4.

### 55.2 Africa from 1800

3 hours; 3 credits
Themes include the Islamic revolutions, Mfecane, rise of legitimate trade, intrusion of European missionaries and explorers, Ashanti wars, political developments in interlacustrine East Africa, imperialism, colonial experience, nationalist independence movements, and Pan-Africanism. Selections reflect the experience of all the regions of the continent south of the Sahara from 1800 to the present. This course is the same as Africana Studies 11.2. (Not open to students who have taken Africana Studies 18.2.)
Prerequisite: Core Studies 4.

### 58.9 Special Topics in Asian, Caribbean, Latin American, and Middle Eastern History

3 hours; 3 credits
Topics vary from term to term. Course description may be obtained in the department office before registration.
Students may take this course for credit twice, but may not repeat topics.
Prerequisite: Core Studies 4 or permission of the chairperson.

## Upper-division courses

Colloquia are intensive reading and discussion courses in major fields of historical scholarship. Topics vary from term to term; students should consult the department for current offerings and syllabi.

## 61 Colloquium in the History of Religion

3 hours; 3 credits
Religious beliefs, organizations, and communities in historical context. Cross-cultural influences in religious history. Use of historical, literary, and artistic records. Topics may include martyrdom, gender and the body, monasticism, and mysticism in early and medieval Christianity, Jewish-Christian encounters, and revivalism in America and Europe.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 62 Colloquium in History and Biography

3 hours; 3 credits
The individual life in relation to historical change. Topics may include the life of the revolutionary, the hero in history, collective biography, and the biographer as historian.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 63 Colloquium in Social History

3 hours; 3 credits
Classes, groups, and mass movements in history. Topics may include the European nobility, growth of the modern labor movement, immigration and migration, the history of childhood and the family, the bourgeoisie, frontiers in history, urbanization, and industrialization.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 64 Colloquium on Historians and Historical Writing

 3 hours; 3 creditsHistorical scholarship since Herodotus. Topics may include narration and the problem of historical knowledge, the American patrician historians, the Renaissance idea of history, and revisionism in recent historical thought.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 65 Colloquium in Political History

3 hours; 3 credits
States, governments, and people in human history. Topics may include imperialism, the growth of the American presidency, nationalism and nation-building in the early modern period, and comparative revolutions.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 66 Colloquium in Cultural and Intellectual History

3 hours; 3 credits
Ideas, ideologies, and mentalities in their social and cultural context. Topics may include utopias and dystopias, ancient and modern humanism, the history of historical preservation, and the idea of American uniqueness.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 67 Colloquium in Women's History

3 hours; 3 credits
Women's lives and experiences in the context of western history. Topics may include the history of feminism, women and Fascism, women and revolution, and medieval and Renaissance women.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

### 69.1 Introduction to Archival Management

 3 hours; 3 creditsThe role of the archivist in historical research. Theoretical and historical basis of archival management. Types of archives. Applications of modern archival practices. The Brooklyn College archives will serve as the student's laboratory.
Prerequisite: Core Studies 3 and 4 or permission of the chairperson.

### 69.2 Oral History Theory and Practice

3 hours; 3 credits
Theory of and fieldwork in oral history interviewing. Preparing for, conducting, and transcribing oral history interviews. Reviewing legal and ethical issues. Analyzing the relationship between history and memory. Studying the use of life history narratives in print, film, television, radio, exhibitions, performance, community history projects, and the classroom. Prerequisite: Core Studies 3 and 4 or permission of the chairperson.

## 70 Seminar

2 hours and independent work§; 3 credits
Techniques of historical research and writing. Topics vary from term to term. Course description may be obtained in the department office before registration. Research paper. Limited enrollment. Completion with a grade of B or higher carries honors credit.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## 78.1, 78.2 Internship in Public History I, II

9 hours of fieldwork; 3 credits
Applied training in such areas of public history as archival and museum management, mounting historical exhibits, and collection classification. To be pursued in conjunction with an institution outside the college under the supervision of a History Department liaison. A written report is required.
Prerequisite: History 69 or 69.1 or permission of the chairperson.

## 79 Independent Study

Minimum of 9 hours conference and independent work§; 3 credits
Individual study supervised by a faculty member. Approved topic and readings. Weekly conference. Final examination or paper. Students may take this course twice for credit but may not repeat topics.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

## Honors course

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the course described below. Students may not register for more than six credits in honors courses in the department in one term.

### 83.1 Independent Research

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Thesis or research paper. Students may take this course twice for credit but may not repeat topics.
Prerequisite: History 10; junior or senior standing; and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

## Integrated Science

Integrated Science 1 is taught by faculty in the Department of Physics. Integrated Science 1.5, 2, and 2.8 are taught by faculty in the Department of Chemistry.
Integrated science courses are courses in the physical sciences stressing fundamental concepts and the methods, growth, and usefulness of science. These courses are for students who are not science majors.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for science majors.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Workshop

No credit
Voluntary sessions for students enrolled in Integrated Science 1 and 2 who need additional assistance. Emphasis on the solution of problems encountered in these courses.

## *1, *2 Matter and Energy

1 hour recitation, 2 hours lecture, 2 hours laboratory; 4 credits
Development in depth of modern ideas of the solar system, force and motion, properties of matter, energy, electricity and magnetism, wave motion. Structure of the atom, electronic interpretation of chemical processes, air and water pollution, nuclear energy, sun, and stars. (Integrated Science 1 is not open to students who have completed Physics 0.1 or 0.5 or 1 . Integrated Science 2 is not open to students who have completed any college course in chemistry except Chemistry 0.7.)
Prerequisite of 2: Integrated Science 1.

## 1.5, 2.8 Science and Man's Environment

2 hours recitation, 2 hours lecture, 2 hours laboratory; 5 credits
Introduction to fundamental principles of science and their application in controlling and conserving the environment. Examination of relevant physical, chemical, biological, and geological theories from an ecological viewpoint. Examination of scientific and technological means by which the environment can be conserved and improved.
Social implications.
Prerequisite: enrollment in the Small College Program.

12 Europe from Renaissance to Revolution
15 History of Indian Civilization
28.1 European Diplomatic History since 1814
43.3 American Social History through the Civil War

## Interdisciplinary Studies

Interdisciplinary Studies includes interdisciplinary studies courses open to the general student body as well as courses associated with particular programs in the Honors Academy. Faculty: from the departments of the college.

## Courses

Interdisciplinary Studies courses are scheduled at various times depending on student and program demands.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 10 Minicourse in Special Topics

1 hour; 1 credit
Lecture and discussions on topics involving more than one department or program. Course meets for 15 irregularly scheduled hours, including lectures and a final examination. Students may take this course for credit four times, but may not repeat topics. Specific prerequisites may be added depending on the subject matter and level of the topic.

## 12 Italians in America

3 hours; 3 credits
Examination of the role of Italian-Americans in American society. Processes of acculturation, assimilation, and integration. Analysis of principle patterns of economic, social, and political behavior of the Italian-Americans. (Not open to students who have completed Interdisciplinary Studies 9.)
Prerequisite: Core Studies 3 or 4.

## 25 Italian-American Relations: Foreign Relations, Migration, Commerce

3 hours; 3 credits
Introduction to basic patterns of economic, cultural, and political interaction between Italy and the United States since the end of World War II. Central features of institutional life in both countries as well as an overview of the basic patterns of contact between these two societies in the postwar period.
Prerequisite: Core Studies 4; or permission of the chairperson of the Department of Modern Languages and Literatures.

## 70 Seminar

2 hours recitation and a minimum of 7 hours conference and independent work§; 3 credits
Seminar or colloquium on a topic involving more than one department or program. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: junior or senior standing. Specific prerequisites may be added depending on the subject matter and level of the seminar
Note: The following course is carried over from the former Department of Personal Counseling. It is under review and may be revised or replaced by a regular departmental offering in fall 2003.

## Personal Counseling 2.1 Psychosocial Development and the College Student

2 hours recitation; 2 credits
Examination of the psychological, sociocultural, and educational components in the growth and development of the college student. Analysis of values and goals in relation to self-direction. Consideration of available options.
Prerequisite: passing scores on CUNY Skills Assessment Tests in reading and writing.

## Honors Academy

Office: 2231 Boylan Hall
Telephone: 951-4114
Director: Kenneth A. Bruffee
B.A.-M.D. Program Director: Anthony Sgherza

CUNY Honors College Director: Donna F. Wilson
Dean's List Honors Research
Engineering Honors Director: Viraht Sahni
Honors Academy Research Colloquium
MARC Director: Louise Hainline
Mellon Minority Undergraduate Fellowship Director: Margarite Fernández Olmos
Scholars Program Director: Kenneth A. Bruffee
Special Baccalaureate Degree Program: Marilyn Pedalino
Faculty: from the departments of the college.

## CUNY Honors College

## CHC 1, Seminar I: The Arts in New York City

## 3 hours; 3 credits

Interdisciplinary study based on performances and exhibitions in the arts, using New York City's cultural institutions as resources for aesthetic experiences and opportunities for research, interpretation, and creative work. Intersections among cultural events in the city and academic readings and writings. The nature of narrative as it is expressed in literature as well as in various other media: opera, popular music, dance, theater, and pictorial art; high as well as folk art, classical as well as contemporary forms. Equivalent to English 2 and satisfies the second course requirement in the two-course composition sequence for graduation from Brooklyn College.
Prerequisite: acceptance into the CUNY Honors College at Brooklyn College.

## CHC 2, Seminar II:The Peopling of New York City

 3 hours; 3 creditsStudents investigate the role of immigration and migration in shaping the city's identity past, present, and future. Topics include the factors that have driven and drawn people to New York since the seventeenth century; the different ways that religion, race, gender, and ethnicity have shaped immigrant encounters with the city; the formation and social organization of well-known immigrant communities such as the Five Points, the Lower East Side, Little Italy, Harlem, Chinatown, Astoria, Flushing, and East Flatbush; the impact of newcomers on urban culture and politics; and the continuing debates over assilimation and Americanization. Extensive in-class reading and writing assignments in conjunction with site visits to the Tenement House Museum, Ellis Island/Castle Garden, Weeksville, and other places.
Prerequisite: CHC1, Seminar I.

## CHC 3, Seminar III: Science and Technology in New York City

3 hours; 3 credits
Scientific and technological topics that have had an impact on contemporary New York; environmental issues in New York City and communication techniques required to present these issues; the scientific method, energy, spatial and temporal localization of environmental issues, epidemiology, Internet, visualization and mapping.
Prerequisite: CHC 1 , Seminar I and CHC 2 , Seminar II.

## CHC 4 Seminar IV: Shaping the Future of New York City

 3 hours; 3 creditsThe ongoing interplay of social, economic, and political forces that shape the physical form and social dynamics of New York City. Topics include certain important historical junctures and major economic development initiatives that illustrate how decisions are made and power is distributed in the city; New York City in the larger context of the region, the nation, and the world; institutional agents of change in the cityfederal, state, and city government, public authorities, private sector interests, community boards, and community-based organizations-and the roles people take or are given in the decision-making processes of government; inequality and its relationship to race, class, and gender.
Prerequisite: CHC 1, Seminar I; CHC 2, Seminar II; and CHC 3, Seminar III.

## Scholars Program

Program requirements (18 credits)
In addition to completing the requirements for a baccalaureate degree, the following requirements must be met.

1. A grade point average of 3.50 or higher.
2. Completion of each of the following with a grade of $A$ or $B$ :
a. Scholars Program 50.
b. Scholars Program 85.
c. Two of the following courses in sections designated for students enrolled in the Scholars Program: Core Studies 1, 3, 4, 6, 10, English 1, 2.
d. Honors work in two additional courses not offered to satisfy requirements a, b, or c. Each of these courses may be in either category 1 or 2 below:
(1) an honors course ( 80 s level). The topic must be interdisciplinary and receive prior approval from the Scholars Program director.
(2) an honors project in a regular (non-Scholars Program) course. Projects must be interdisciplinary and receive prior approval from the Scholars Program director and from the course instructor.
3. Completion of a senior thesis. The topic of the senior thesis and the thesis itself must be approved by the Scholars Program director and a thesis adviser.

## Courses

The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 50 Interdisciplinary Topics

## 3 hours; 3 credits

This course addresses issues of an interdisciplinary character. Questions of methodology will be raised as an essential aspect. Topics vary from term to term. Course descriptions may be obtained in the Scholars Program office. Students may take this course three times but may not repeat topics.
Prerequisite: good standing in the Scholars Program or permission of the director of the Scholars Program.

## 85 Colloquium

## 3 hours; 3 credits

A series of lectures in one or more fields by faculty and invited guests. The colloquium is led by a faculty coordinator and is intended to be responsive to areas of student interest. Each student is expected to present one piece of original work.
This course may be repeated once with the permission of the director of the program.
Prerequisite: acceptance of the qualifying paper and satisfactory standing in the Scholars Program.

## Coordinated B.A.-M.D. Program

## Program requirements

Completion of all requirements for a baccalaureate degree as stated elsewhere in this Bulletin is subject to the following provisions:

1. Core Studies 1, 3, and 10 must be taken in designated sections.
2. Students who major in a natural science must take at least 15 credits in courses in the humanities or social sciences beyond the core curriculum. This will normally consist of at least five courses in a single department; with the permission of the coordinator of the B.A.-M.D. Program, students may take five related courses in the humanities and/or social sciences.
3. The following courses are required:
a. Biology 17, 17.1, 29, 29.1, and 34; Chemistry 1, 2, 51, and 52; Physics 1 and 2 . These courses must be taken at Brooklyn College. (Credit received for advanced placement examinations will be accepted.)
b. Interdisciplinary Studies 8 . This course must be taken in the summer following the sophomore year.
c. Interdisciplinary Studies 71. A designated section of this course must be taken during the senior year.
Subsequent admission to the College of Medicine of the
SUNY Health Science Center at Brooklyn is contingent on a B.A.-M.D. student's maintaining a minimum grade point average of 3.50 overall and 3.50 in the program science requirements, completing the courses outlined in the program, completing other program requirements, and having the approval of the director.

## Courses

The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 8 Post-Sophomore Summer Community Internship and Seminar

Minimum of 175 hours fieldwork,
15 lecture/recitation hours; 4 credits
Community service internship during the summer between the second and third years of the B.A.-M.D. Program. Six-week placement at a health-related facility and concurrent summer seminar which deals with the students' experiences. The seminar will include the discussion of such issues as medical ethics, patient/client/professional roles, race and ethnic conflict/conflict resolution, and the nature of the community. Open only to students in the B.A.-M.D. Program.
Prerequisite: successful completion of the first two years of the B.A.-M.D. Program, or permission of the B.A.-M.D. Program Coordinator.

## 71 Seminar: Health Care in the Inner City

2 hours lecture and a minimum of 7 hours conference and independent work; 3 credits
Interdisciplinary study of health-care crises in the inner city. Guest lecturers will discuss the medical issues.
Prerequisite: junior or senior standing in the B.A.-M.D. Program.

## Ford Colloquium

The Ford Colloquium is no longer accepting new students. Courses will continue to be offered through the Honors Academy, from which complete course descriptions may be obtained.
51 Orientation for Teaching and Research
62 Introduction to Scholarly Disciplines
73 Critical Analysis in Scholarship and Research
74 Knowledge and Society

## Judaic Studies

Department office: 3111 James Hall
Telephone: 951-5229
Chairperson: Sara Reguer
Deputy Chairperson, Division of Graduate Studies: Herbert Druks
Professors: Druks, Helfand, Leiman, Reguer;
Associate Professor: Flatto;
Adjunct Professor: Scult.

## B.A. degree program in Judaic studies <br> HEGIS code 0309

Department requirements (22 credits)
Judaic Studies 11.
Two courses chosen from the ancient and medieval periods:
Judaic Studies 12, 13.5, 14, 15, 17, 18, 22, 23, 24, 30, 33, 43.5.

Two courses chosen from the modern period: Judaic Studies
$10,11.5,13,16,19.5,20,20.5,21.5,31,37,40.5,46,47$, 48.5, 48.9, 49.6, 50, 51, 52.5, 53.5, 54, 56.

One of the following: Judaic Studies 71, 75.1, 75.2.
One of the following: Judaic Studies 83.1, 83.2, 88.1, 88.2.

## Department recommendations

The related courses listed at the end of the department section are strongly recommended for Judaic studies majors.

## Department honors

To qualify for honors in Judaic studies, a student must complete Judaic Studies 83.1 or 83.2 or 88.1 or 88.2 with a grade of $B$ or higher.

## Requirements for a minor in Judaic studies

Twelve credits of advanced courses in Judaic studies. Each course must be approved by the department chairperson and completed at Brooklyn College with a grade of C or higher.

## Requirements for an optional minor in Hebrew

Twelve credits in courses in Hebrew numbered 11.1 or higher with a grade of C or higher. Minors in Hebrew should consult

Concentration in Judaic studies for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in Judaic studies must complete at least 30 credits in the Judaic Studies Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

One of the following courses: Judaic Studies 10, 16, or 53.5. Nine of the following courses: Judaic Studies 17, 19.5, 37, 40.5, 47, 48.5, 50, 75.1, 75.2; Art 13.40; History 23.3, 28.3, 50; Music 10.3; Political Science 49.3, 49.5; Sociology 27.2; Theater 41.2. Judaic Studies 75.1 and 75.2. (Judaic Studies 75.1 and 75.2 change topics each semester. Students must confer with the chairperson as to whether the course offering fulfills either the literature or the social studies requirements for this concentration.)

## Division of Graduate Studies

The Judaic Studies Department offers a master of arts in Judaic studies and graduate courses for students in other fields. For information, students should consult the department chairperson. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *1 Introduction to Judaic Studies

3 hours; 3 credits
Survey of basic concepts, terminology, facts of the Jewish experience for students with little background in Judaic studies. Cultural, religious, historical highlights; relations with other religions and cultures. (Not open to students who are enrolled in or have completed Judaic Studies 12, 12.1, 12.2, 13, or the equivalent.)

## 10 Jewish Biography in the Classroom

## 3 hours; 3 credits

An analysis of the experience of American Jews as an immigrant community focusing on the interaction between Jewish culture, tradition, and values and the fundamental ideals of American culture. The biographies of American Jews and their search for meaning within the American experience. Particular attention will be paid to the role of Jewish personalities in the areas of philanthropy, social work, labor relations, public education, entertainment, and American intellectual life.
Prerequisite: Core Studies 1 and 6.

## 11 Land and Cultures of Israel

4 hours; 4 credits
Survey of the history and culture of Israel. Its socio-economic and political structure, including: kibbutzim, relationship between church and state, Ashkenazim and Sephardim, conflict between Jews and Arabs, the role of the military, the labor movement, and the relationship between Israel and the Diaspora.

### 11.5 History of Zionism

3 hours; 3 credits
Historical review of the development of Zionism as an idea and as a political movement from its roots in Jewish tradition and modern Jewish thought to the present.

## 12 Jewish Religion and Tradition

3 hours; 3 credits
Survey of major developments in Jewish culture and tradition from the biblical period in the ancient Near East through the medieval period in Europe. Ethical teachings of the prophets. Rabbinic Judaism. Jewish sectarianism; the impact of Christianity and Islam on Jewish life.

## 13 Out of the Ghetto

3 hours; 3 credits
Study of major developments in early modern Jewish culture, tradition, and history from the early modern period through the twentieth century. Analysis of the impact of modernity on traditional Jewish life. Sabbatianism. Hasidism. Haskalah. Zionism. Emergence of Reform and Conservative movements.

### 13.5 Sages and Scholars

3 hours; 3 credits
Biographical studies of major Jewish scholars and religious personalities from the late Middle Ages to the twentieth century, their literary activities, and their impact on Jewish society and intellectual life. Personalities to be studied include Rabbi Joseph Karo, the Gaon of Vilna, and Rabbi Dr. David Zvi Hoffman.

## 16 Modern Jewish Biographies

3 hours; 3 credits
Biographical studies of modern Jewish personalities who made major contributions in the fields of politics, science, literature, the arts, and finance. Focusing on the relationship between Jews and Western culture, the course will explore how Jews confronted modernity. Personalities to be studied include Einstein, Freud, Marx, Szold, Rothschild, Kafka, Chagall, and others. Biographical works as historical sources. Prerequisite: Judaic Studies 13.

## 17 The Jewish Woman

## 3 hours; 3 credits

The role of the Jewish woman in religion and history. The status of women in Jewish Law. Different roles of the Jewish woman in the Sephardic and Ashkenazic communities. Jewish responses to the feminist movement.
Prerequisite: Judaic Studies 1 or permission of the chairperson

## 18 Studies in Jewish Customs

## 3 hours; 3 credits

Study of the origins and authority of ritual customs ("minhagim") in Jewish tradition, relationship to historic conditions, and place in the Jewish legal system ("halakhah"). Analysis of the typology of customs based on internal religious dynamics as well as external, environmental influences.
An analysis of the nature of customs as an expression of communal and cultural diversity within Jewish life.
Prerequisite: Judaic Studies 12 or permission of the chairperson; reading knowledge of Hebrew.

### 19.5 Anti-Semitism

3 hours; 3 credits
Analysis of ideological and historical origins of anti-Semitism in the Greek and Roman periods. Jewish-Christian relations from the New Testament period through modern times. Special emphasis on political and racial anti-Semitism in the nineteenth and twentieth centuries.
Prerequisite: Core Studies 4 or Judaic Studies 12 or 13 or permission of the chairperson.

## 20 Contemporary Issues in Halakhah

3 hours; 3 credits
Analysis of halakhic problems in the light of advances in science, medicine, and technology.
Prerequisite: Judaic Studies 12 or 13 or permission of the chairperson.

### 20.5 Business Practices and the Jewish Tradition

 3 hours; 3 creditsUsing the classical sources of the Jewish tradition, this course will examine subjects dealing with running a business in accordance with Jewish law and values. Topics covered include compassion for the poor, concern for the stranger, racism, employer-employee relations, pricing, honesty in business, water, environmentalism, and moral leadership. (This course is the same as Business 50.6.)
Prerequisite: Judaic Studies 12 or 13 or permission of the chairperson.

## 22 Job and the Problem of Evil

3 hours; 3 credits
Intensive study of the Book of Job as the primary religious work dealing with suffering and evil. Opinions as to "why bad things happen to good people" will be considered in both ancient and modern works. This course is the same as Studies in Religion 10.
Prerequisite: Judaic Studies 12 or permission of the chairperson.

## 23 Introduction to the Bible and Apocrypha

 3 hours; 3 creditsAs introduction to the content, formation, transmission, and interpretation of the Bible and the Apocrypha from antiquity through the Middle Ages. Topics include the canon of the Bible; Aprocrypha and Pseudepigrapha; biblical versions; Dead Sea scrolls and the Bible; and biblical interpretation. (Not open to students who completed Judaic Studies 75.1 in Fall 1995 or Spring 1998.)
Prerequisite: Core Studies 9 or permission of the chairperson.

## 24 The Dead Sea Scrolls

3 hours; 3 credits
An introduction to the Dead Sea scrolls and their significance for biblical and Talmudic studies, and for the early history of Judaism and Christianity. (Not open to students who completed Judaic Studies 75.1 in Spring 1993 or Spring 1996.) Prerequisite: Core Studies 9 or permission of the chairperson.

## 31 Modern Jewish Thought

## 3 hours; 3 credits

Significant works in modern Jewish thought. Modernization of society and its impact on Judaism considered through the works of such thinkers as Moses Mendelssohn, Samson R. Hirsh, Martin Buber, J.B. Soloveitchik, A. J. Heschel, and Mordechai Kaplan.
Prerequisite: Core Studies 10 or permission of the chairperson.

## 33 Maimonides: Philosopher, Legalist, Physician

## 3 hours; 3 credits

Readings from Maimonides' philosophical, ethical, and legal writings. Impact on medieval Jewish and Christian thought and the Jewish legal system.
Prerequisite: Core Studies 10 or permission of the chairperson.

## 37 The Hasidic Movement: Its History and Literature

 3 hours; 3 creditsHistory and literature of the Hasidic movement. Major dynasties and prominent masters in Europe, Israel, and America. Impact on such major literary figures as Kafka, Peretz, Buber, and Singer.
Prerequisite: Judaic Studies 13 or permission of the chairperson.

### 40.5 The Sephardic Heritage

3 hours; 3 credits
The Jewish experience in Muslim countries. Analysis of the Jewish communities in all aspects of life and the upheaval caused by their mass emigration, particularly to Israel and the United States. (Not open to students who have completed Judaic Studies 75.1, "The Sephardic Heritage.")
Prerequisite: Judaic Studies 11 or Core Studies 9 or permission of the chairperson.

### 43.5 Italian Jewry

3 hours; 3 credits
The unique relationship between Italy and its Jewish population. Jewish contributions to Italian culture. Italian Jewry during the Renaissance. "New" Sephardic communities. Italian Jewry during World War II.
Prerequisite: Judaic Studies 13 or permission of the chairperson.

## 46 The Shtetl in History and Literature

3 hours; 3 credits
Survey of the history and literature of the East European shtetl; its religious, social, educational, economic, and political institutions; its lore and folklore as reflected in historical and literary works. Its impact on America and Israel.
Prerequisite: Judaic Studies 1 or 13 or permission of the chairperson.

## 47 History of the Jews in the United States

3 hours; 3 credits
Survey of the history of American Jewry from the 1650s to the present. Personalities who have played an integral part in the American experience. American Jewish contribution to establishment of Israel. Relations of American Jewish community to Jewish communities throughout the world. Prerequisite: Judaic Studies 1 or 13 or Core Studies 3 or permission of the chairperson.

### 48.5 The Jews of New York

## 3 hours; 3 credits

Study of the history and structure of New York's Jewish communities from the seventeenth century to the present. Contributions to New York's political, cultural, and economic life.
Prerequisite: Judaic Studies 47 or permission of the chairperson.

### 48.9 The Jews of Brooklyn

## 3 hours; 3 credits

The heritage and multicultural backgrounds of the Jews of Brooklyn and their contributions to the Brooklyn communities and to American society.
Prerequisite: Judaic Studies 47 or 48.5 or permission of the chairperson.

### 49.6 Jewish Religious Movements in America

 3 hours; 3 creditsStudy of Jewish denominations in the United States. Ideologies and institutions of Orthodox, Conservative, Reform, and Reconstructionist Judaism. Contemporary Jewish issues.
Prerequisite: Judaic Studies 12 or 13 or 47 or permission of the chairperson.

## 50 History of the Holocaust

3 hours; 3 credits
History and analysis of Nazi Germany's attempt to annihilate European Jewry, 1933-45. Ghettos and killing centers. Deportations and killings. Jewish physical and spiritual resistance, liberation, and postwar displaced persons camps.
Prerequisite: Judaic Studies 13 or permission of the chairperson.

## 51 The Nazi Concentration Camps

## 3 hours; 3 credits

Analysis of the Nazi concentration and extermination camps as the arena of the Holocaust. History, ideology, and organization of the camps; the psychology of their bureaucrats and guards; and the response of Jewish and other inmates.
Prerequisite: Judaic Studies 50 or Core Studies 4 or permission of the chairperson.

### 52.5 Nazi War Crimes: Laws and Trials

3 hours; 3 credits
Analysis of postwar trials of Nazi criminals. Laws and procedures used to bring them to trial. Nuremberg and other Allied trials; trials in postwar West Germany; denaturalization proceedings in the United States.
Prerequisite: Judaic Studies 50 or Core Studies 4 or permission of the chairperson.

### 53.5 Literature of the Holocaust

3 hours; 3 credits
Impact of the Holocaust as reflected in contemporary literature. Reading of authors who experienced or witnessed the Holocaust and writers of the post-Holocaust generation. All works are in English or English translation.
Prerequisite: Core Studies 6 or permission of the chairperson.

## 54 The Holocaust and Halakhah

3 hours; 3 credits
Analysis of rabbinic responsa dealing with legal and religious questions that arose as a result of the Nazi persecution.
Prerequisite: Judaic Studies 50 or permission of the chairperson.

### 70.1 Summer Archaeological Field School in Israel

 (Intensive Program)3 hours lecture; 6 hours supervised fieldwork; 6 credits Intensive instruction in field methods and techniques of archaeology through participation in every aspect of an excavation; training in archaeological mapping, excavation techniques, and methods of archaeological laboratory analysis. This course is the same as Art 70.12. (Not open to students who have previously received credit for archaeological fieldwork.)
Prerequisite: permission of the chairperson and one of the following: Judaic Studies 12, Anthropology 2.2, Art 2.1, Classics 26, Core Studies 1, 2.1, 9, a course in archaeological theory and methodology.

## 71 Seminar in Special Topics

3 hours; 3 credits
Topics vary from term to term. Course description may be obtained in the department office before registration.
Prerequisite: permission of the chairperson.

## 75.1, 75.2 Special Topics

3 hours; 3 credits each term
Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take Judaic Studies 75.1 for credit twice or 75.2 for credit twice or 75.1 and 75.2 for credit once each, but may not repeat topics.
Prerequisite: permission of the chairperson.

## 83.1, 83.2 Independent Research I, II

Minimum of 9 hours conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Weekly conference. Thesis or report.
Prerequisite: completion of a program, approved by the chairperson, in the Judaic Studies Department or related departments; and permission of the instructor and the chairperson.

## 88.1, 88.2 Independent Study I, II

Minimum of 9 hours conference and independent work§; 3 credits each term
Independent study supervised by a faculty member. Approved reading. Periodic conferences. Final examination or term paper.
Prerequisite: completion of a program, approved by the chairperson, in the Judaic Studies Department or related departments; and permission of the instructor and the chairperson.

## Hebrew

*1 Elementary Hebrew I
3 hours recitation, 1 hour laboratory; 3 credits
Fundamental course in grammar, speaking, reading, and writing. (Not open to students who have completed Hebrew 0.5.)

## *2 Elementary Hebrew II

3 hours recitation, 1 hour laboratory; 3 credits
Continuation of Hebrew 1. (Not open to students who have completed Hebrew 0.6 and 0.7.)
Prerequisite: Hebrew 1 or one year of high school Hebrew.

## *3 Intermediate Hebrew I

3 hours recitation, 1 hour laboratory; 3 credits
Oral and aural drill. Grammar review, selected modern readings, and practice in writing and speaking.
Prerequisite: Hebrew 2 or two years of high school Hebrew or permission of the chairperson.

## *4 Intermediate Hebrew II

3 hours recitation, 1 hour laboratory; 3 credits
Continuation of Hebrew 3. Reading and discussion in Hebrew. (Not open to students who have completed Hebrew 4.1.)
Prerequisite: Hebrew 3 or three years of high school Hebrew or permission of the chairperson.

## *4.1 Literary Masterpieces

3 hours; 3 credits
Readings from significant works and introduction to literary analysis. Conducted in Hebrew. (Not open to students who are enrolled in or have completed Hebrew 4 or 4.5.)
Prerequisite: four years of high school Hebrew and ability to converse in Hebrew.

## *4.5 Conversation

3 hours; 3 credits
Oral and aural practice. Reading newspapers and journals. Discussion and short exposés in Hebrew. Students who are fluent in Hebrew may not take this course for credit except with permission of the chairperson. (Not open to students who have completed Hebrew 4.6.)
Prerequisite or corequisite: Hebrew 4.

## *9.1 Hebrew Literature in Translation I

3 hours; 3 credits
Survey of Hebrew literature from the Biblical period through the Middle Ages. Representative works in English translation. (Not open to students who are enrolled in or have completed Comparative Literature 17 or Hebrew 9.)

## *9.2 Hebrew Literature in Translation II

## 3 hours; 3 credits

Survey of Hebrew literature from the end of the Middle Ages to the present. Representative works in English translation. (Not open to students who are enrolled in or have completed Comparative Literature 17.)

### 11.1 Advanced Grammar and Composition 3 hours; 3 credits

Critical and historical review of grammar and style. Writing original narratives and essays.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.
Hebrew courses 21 through 85 are taught entirely in Hebrew.

## 21 Poetry of the Hebrew Renaissance

3 hours; 3 credits
Readings from the poetry of Bialik, Tchernichovsky, and some of their contemporaries.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 25 Prose of the Hebrew Renaissance

3 hours; 3 credits
Novels and short stories of Mendele Mokher Sefarim, Berditchevsky, Brenner, Frischmann, and Peretz.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 41 Bible: The Historical Books

3 hours; 3 credits
The Books of Joshua, Judges, Samuel, Kings, Chronicles, Ezra, and Nehemiah.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

### 45.1 Bible: The Prophets and the Psalms

3 hours; 3 credits
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 47 Prose of Modern Israel

3 hours; 3 credits
Prose fiction since World War I. Burla, Shenhar, Shamir, Meged, and Yizhar.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 48 Agnon and Hazaz

3 hours; 3 credits
Their novels and short stories.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 49 Poetry of Modern Israel

3 hours; 3 credits
Readings from the poetry of such writers as Shimeoni, Shlonsky, Lamdan, Meltzer, Sh. Shalom, and Leah Goldberg.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 51 Medieval Literature

3 hours; 3 credits
Prose and poetry of the Middle Ages, particularly that of the Golden Age in Spain.
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 52 Literature of the Haskalah

3 hours; 3 credits
Growth of modern Hebrew literature in the eighteenth and nineteenth centuries. Representative authors. (Not open to students who have completed Hebrew 16.)
Prerequisite: Hebrew 4 or 4.1 or permission of the chairperson.

## 70 Tutorial in Literature and Culture

1 hour conference; minimum 8 hours independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports and a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced Hebrew courses with an average of 3.0 or higher. Approval of topic by the instructor and the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in Hebrew. May not be taken concurrently with Hebrew 85.
Prerequisite: junior or senior standing and 15 credits in advanced Hebrew courses, approved by the chairperson, with an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work; 3 credits
Research thesis written in Hebrew on a literary, linguistic, or cultural topic. May not be taken concurrently with Hebrew 84.1. Prerequisite: senior standing and 18 credits in advanced Hebrew courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## Related courses

Art 13.40 Jewish Art
Education 65.07, 66.07 Seminars in Secondary Education in Hebrew I, II
English 59 Special Topics in Literature
("The Jew in American Literature," when offered)
History 50 Ancient Jewish History
History 23.3 Medieval Jewish History
History 28.3 The Jews in Modern Europe
Music 10.3 Jewish Folk Music
Philosophy 60.1, 60.2, 60.3, 60.4, 60.5 Special Topics
(topics relating to Judaic studies, when offered)
Philosophy 70.1, 70.2 Seminar in the History of Philosophy
I, II (Introduction to Judaic Philosophy I, II, when offered)
Physical Education 17.14 Israeli Folk Dancing
Political Science 49.3 Politics of the Middle East
Political Science 49.5 Government and Politics of Israel
Sociology 27.2 Sociology of the American Jewish Community
Theater 41.2 The Yiddish Theater
Yiddish 3 Intermediate Yiddish
Yiddish 4 Advanced Yiddish
The following courses are inactive and will be offered only if there is sufficient demand:

## 14 Introduction to the Talmud <br> 15 Introduction to the Midrash <br> 21.5 Religious Controversy in Israel

## Linguistics Program

Telephone: 951-5641
Convener: John D. Roy
Faculty: from the departments of the college.
The Linguistics Program offers a major in linguistics, a dual major in linguistics and a related discipline, and a minor in linguistics.

## B.A. degree program in linguistics HEGIS code 1505

Program requirements (27-49 credits)
Students must complete parts 1 through 5.

1. Linguistics 1 or Anthropology 2.3.
2. All of the following: Anthropology 17, Speech 13, Linguistics 84.1.
3. Two of the following: Linguistics 21, 22, 23.
4. One advanced foreign language course chosen from the following: Greek 12 or above, Latin 12 or above, Chinese 10 or above, French 11.1, German 11.1, Hebrew 11.1, Italian 11.1, Russian 11.1, Spanish 11.1, plus any prerequisite of the course. Another advanced foreign language course may be substituted with permission of the Linguistics Program convener.
5. Two of the following: Anthropology 17, 19, Computer and Information Science 24, 29, 32, 38, 45, English 24.3, 24.4, 24.7, 24.8, 24.9, Mathematics 51.1, 52, 56, Philosophy 13, 19, 33, 34, Psychology 22, 58.1, Puerto Rican and Latino Studies 43 , Sociology 77.2, Speech 17.6, 31, plus any prerequisite of the courses. Other courses, particularly appropriate honors seminars, may be substituted for either or both of the two courses with permission of the Linguistics Program convener.

## B.A. degree program for linguistics dual major HEGIS code 1505

Program requirements (21-36 credits plus a major in a department; see part 6 below)
Students must complete parts 1 through 7.*

1. Linguistics 1 or Anthropology 2.3.
2. Speech 13.
3. Two of the following: Linguistics 21, 22, 23.
4. One advanced language course chosen from the following: English 24.7, Greek 12 or above, Latin 12 or above, Chinese 10 or above, French 11.1, German 11.1, Hebrew 11.1, Italian 11.1, Russian 11.1, Spanish 11.1, plus any prerequisite of the course. If a foreign language is chosen, it may be the same as that in part 7 .
5. Two of the following: Anthropology 17, 19, Computer and Information Science 24, 29, 32, 38, 45, English 24.3, 24.4, 24.8, 24.9, Mathematics 51.1, 52, 56, Philosophy 13, 19, 33, 34, Psychology 22, 58.1, Puerto Rican and Latino Studies 43 , Sociology 77.2, Speech 17.6, 31, plus any prerequisite of the courses. Other courses, particularly appropriate honors seminars, may be substituted for either or both of the two courses with permission of the Linguistics Program convener.
6. A major in a department of the college. The following majors are recommended for the dual major program: anthropology, classics, computer and information science, English, mathematics, modern languages and literatures, philosophy, psychology, sociology, and speech. Any other major must be approved by the Linguistics Program convener.
7. Study of a classical or modern foreign language through course 4 or 4.1 , or the equivalent; or proficiency in a classical or modern foreign language through course 4 or 4.1, or the equivalent. Proficiency is determined by the department offering the language.
*Note: If any of the courses in parts 1 through 7 is applicable toward the requirements of the student's department major, it may be applied toward the requirements of both the Linguistics Program and the department major.

## Requirements for a minor in linguistics

A minimum of 12 credits of advanced electives in the Linguistics Program. Advanced linguistics courses in other departments may be used with the approval of the program convener. Each course must be completed with a grade of C or higher. Students should meet with the program convener to plan a program suited to their interests and career plans.

## Recommendation for prospective graduate students

Prospective graduate students in linguistics should develop reading fluency in French and either German or Russian and some familiarity with Greek and Latin.

## Courses

§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 1 Introduction to Linguistics

3 hours; 3 credits
Nature and structure of human language in relation to other communication systems. Evolution and acquisition of language; dialects and styles; language and culture; speech and writing. Comparison of traditional and recent theories of language. (Not open to students who are enrolled in or have completed Anthropology 2.3.)

## 21 Phonology

3 hours; 3 credits
Analysis of the sound systems of natural languages.
Phonetics and phonology. Relation of phonology to vocabulary and syntax.
Prerequisite:Linguistics 1 or Anthropology 2.3; and Speech 13.

## 22 Syntax

3 hours; 3 credits
Analysis of the sentence structure of natural languages.
Sentence and discourse. Relation of syntax to semantics and phonology. Traditional and recent theories of syntactic analysis. Prerequisite: Linguistics 1 or Anthropology 2.3.

## 23 Semantics

## 3 hours; 3 credits

Analysis of the meaning of words and sentences. Relation of semantics to vocabulary, syntax, and discourse. Traditional and recent theories of meaning.
Prerequisite: Linguistics 1 or Anthropology 2.3.

### 84.1 Seminar or Independent Study in Linguistics

Recitation or conference and independent work§; 3 credits Independent reading and research on a problem or topic in linguistic analysis. Major paper or final examination.
Prerequisite: six credits in linguistics courses and permission of the Linguistics Program convener.

## Mathematics

Department office: 1156 Ingersoll Hall
Telephone: 951-5246, 951-5247
Chairperson: George S. Shapiro
Deputy Chairperson, CLAS: Wolfe Snow
Deputy Chairperson, SGS: Raymond Gittings
Professors: Gardiner, Gittings, Halpern, Kohn, Marathe, Máté, Shapiro, Sibner, Stone;
Associate Professors: Godino, Hennefeld, Hochberg, Snow, Spatz, Velling;
Assistant Professors: Bouziakova, Hu.

## Placement examination in mathematics

Students who plan to take calculus (Mathematics 3.3) without having taken precalculus (Mathematics 2.9) should take the Brooklyn College Calculus Placement Test, which is routinely offered to incoming students by the Office of Testing.

## B.A. and B.S. degree programs in mathematics HEGIS code 1701

Department requirements (30-33 credits)
To enroll in any advanced course in mathematics, students must maintain an average grade of $C$ or higher in all courses previously taken in the department, unless this requirement is waived by the chairperson. A student exempt, without credit, from a course may not take the course later for credit except with permission of the chairperson. Mathematics majors must offer a minimum of 18 credits in advanced courses for the degree. All mathematics courses offered to satisfy the requirements for a major in mathematics must be completed with a grade of C - or higher.
One of the following mathematics sequences, a), b), c), or d):
a) Mathematics 3.3 and 4.3 and 5.3.
b) Mathematics 3.20 and 4.20 and 5.20 .
c) Mathematics 3.20 and 4.20 and 4.31 and 5.3
d) Mathematics 4.10 and 5.10.

Mathematics 10.1, 11.1, and 14.1.
Two of the following: Mathematics 12.1, 13.5, 14.5, 15, 18.1, $24,25,27,37.1,43,52,56,88.1,88.2,88.3,88.4$.
Computer and Information Science 1.10 or 1.20 or 1.5.
Additional courses in the Mathematics Department to bring the total number of credits in advanced courses to 18.
Recommendation for prospective graduate students
Prospective doctoral students should develop reading competence in at least one of the following languages: French, German, Russian.

## Department recommendation

Majors should consult with a Mathematics Department counselor concerning substitutions for core science courses.

## Computational mathematics program

The Department of Mathematics and the Department of Computer and Information Science offer an interdepartmental major in computational mathematics. The program is described in the Department of Computer and Information Science section.

## B.A. degree program in adolescence education: mathematics teacher <br> HEGIS code 1701.01; SED program code 26735

The School of Education and the Department of Mathematics jointly offer a program for students who plan to teach mathematics in grades 7 through 12. Additional information may be obtained from the School of Education or the Department of Mathematics. Students should consult a counselor as early as possible to plan their program.
All mathematics courses offered to satisfy the requirements for a major in mathematics teacher must be completed with a grade of C - or higher.
Program requirements (54-57 credits)
One of the following mathematics sequences, a), b), c), or d):
a) Mathematics 3.3 and 4.3 and 5.3.
b) Mathematics 3.20 and 4.20 and 5.20.
c) Mathematics 3.20 and 4.20 and 4.31 and 5.3.
d) Mathematics 4.10 and 5.10.

All of the following: Mathematics 10.1, 11.1, 14.1, 25, 46, 51.1, 71.

Computer and Information Science 1.10 or 1.20 or 1.5.
The following pedagogical courses: Education 16, 34, 64.1, 69, 71.03, 72.03.
These courses are described in the "Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree program for mathematics teacher.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

## Mathematics concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section of the Bulletin. Students who major in either of these programs and who elect a concentration in mathematics must complete all concentration requirements with a grade of C - or higher in each course and an overall average of $C$ or higher in all mathematics courses taken for the concentration.

## Concentration requirements:

Core Studies 5 or 5.1. Students exempted from Core Studies 5 or 5.1 must take a computer and information science course numbered 1.5 or higher other than the course used to satisfy the computer and information science requirement below.
Mathematics 1.95. Students exempted from Mathematics 1.95 must take an additional 3 credits of mathematics besides those listed below.
Mathematics 1.97.
Mathematics 2.9 or Mathematics 2.91 and 2.92. Students permitted to enroll in Mathematics 3.3 without taking precalculus must take an additional 3 credits of mathematics besides the courses listed below.
All of the following courses: Mathematics 3.3, 4.3, 8.1, 10.1, 41.

Computer and Information Science 3 or 5.1.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in mathematics must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Mathematics Department. These 24 credits must be completed at Brooklyn College with a grade of C- or higher in each course. Specific course requirements for a B.S. degree are described above. The following courses may be applied toward the 60 credits in science and mathematics:
a) All courses in the departments of Biology, Chemistry, Computer and Information Science, Geology, Mathematics, Physics, and Psychology.
b) Courses marked with a dot (•) in the Department of Health and Nutrition Sciences.
c) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3.

Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2.
Economics 30.2, 30.3, 31.1, 31.2.
Philosophy 13, 33, 42.
Physical Education 22.71, 22.75, 23, 30, 51.
Sociology 77.1.

## Minor in mathematics

At least 12 credits in advanced electives in mathematics with a grade of C - or higher. With the permission of the chairperson, at most 6 credits of advanced courses from another institution may be accepted toward this requirement. Mathematics minors should consult with the department counselor for recommendations.

## Division of Graduate Studies

The Mathematics Department offers a master of arts degree program in mathematics and a master of arts degree program for mathematics teachers (grades 7 through 12). For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.
The following courses have been divided into five categories to assist students in selecting the appropriate mathematics courses. The first category is self-explanatory. Levels 1 through 4 contain courses for mathematics and science majors, with level 1 the least advanced and level 4 the most advanced.
For the nonscience student: 1.2, 1.3, 1.4, 1.45, 1.5, 1.8, 1.9, 1.92, 1.95, 1.97, 2.3.

Level 1: 2.9, 3.3, 4.3, 4.31, 4.35.
Level 2: 5.3, 5.35, 8.1, 10.1, 13, 39, 41, 74.1, 74.2.
Level 3: 7.1, 13.1, 14.1, 17, 25, 37.1, 51.1, 73.2.
Level 4: 7.2, 11.1, 12.1, 13.5, 14.5, 15, 18.1, 24, 27, 43, 46, $52,56,71,88.1,88.2,88.3,88.4$.

## Workshops

No credit
Voluntary sessions for students enrolled in any mathematics course numbered lower than 6 who need additional assistance. Emphasis on the solution of problems encountered in these courses.

## *1.3 Introduction to Mathematical Thinking

3 hours; 3 credits
Analysis, on an elementary level, of the nature of mathematical reasoning; elements of set theory; some simple postulational systems. (A student who is enrolled in or has completed a Mathematics Department course numbered 5 or higher or Computer and Information Science 11 may not take Mathematics 1.3 for credit except with permission of the chairperson.)
Prerequisite: Course 2 of the New York State Sequential Mathematics Curriculum, or two-and-one-half years of high school mathematics including one year of geometry and a course in intermediate algebra, or Mathematics 0.04, or a grade of C - or higher in Mathematics 0.35 or 0.36 or 0.44 , or the equivalent.

## *1.4 Elementary Number Theory

3 hours; 3 credits
Fundamental properties of integers and related systems, in particular of primes, factorization, and divisibility. (Not open to students who have completed Mathematics 1.1 for credit. A student who is enrolled in or has completed a Mathematics Department course numbered 5 or higher may not take Mathematics 1.4 for credit except with permission of the chairperson.)
Prerequisite: Course 2 of the New York State Sequential Mathematics Curriculum, or two-and-one-half years of high school mathematics including one year of geometry and a course in intermediate algebra, or Mathematics 0.04 , or a grade of C - or higher in Mathematics 0.35 or 0.36 or 0.44 , or the equivalent.

## *1.5 Elements of Statistics with Applications

 3 hours; 3 creditsAnalysis and presentation of data. Abuses of statistics. Measures of central tendency; measures of variability. Hypothesis testing. Estimation. Tests of independence. Applications to various fields. Use of simple calculator required. (Not open to students who are enrolled in or have completed any of the following: a Mathematics Department course numbered 5 or higher, Biology 16.1, Business 30.2, Economics 30.2, Political Science 12.5, 57, Psychology 40.1, 50.)
Prerequisite: Course 2 of the New York State Sequential Mathematics Curriculum, or two-and-one-half years of high school mathematics including one year of geometry and a course in intermediate algebra, or Mathematics 0.04 , or a grade of C - or higher in Mathematics 0.35 or 0.36 or 0.44 , or the equivalent.

## *1.8 Modern Mathematics for the Social Sciences

 3 hours; 3 creditsMathematics 1.8 covers recent developments in mathematics of significance to the social scientist. Linear programming including necessary introductory topics and study of a computer language. (Not open to students who are enrolled in or have completed Mathematics 2.4 or a Mathematics Department course numbered 5 or higher except with permission of the chairperson.)
Prerequisite: Course 2 of the New York State Sequential Mathematics Curriculum, or two-and-one-half years of high school mathematics including one year of geometry and a course in intermediate algebra, or Mathematics 0.04 , or a grade of C - or higher in Mathematics 0.35 or 0.36 or 0.44 , or the equivalent.

## *1.95 Elementary Mathematics from an

## Advanced Standpoint

4 hours; 4 credits
Mathematics content needed for teaching major strands in the early childhood and elementary school mathematics curriculum. Various concrete and abstract representations of mathematical concepts, inductive and deductive thinking, and applications and problem solving. (A student who is enrolled in or has completed Mathematics 1.9 or any Mathematics Department course numbered 4 or higher or who has completed Calculus 1 with a grade of B or higher may not take Mathematics 1.95 for credit except with permission of the chairperson. Mathematics 1.95 may be credited toward a baccalaureate degree only by students who have completed at least five credits in Education.)
Prerequisite: Core Studies 5 or 5.2 or a course which is acceptable for at least three credits in mathematics at Brooklyn College.

## *1.97 Mathematics in Education

2 hours; 2 credits
Concepts and principles of mathematics underlying the elementary school curriculum. Taught in coordination with Education 44.

## a. Early childhood education section:

emphasis on topics relevant to teaching children from prekindergarten to grade 3.
b. Elementary, bilingual, and special education section: emphasis on topics relevant to teaching children from kindergarten to grade 6.
Prerequisite: Mathematics 1.95; or a higher level mathematics course and a passing score on a placement test.
Corequisite: Education 44.

## *2.9 Precalculus Mathematics

4 hours; 3 credits
Preparation for calculus. Trigonometry. The concept of function, including exponential, logarithmic, trigonometric, and inverse trigonometric functions. Introduction to limit ideas. (Not open to students who are enrolled in or have completed a Mathematics Department course numbered 2.91 or higher.)
Prerequisite: Course 3 of the New York State Sequential Mathematics Curriculum, or a grade of C- or higher in Mathematics 0.47 , or the equivalent, and assignment on the basis of a placement test.

## *2.91 Precalculus Mathematics A

3 hours lecture, 1 hour recitation; 2 credits
Preparation for calculus with more introductory material than Mathematics 2.9. Mathematics 2.91 and 2.92 constitute a two-term sequence for students who are not prepared for Mathematics 2.9 or who wish a review. Real numbers. Complex numbers. Graphs. Functions, especially linear and quadratic functions. Polynomials and rational functions.
Trigonometry. (Not open to students who are enrolled in or have completed Mathematics 2.9 or any mathematics course numbered 3 or higher.)
Prerequisite: Course 2 of the New York State Sequential Mathematics Curriculum or the equivalent.

## *2.92 Precalculus Mathematics B

3 hours lecture, 1 hour recitation; 2 credits
Continuation of Mathematics 2.91. More extensive study of functions; composition of functions, inverse functions. Logarithmic and exponential functions. Trigonometric and inverse trigonometric functions. Conic sections. Binomial theorem. (Not open to students who are enrolled in or have
completed Mathematics 2.9 or any mathematics course numbered 3 or higher.)
Prerequisite: A grade of C- or higher in Mathematics 2.91 or permission of the chairperson.

## *2.99 Introduction to Mathematics for the Social Sciences and Business

3 hours; 2 credits
Graphs; functions; polynomial and rational functions; exponential and logarithmic functions; the parabola; systems of linear equations and inequalities; geometric series; the binomial theorem. (Not open to students who are enrolled in or have completed any mathematics course numbered 2.9 or higher. Not open to entering freshmen.)
Prerequisite: two years of sequential mathematics or mathematics A in high school.

## *3.3 Calculus I

3 hours; 3 credits
Mathematics 3.3 and 4.3 and 5.3 constitute a three-term sequence. Mathematics 3.3 is an introduction to calculus: derivatives and integrals of algebraic, exponential, logarithmic, and trigonometric functions of one variable, and applications. (Not open to students who have completed Mathematics 3.20 or 4.10.)
Prerequisite: three years of high school mathematics including geometry and intermediate algebra and trigonometry or Course 3 of the New York State Sequential Mathematics Curriculum, and assignment on the basis of a placement test; or a grade of C or higher in Mathematics 2.9 or 2.92 .

## *4.3 Calculus II

4 hours; 4 credits
Continuation of Mathematics 3.3. Trigonometric and inverse trigonometric functions, techniques (closed form and numerical) and applications of integration for functions of one variable, improper integrals, l'Hopital's rule, sequences,
series, and polar coordinates. (Not open to students who have completed Mathematics 4.20 or 5.10.)
Prerequisite: a grade of C- or higher in Mathematics 3.20 or 3.3.

## *4.31 Infinite Series

1 hour; 1 credit
Intended for students who completed Calculus II, without infinite series. Taylor series; tests for convergence. (Not open to students who are enrolled in or have completed Mathematics 4.3 or 5.10 or 5.20 ).
Prerequisite: Mathematics 4.20 with a grade of C- or higher; or permission of the chairperson.

## *4.35 Symbolic Manipulation in Calculus II

1 hour; 1 credit
Use of symbolic manipulation computer software to present in greater depth certain topics in second semester calculus.
Topics include applications of integration, numerical integration, Taylor series, graphing in polar coordinates.
Prerequisite or corequisite: Mathematics 4.3 or 4.31 .

## *5.3 Multivariable Calculus

4 hours; 4 credits
Continuation of Mathematics 4.3. Vectors and parametric equations, partial differentiation, multiple integration, line integrals, and Green's theorem. (Not open to students who have completed Mathematics 5.10 or 5.20 .)
Prerequisite: a grade of C- or higher in Mathematics 4.3; or prerequisite or corequisite: Mathematics 4.31.

## *5.35 Symbolic Manipulation in Multivariate Calculus

1 hour; 1 credit
Use of symbolic manipulation computer software to present in greater depth certain topics in multivariable calculus. Topics include functions of two and three variables, vectors, partial derivatives, and multiple integrals.
Prerequisite or corequisite: Mathematics 5.3.

## *7.1 Actuarial Mathematics I

70 minutes a week for 11 weeks; 1 credit
Calculus and linear algebra. Emphasis on those aspects not covered in previous courses and on problem types similar to those appearing on Examination 100 of the Society of Actuaries. Spring term.
Prerequisite: Mathematics 5.10 or 5.20 or 5.3 ; and 10.1.

## *8.1 Elementary Probability and Statistics

3 hours; 3 credits
Sample spaces; combinatorial theory; elementary probability; random variables; discrete and continuous probability distributions; confidence intervals; hypothesis testing. (Not open to students who are enrolled in or have completed Mathematics 51.1.)
Prerequisite: Mathematics 4.3 or 4.31 or 5.10 or 5.20 .

### 10.1 Linear Algebra I

3 hours; 3 credits
Introduction to the concepts of linear algebra. Vector geometry of three dimensions. (Not open to students who are enrolled in or have completed Mathematics 14.5.)
Prerequisite: Mathematics 4.10 or 4.20 or 4.3.

### 11.1 Advanced Calculus I

3 hours; 3 credits
Advanced calculus of functions of one variable. Relevant properties of the real number system. Properties of continuous functions and uniform continuity. Differentiable functions, mean-value theorems. L'Hopital's rule, Taylor's theorem. Sequences, series, and improper integrals.
Prerequisite: Mathematics 5.10 or 5.20 or 5.3 ; and at least 6 credits in advanced Mathematics Department courses or permission of the chairperson.

## 13 Elementary Differential Equations

## 3 hours; 3 credits

Standard methods of solving ordinary differential equations; geometric interpretations; problems in physics leading to differential equations.
Prerequisite or corequisite: Mathematics 5.3.

### 13.5 Partial Differential Equations

## 4 hours; 4 credits

Solution of partial differential equations; theory of Fourier series and their applications to boundary value problems; applications to mathematical physics; transform methods; numerical methods; systems of orthogonal functions.
Prerequisite: Mathematics 13.

### 14.1 Abstract Algebra I

3 hours; 3 credits
Elementary theory of groups, rings, and fields; integers, rationals, real and complex numbers; elements of number theory, polynomials.
Prerequisite: Mathematics 5.10 or 5.20 or 5.3 ; and Mathematics 10.1.

### 14.5 Linear Algebra II

4 hours; 4 credits
Determinants, matrices, and systems of linear equations; linear dependence; vector spaces; eigenvalues, and eigenvectors; matrix equations; linear transformations; convex sets.
Prerequisite: Mathematics 10.1 and 14.1.
15 Introduction to Functions of a Complex Variable 4 hours; 4 credits
Calculus of complex functions; Cauchy's integral theorem; Laurent series, singularities; residues; properties of analytic functions; conformal mapping; analytic continuation.
Prerequisite: Mathematics 11.1 and permission of the chairperson.

## 17 Theory of Numbers

3 hours; 3 credits
Congruences; quadratic residues; diophantine equations; factorization.
Prerequisite: Mathematics 14.1.

## 25 Foundations of Geometry

4 hours; 4 credits
Critical analysis of foundations of geometry; postulational development of Euclidean and hyperbolic geometries; theories of incidence, order, congruence, parallelism, and measure; ordered linear geometries of arbitrary dimension as join systems (multigroups).
Prerequisite: a minimum of six credits in advanced Mathematics Department courses.

## 27 Introduction to Topology

4 hours; 4 credits
Intuitive concepts of topology: topology as a geometry of continuity, topological equivalence; one- and two-dimensional manifolds, Jordan curve theorem. Introduction to general topology; topology of Euclidean, metric, and abstract spaces with emphasis on continuous mappings, compactness, connectedness, completeness, separation axioms. Applications to analysis and geometry.
Prerequisite or corequisite: Mathematics 11.1 and permission of the chairperson.

## 30 Special Topics in Mathematics

3 hours; 3 credits
A topic in mathematics not covered in the regular curriculum. The topics will, in general, vary from one offering to another. Course descriptions will be available in the department office before registration in semesters in which the course is to be offered. Students may take this course for credit three times, but may not repeat topics.
Prerequisite: Mathematics 4.3 or higher; permission of the chairperson.

### 37.1 Numerical Analysis

4 hours; 4 credits
Introduction to numerical analysis using high-speed computers. Fixed-point and floating-point arithmetic; analysis of errors; numerical solution of algebraic and transcendental equations and systems of linear equations. Interpolation and approximation. Numerical differentiation and integration. Solution of ordinary differential equations. (Not open to students who are enrolled in or have completed Mathematics 37.)
Prerequisite: Mathematics 10.1; and Mathematics 5.10 or 5.20 or 4.3 or 4.31 ; and one of the following: Computer and Information Science 1.10, 1.20, 1.5, the ability to use a scientific programming language.

## 39 Chaos and Structural Stability in One-Dimensional Dynamics

3 hours lecture, 2 hours laboratory; 4 credits
Computer and thought experiments will be used to illustrate concepts from one-dimensional dynamical systems. Lectures will focus on theoretical concepts explaining the phenomena illustrated in the laboratory assignments. Topics include structural stability, chaos, symbolic dynamics, kneading sequences for folding maps, bifurcation in parameter spaces, periodic points and the Sarkovskii ordering. Cantor sets, and fractional dimension. (Not open to students who completed Mathematics 30 in fall, 1990.)
Prerequisite: Mathematics 4.3.

## 41 History of Mathematics

3 hours; 3 credits
Development of mathematics from antiquity to recent times. Interrelationship of subject matter and the rise of modern concepts.
Prerequisite: Mathematics 4.3 or 4.31 or 5.10 or 5.20.

## 46 Secondary School Mathematics from an

## Advanced Viewpoint

4 hours; 4 credits
An advanced overview of mathematical topics in the secondary school curriculum: logic, space geometry, transformation geometry, coordinate geometries, polynomials, and computer applications. (Not open to students who have completed Mathematics 8 and 9.) Spring term, 1993.
Prerequisite: Mathematics 10.1 and 14.1 and Computer and Information Science 1.1 or 1.2 or 1.3 or 1.10 or 1.20.
51.1 Introduction to Probability and Statistics 3 hours; 3 credits
Sample spaces; combinatorial theory; elementary probability; random variables; discrete and continuous probability distributions; moments and moment-generating functions; applications. (Not open to students who are enrolled in or have completed Mathematics 8.1.)
Prerequisite: Mathematics 5.10 or 5.20 or 5.3.

## 52 Statistics

4 hours; 4 credits
Theory of estimators; distributions of functions of random variables, including chi-square, $t$ and $F$ distributions; confidence intervals; tests of hypotheses.
Prerequisite: Mathematics 51.1.

## 71 Seminar in Problem Solving and Selected Topics

1 hour; 1 credit
Reading, discussions, problem-solving sessions on selected topics in graph theory, topology, game theory, number theory, and recreational mathematics. Fall term.
Prerequisite: at least eight credits in advanced Mathematics Department courses; and senior standing or permission of the chairperson.

### 73.2 Mathematics of Operations Research

3 hours; 3 credits
Linear programming; network analysis; queueing theory; simulation; decision analysis.
Prerequisite: Mathematics 51.1.

### 74.1 Mathematics of Compound Interest and Finance

 3 hours; 3 creditsMeasurement of interest; annuities-certain; amortization schedules and sinking funds; bonds and related securities. Prerequisite: Mathematics 4.3 or 4.31 or 5.10 or 5.20 .

### 74.2 Investment Science

4 hours; 4 credits
Net present value, internal rate of return; yield, duration, immunization, and convexity of fixed-income securities; mean-variance portfolio theory, Markowitz model, CAPM, factor models, arbitrage pricing theory; models of asset dynamics, Ito's lemma, options theory, Black-Scholes equation; interest-rate derivatives. (This course is the same as Business 70.7 and Economics 70.7.)
Prerequisite: Economics 30.2 or Business 30.2 or
Mathematics 8.1 or Mathematics 51.1; Mathematics 5.3. Prerequisite or corequisite: Economics 10.1 or 20.1.
88.1, 88.2, 88.3, 88.4 Independent Study I, II, III, IV Minimum of 9 hours independent work and conference; 3 credits
Independent study of a selected list of readings approved by a faculty adviser. Thesis or final examination.
Prerequisite: a minimum of 12 credits in advanced Mathematics Department courses and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 1.2 Basic Concepts of Geometry

1.45 Problem Solving and Mathematical Reasoning
1.92 Geometry for Elementary School Teachers
2.3 Applied Mathematics for Teachers
7.2 Actuarial Mathematics II
12.1 Advanced Calculus II
13.1 Applications of Mathematics (Multivariable)
18.1 Abstract Algebra II

24 Projective Geometry
43 Foundations of Modern Mathematics
56 Probability

## Modern Languages and Literatures

Department office: 4239 Boylan Hall
Telephone: 951-5451, 951-5452
Chairperson: William Sherzer
Deputy Chairperson, CLAS: Malva E. Filer
Professors: Barran, Blasi, Bonaffini, Fernández Olmos, Filer, Huffman, Sherzer, Wile;
Associate Professors: Girelli-Carasi, Mbom;
Assistant Professor: Childers, Renner.
The Department of Modern Languages and Literatures offers majors in French, Italian, Russian, and Spanish.
The department also offers courses in Arabic, Chinese, German, Greek (modern), Haitian Creole, Japanese, and Portuguese.
Courses in Hebrew are offered in the Department of Judaic Studies.

## Core curriculum

The Department of Modern Languages and Literatures participates in the college's core curriculum through the foreign language requirement.
The department shares responsibility for Core Studies 6 and 9 with other departments.
All baccalaureate students are required to complete one course in a foreign language at course-level 3 (the third semester of study at the college level) or to demonstrate an equivalent proficiency by examination, except as modified below.

1. This requirement presupposes two years of secondary school language study. If only one year of language study (or none at all) is offered, one or two semesters of college study (course-levels 1 and/or 2) are required before course-level 3 can be taken. A student who has studied language in high school for at least two years but wants to study a different language at the college level may do so, but this student must complete a minimum of two terms of the new language at the college level to fulfill the core requirement.
2. Students who have completed three years of one language in high school and passed the level 3 Regents examination are exempted from the core language requirement.
3. Students whose native language is not English may be exempted from this requirement by passing one of the competency examinations administered by the Department of Modern Languages and Literatures.
4. Neither blanket nor equivalent credit will be given for introductory courses in a foreign language from which a student has been exempted by examination.

## Placement in foreign language courses

Students may begin study of a language at Brooklyn College or may continue foreign language study begun in high school. Students who are fluent in a given language usually register for advanced courses in that language. These students may register for courses $1,2,3$, and 4.5 only with permission of a department counselor.

## Students who want to begin study of a foreign language at Brooklyn College should follow these guidelines for registration.

(a) Basic courses in all languages are listed with numbers beginning with $1(),. 2(),. 3($.$) , and 4($.$) . Each course is the$ prerequisite of the next. Courses numbered $4($.$) are the$ prerequisite of all courses numbered 10 and higher. Some advanced courses have additional prerequisites.
(b) For specific information on course content and prerequisites, students should consult individual course listings on the following pages.
Students who want to continue foreign language study begun in high school should follow these guidelines for registration.
(a) Students who have completed four years or more of foreign language study and have passed the Regents level 3 examination in the language should consult a department counselor to determine proper placement.
(b) Students who have completed fewer than four years of foreign language study but have passed the Regents level 3 examination in the language should register for course 4 or 4.1. If there has been a lapse of time since completing high school work, the student should consult a department counselor.
(c) Students who have completed three years or less of foreign language study but have not passed the Regents level 3 examination in the language are advised to consult a department counselor about placement before registration.
Students who have completed one year of language study or less in high school normally enroll in course 1 at Brooklyn College. Students with two years of high school language experience usually enroll in course 2 , and students with three years of high school language experience usually enroll in course 3. Any questions regarding placement should be directed to the department office.

## B.A. degree program in French HEGIS code 1102

## B.A. degree program in Italian HEGIS code 1104

## B.A. degree program in Russian HEGIS code 1106

## B.A. degree program in Spanish HEGIS code 1105

Department requirements (24-36 credits)
The majors in French, Italian, Russian, and Spanish are hereafter referred to as "Language."
There are two options for the major:
Option I ( 24 credits)
Required for all majors:
All of the following: Language 11.12 and 17.50.
At least one of the following culture courses: Language 18.50, 18.75 , 19.50, or 19.75 .

The remaining courses are to be selected from Language 11.1, Language $15.50,18.50,18.75,19.50$, or 19.75, Tier II, Tier III, Tier IV, and/or Modern Languages rubric.
A knowledge of Latin and/or another Language Other Than English is also helpful.
Option II: Language and Business (36 credits)
All of the following: Language 11.1 or 11.12; Language 17.50; Language 18.50 or 18.75; Modern Languages 20.02-20.11 (one course specific to the major), 60.02-60.11 (one course specific to the major).
Three additional courses to be selected from: Language 11.1, Language 11.12, Language $15.50,18.50,18.75,19.50$, or 19.75, Tier II, Tier III, Tier IV, and/or Modern Languages 20 or higher.
Both of the following: Business 50.2, 76.4 .
Two of the following: Business 40.3, 50.1, 50.4, 50.5, 50.7, 50.9.

## Requirements for a minor in Italian American studies

A grade of $C$ or higher in each of the four courses taken to satisfy the minor.
Both of the following: Interdisciplinary Studies 12, English 63.2
Two of the following: Italian 15, Italian 18.50, Italian 18.75, Italian 19.50, Italian 20.07, Italian 59.1, Italian 70 , Interdisciplinary Studies 25, Interdisciplinary Studies 70, English 40.2, English 59, History 25.11. The approval of the program director is required for Italian 59.1, Italian 70, Interdisciplinary Studies 70, English 40.2, and English 59.

## Requirements for a minor in Italian international studies

A grade of $C$ or higher in each of the five courses offered for the minor.
All of the following: Italian 15, Modern Languages and Literatures 20.07, Interdisciplinary Studies 12 or 25.
Two of the following: Art 14.71 or 14.72, English 59 with the approval of the Modern Languages chairperson when the topic is relevant to this minor, History 25.11, Interdisciplinary Studies 12, Interdisciplinary Studies 70 with the approval of the Modern Languages chairperson when the topic is relevant to this minor, Italian 19.50 or 59.1, Political Science 47.1.

## Requirements for an optional minor in Chinese, French, German, Italian, Russian, or Spanish

A minimum of 12 credits in advanced courses in the chosen language (11.1 and above).

## Department recommendations

Modern languages and literatures majors are advised to take one or more courses in literatures other than the major.
Appropriate courses in anthropology, art history, classics, comparative literature, English, history, Judaic studies, philosophy, and theater are recommended.

## B.A. degree programs in adolescence education:

 French teacher, Italian teacher, Spanish teacher HEGIS code 1102.01, 1104.01, 1105.01; SED program code 26796; 26804; 26801The School of Education and the Department of Modern Languages and Literatures jointly offer a program for students who plan to teach French, Italian, or Spanish in grades 7 through 12. Additional information may be obtained from the School of Education or the Department of Modern Languages and Literatures. Students should consult a counselor as early as possible to plan their program.
Program requirements (51 credits):
Thirty credits in the content area are required for New York state certification to teach a Language Other Than English at the secondary level. Twenty-four of those credits must be taken in the Department of Modern Languages and Literatures as follows (Language $=$ French, Italian, or Spanish):
All of the following: Language 11.12, 17.50, and Modern Language 58.
Two of the following culture courses: Language 18.50 or 18.75; 19.50 or 19.75.

Nine credits to be selected from Language 11.1, Language 15.50, Tier II, Tier III, Tier IV; and/or Modern Languages 20 or higher.
The remaining six credits may be selected from the following options:

1) Up to two courses in the major language and/or the Modern Language rubric.
2) Two courses in a second language, level 4 or above.
3) Up to two courses in related areas, subject to department approval.
An average of $B$ or higher in the major is required for student teaching.
In addition, students must complete the following pedagogical courses: Education 16, 34, 64.1, 69, 71.11, and 72.11. These courses are described in the "Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree programs for French teacher, Italian teacher, and Spanish teacher.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

Concentrations in modern languages and literatures for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs may elect one of the following concentrations in modern languages and literatures. A minimum of 30 credits is required for a concentration in Chinese, French, Italian, Russian, or Spanish. Prior study of the language may substitute for a maximum of two courses.

## Chinese

Chinese 3.1 or 3.8 ; 4.1 or 4.8 ; 11.1 or 11.12. Modern Languages 1.5. Six Chinese courses from Tiers II or III.
French
French 4 or 4.8; 11.1 or 11.12; 15.50; 17.50. Modern
Languages 1.5. Two of the following courses: French 18.50,
18.75, 19.50, 19.75. Three French courses from Tiers II or III. Italian
Italian 4 or 4.8; 11.1 or 11.12; 17.50. Modern Languages 1.5. One of the following courses: Italian 18.50, 18.75, 19.50. Five Italian courses from Tiers II or III.
Russian
Russian 4.1 or 4.8; 11.1 or 11.12. Modern Languages 1.5. Russian 18.50 or 19.50. Six Russian courses from Tiers II or III.

## Spanish

Spanish 4 or 4.8; 11.1 or 11.12. Modern Languages 1.5. Two of the following courses: Spanish 17.50, 18.75, 19.75, 43.75. Five Spanish courses from Tiers II or III. Students may be exempted from level 4 courses, but must take Spanish 11.2, a one-credit advanced grammar course that follows Spanish 11.1 or 11.12.

## Division of Graduate Studies

The Modern Languages and Literatures Department offers master of arts degree programs in Spanish and Spanish teacher (grades 7 through 12). Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the chairperson. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

All courses, unless otherwise indicated, are taught in the target language.
*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 24-27 credits in advanced courses in the major language.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
Tier I Introductory Courses include basic culture and civilization courses and two core courses that provide a basis for future electives: 15.50 Understanding Texts teaches students how to read, analyze, and write about texts from a diversity of genres; 17.50 Landmarks of Literature presents an established core of representative texts in chronological order.
Tier II Genre Courses include courses titled Thematic Readings in five major literary genres (poetry, the novel, short fiction, theater, and the essay). The content of these courses varies from semester to semester and it is always presented in chronological order to help students develop a sense of literary history.
Tier III Multidisciplinary Courses expand the study of literature beyond the traditional fields, focusing on special areas of interest in the contemporary world; women; autobiography; moral and religious concerns; historical and social concerns; and the arts.
Tier IV Pivotal and Monographic Courses offer the intensive study of a major author or body of literary works at an advanced level. Their in-depth nature makes them suitable for students toward the end of their course of study.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Modern languages

*1.5 Approaches to Learning a Modern Language 3 hours; 3 credits
Analysis of the process of second-language acquisition for the adult language learner and of the relationship between language learning and cultural awareness. Development of practical self-monitoring and self-evaluating strategies to promote successful language acquisition and cultural competence. For students studying or planning to study a modern language, including English at the college level. This course is the same as English *1.5.
Prerequisite: permission of the chairperson of the Department of Modern Languages and Literatures.

### 13.01-13.11 Peer Tutoring I

2 hours tutoring, 1 hour conference; 1 credit
Two hours of peer tutoring in the Learning Center and one conference hour per week with a faculty supervisor. Final report in journal form.
13.01 Arabic
13.02 Chinese
13.03 French
13.04 German
13.05 Greek (modern)
13.06 Haitian Creole
13.07 Italian
13.08 Japanese
13.09 Portuguese
13.10 Russian
13.11 Spanish

Prerequisite: permission of the chairperson.

### 14.01-14.11 Peer Tutoring II

2 hours tutoring, 1 hour conference; 1 credit
Two hours of peer tutoring in the Learning Center and one conference hour per week with a faculty supervisor. Final report in journal form.

| 14.01 | Arabic |
| :--- | :--- |
| 14.02 | Chinese |
| 14.03 | French |
| 14.04 | German |
| 14.05 | Greek (modern) |
| 14.06 | Haitian Creole |
| 14.07 | Italian |
| 14.08 | Japanese |
| 14.09 | Portuguese |
| 14.10 | Russian |
| 14.11 | Spanish |

Prerequisite: one course from Language 13.01-13.11 and permission of the chairperson.

### 20.02-20.11 Translation for the Professions

## 3 hours; 3 credits

Practical and theoretical approaches to translating materials drawn from a variety of texts and to integrating translation resources available in the multimedia laboratory. (French 20.03 not open to students who have completed French 54. Italian 20.07 not open to students who have completed Italian 12.1. Spanish 20.11 not open to students who have completed Spanish 54.)

| 20.02 | Chinese |
| :--- | :--- |
| 20.03 | French |
| 20.04 | German |
| 20.07 | Italian |
| 20.10 | Russian |
| 20.11 | Spanish |

Prerequisite: Language 11.12 or permission of the chairperson.

### 21.02-21.11 Literary Translation

3 hours; 3 credits
Practical and theoretical approaches to translating literary texts including poetry, plays, and narrative fiction. Analysis of selected published translations and of the cultural factors bearing upon the process of translation. Integration of resources available in the multimedia laboratory. (French 21.03 not open to students who have completed French 54. Spanish 21.11 not open to students who have completed Spanish 54.)

| 21.02 | Chinese |
| :--- | :--- |
| 21.03 | French |
| 21.04 | German |
| 21.07 | Italian |
| 21.10 | Russian |
| 21.11 | Spanish |
| Prerequisite: Language 11.12 or permission of the chairperson. |  |

### 29.02-29.11 Translation Practicum

One hour conference, minimum 9 hours independent work§; 3 credits
Individual translation project designed in consultation with a faculty supervisor and leading to a portfolio containing successive and final drafts. May be taken twice provided the project is different.
29.02 Chinese
29.03 French
29.04 German
29.07 Italian
29.10 Russian
29.11 Spanish

Prerequisite: Language 20.02-20.11 or 21.02-21.11 or permission of the chairperson.

### 50.02-50.11 Writing, Research, and Resources

## 3 hours; 3 credits

A practical approach to the writing of research papers using resources available in print and nonprint sources. Emphasis on scholarship as a process, including the selection of a topic, documentation, organization of materials, expository writing, and the preparation of a list of works cited. Students will submit a series of preliminary drafts for comment and approval prior to the final paper, which, in the case of majors and minors, will form part of the final Best Work Portfolio. To be taught in English. Written work to be done in a Language Other Than English.

| 50.02 | Chinese |
| :--- | :--- |
| 50.03 | French |
| 50.04 | German |
| 50.07 | Italian |
| 50.10 | Russian |
| 50.11 | Spanish |

Prerequisite: Language 11.1 or 11.12 or 17.50 , or permission of the chairperson.

### 52.03-52.11 Regional Variations in Language

3 hours; 3 credits
Recent developments in linguistic expression, both oral and written, in a diversity of nations and societies. The foundations of language in its country of origin and its subsequent expansion throughout the world. Emphasis on regional similarities and differences in pronunciation, lexicon, syntax, and usage through the analysis of contemporary texts, films, television, and musical lyrics, as well as materials available on the Internet.
$52.03 \quad$ French
52.11 Spanish

Prerequisite: Language 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 53.02-53.11 Language and Technology

3 hours, 2 hours multimedia laboratory; 3 credits
A systematic approach to multimedia resources for students and teachers of Languages Other Than English. Audiovisual materials (audio documents, films, and videos), software programs, electronic dictionaries. Audio, video, CD-ROM format, and the Web. Informational materials, news, and other original texts in foreign languages in formats other than printed media. Use of e-mail as a teaching tool. Use of the Web as an environment for learning and teaching foreign languages. Development of classroom activities using multimedia technologies. To be taught in English.
53.02 Chinese
53.03 French
53.04 German
53.07 Italian
53.10 Russian
53.11 Spanish

Prerequisite: Language 4 or permission of the chairperson.

### 55.03-55.11 Introduction to Romance Linguistics

 3 hours; 3 creditsStudy of major areas of Romance linguistics, with an emphasis on French, Italian, and Spanish. Historical development, philology, morphology, syntax, and semantics. Students will acquire metalinguistic knowledge of the target language and will learn the basics of grammatical analysis: constituent structures; inflectional, derivational, and constituent morphemes; agreement system; syntactic categories and grammatical relations within a sentence; phrase structure rules; cases and complements; tense
sequence. The course will also address the most salient phenomena of the evolution from classical and vulgar Latin. Attention will be given to the most recent evolutions (Francophonie, influence of English, regionalization of Latin American Spanish). Students will be encouraged to pursue research in a particular language and area of interest.
Taught in English. Final project in the target language.
55.03
55.07 Italian
55.11 Spanish

Prerequisite: Language 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 58.02-58.11 Teaching and Learning Language <br> for Communication

3 hours, 1 hour multimedia laboratory; 3 credits
Approaches to second language instruction and acquisition from a practical perspective. Current methodologies and applications. Student-centered learning, setting realistic goals, outcomes assessment for the four skills, the Oral Proficiency Interview (OPI), and balancing the needs of both heritage and nonheritage speakers. Identifying and using resources available in the media and on the Internet. To be taught in English.
58.02 Chinese
58.03 French
58.04 German
58.07 Italian
58.10 Russian
58.11 Spanish

Prerequisite: Language 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 59.02-59.11 Special Topics

3 hours; 3 credits
Special topic or theme not otherwise covered in the regular curriculum. Topics vary and reflect special interests of students and faculty. Course description available in department office prior to registration. Students may take the course more than one time, but may not repeat the topic or theme.

| 59.02 | Chinese |
| :--- | :--- |
| 59.03 | French |
| 59.04 | German |
| 59.07 | Italian |
| 59.10 | Russian |
| 59.11 | Spanish |

Prerequisite: Language 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 60.02-60.11 Fieldwork in Communities and Professional Environments I

9 hours fieldwork, 1 hour conference; 3 credits
A minimum of nine hours per week of supervised fieldwork in an approved place of employment, professional environment, or community program, where students will use one of the target languages designated below.

| 60.02 | Chinese |
| :--- | :--- |
| 60.03 | French |
| 60.04 | German |
| 60.07 | Italian |
| 60.10 | Russian |
| 60.11 | Spanish |

Prerequisite: 15 credits of advanced courses in the target language and permission of the chairperson.

### 61.02-61.11 Fieldwork in Communities and Professional Environments II

9 hours fieldwork, 1 hour conference; 3 credits
A minimum of nine hours per week of supervised fieldwork in an approved place of employment, professional environment, or community program, where students will use one of the target languages designated below.

| 61.02 | Chinese |
| :--- | :--- |
| 61.03 | French |
| 61.04 | German |
| 61.07 | Italian |
| 61.10 | Russian |
| 61.11 | Spanish |

Prerequisite: 15 credits of advanced courses and one course from Language 60.02-60.11 in the target language; permission of the chairperson.

## Arabic

## *1.1 Intensive Elementary Arabic I

5 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for beginners and those who have had one year or less of high school study. Introduction to phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. (Not open to heritage speakers or to students who have completed Arabic 1 or more than one year of high school Arabic.) Prerequisite: none.

## *2.1 Intensive Elementary Arabic II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence. Expanded acquisition of phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. Designed to prepare students for Arabic 3.1. (Not open to heritage speakers or to students who have enrolled in or have completed Arabic 1 or 2.)
Prerequisite: Arabic 1.1 or permission of the chairperson.

## *3.1 Intensive Intermediate Arabic I

4 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for students who have completed Arabic 1.1 and 2.1 or the equivalent, or have had four years of high-school study. Continued development of oral fluency and writing in social interaction and in systematic vocabulary building. Increased awareness of cultural diversity in areas where language is spoken. (Not open to heritage speakers or to students who are enrolled in or have completed Arabic 3.)
Prerequisite: Arabic 2.1 or permission of the chairperson.

## *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Fundamentals of writing and reading for students whose knowledge of Arabic is limited to spoken communication. Emphasis on spelling, word order, and verb tenses, based on authentic literary and nonliterary texts. Practice in written self-expression.
Prerequisite: permission of the chairperson.
*4.1 Intensive Intermediate Arabic II
4 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence for students who have completed Arabic 3.1 or its equivalent. Further refinement of oral fluency and writing in social interaction and
in systematic vocabulary building. Expanded awareness of cultural diversity through study of literary and nonliterary texts and other media of communication. (Not open to heritage speakers or students who have completed Arabic 4.) Prerequisite: Arabic 3.1 or permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of Arabic. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Arabic 3.8 or permission of the chairperson.

## Chinese

*1.1 Intensive Elementary Chinese I
5 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for beginners and those who have had one year or less of high school study. Introduction to phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. (Not open to heritage speakers or to students who have completed Chinese 1 or more than one year of high school Chinese.)
Prerequisite: none.

## *2.1 Intensive Elementary Chinese II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence. Expanded acquisition of phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. Designed to prepare students for Chinese 3.1. (Not open to heritage speakers or to students who have enrolled in or have completed Chinese 1 or 2.)
Prerequisite: Chinese 1.1 or permission of the chairperson.

## *3.1 Intensive Intermediate Chinese I

4 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for students who have completed Chinese 1.1 and 2.1 or the equivalent, or have had four years of high school study. Continued development of oral fluency and writing in social interaction and in systematic vocabulary building. Increased awareness of cultural diversity in areas where language is spoken. (Not open to heritage speakers or to students who are enrolled in or have completed Chinese 3.)
Prerequisite: Chinese 2.1 or permission of the chairperson.

## *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Fundamentals of writing and reading for students whose knowledge of Chinese is limited to spoken communication. Emphasis on writing and the distinctions among various levels of dialect and language.
Prerequisite: permission of the chairperson.

## *4.1 Intensive Intermediate Chinese II

4 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence for students who have completed Chinese 3.1 or its equivalent. Further refinement of oral fluency and writing in social interaction and in systematic vocabulary building. Expanded awareness of cultural diversity through study of literary and nonliterary texts
and other media of communication. (Not open to heritage speakers or students who have completed Chinese 4.) Prerequisite: Chinese 3.1 or permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of Chinese. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Chinese 3.8 or permission of the chairperson.

## *6 Calligraphy

2 hours; 1 credit
Esthetics and practice of Chinese calligraphy for students with or without Chinese language background.

## *7 T'ai-chi Ch'üan: Theory and Practice

2 hours laboratory; 1 credit
The short Yang form for health, meditation, and self-defense with push-hands practice and readings from the T'ai-chi classics, the Lao tzu, Chuang tzu, Confucian Analects, and I Ching. (Not open to students who have taken or are enrolled in Physical Education 17.20.) To be taught in English. Prerequisite: none.

## 10 Studies in Chinese Media

3 hours; 3 credits
Introduction to Chinese media, including newspapers, journals, speeches, essays, radio and television broadcasts, video documentaries, the Internet, and pop music lyrics.
Prerequisite: Chinese 4.1 or 4.8 or permission of the chairperson.

### 11.1 Advanced Language Skills I

## 3 hours; 3 credits

Development of advanced language skills for nonheritage speakers; analytical practice and self-expression in the written and spoken language; use of authentic literary and nonliterary texts. (Not open to heritage speakers.)
Prerequisite: Chinese 4.1 or 4.8 or permission of the chairperson.

### 11.12 Advanced Language Skills II

3 hours; 3 credits
Continued practice in advanced written expression and in textual analysis for heritage and nonheritage speakers; composition modeled on selected literary texts.
Prerequisite: Chinese 4.8 or permission of the chairperson.

### 11.31-11.37 Chinese for Specific Purposes

3 hours; 3 credits
Acquisition of the language skills, terminology, and procedures necessary to function in one or more specialized areas where Chinese is routinely used. Designed to familiarize students with common interactions within the professional environment and with problems arising from cross-cultural misunderstandings. Intensive practice in speaking and writing. Reading and discussion of authentic materials related to the topic. May be taken before or concurrently with Chinese 60.02.
11.31 Chinese for the Arts
11.32 Chinese for Business
11.33 Chinese for Criminal Justice
11.35 Chinese for the Media
11.36 Chinese for Social Sciences
11.37 Chinese for Social Work

Prerequisite: Chinese 11.12 or permission of the chairperson.

### 17.50 Landmarks of Chinese Literature

3 hours; 3 credits
An introductory course designed to familiarize students with major literary works in Chinese within a chronological and cultural framework. Representative texts from the Chinesespeaking world, providing an overview of writings that have shaped the lives of generations of readers. Frequent writing assignments in Chinese to strengthen students' individual competencies. This core of texts, reviewed periodically by the department, serves as a foundation for advanced literature courses.
Prerequisite: Chinese 4.1 or 4.8 or permission of the chairperson.

### 20.1 Modern Chinese Literature from 1919 to 1949

 3 hours; 3 creditsReadings from vernacular literature from the May 4th Movement to the founding of the People's Republic.
Prerequisite: Chinese 10 or permission of the chairperson.

### 20.2 Modern Chinese Literature from 1949 to the Present

 3 hours; 3 creditsReadings from postwar literature of the People's Republic, Taiwan, and overseas Chinese communities.
Prerequisite: Chinese 10 or permission of the chairperson.

## 26 Survey of Classical Chinese Poetry

 3 hours; 3 creditsIntroduction to the development of various poetic forms in the classical style.
Prerequisite: Chinese 4.1 or 4.8 or permission of the chairperson.

## 27 T'ang Poetry

3 hours; 3 credits
Reading of the works of well-known T'ang dynasty poets.
Prerequisite: Chinese 4.1 or 4.8 or permission of
the chairperson.

## 28 Philosophical Texts from the I Ching to Mao Tse-tung

 3 hours; 3 creditsIntellectual history of China. Documents in the original language and translation. Emphasis on contrasts and continuity.
Prerequisite: Chinese 4.1 or 4.8 or permission of the chairperson.

### 30.50 Chinese Literature and Film

3 hours; 3 credits
The relationship between Chinese literary works and the films they inspired. Course description available in department office prior to registration.
Prerequisite: Chinese 4.1 or 4.8 or permission of the chairperson.

## 31 Classical Novel

3 hours; 3 credits
Readings from five major Chinese novels from the fourteenth to the eighteenth centuries: San-kuo yen-i, Shui-hu-chuan, Hsi-yu chi, Ju-lin wai-shih, Hung-lou Meng.
Prerequisite: Chinese 10 or permission of the chairperson.

### 40.50 Writings of a Major Chinese Author

3 hours; 3 credits
An in-depth, monographic study concentrating either on the opus of a major Chinese writer or on one of the masterpieces of Chinese literature.
Prerequisite: Chinese 17.50 or permission of the chairperson.

## 70 Tutorial in Literature and Culture

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports and a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced Chinese courses with an average of 3.0 or higher. Approval of topic by the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in Chinese. May not be taken concurrently with Chinese 85.
Prerequisite: junior or senior standing and 15 credits in advanced Chinese courses approved by the chairperson with an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work§; 3 credits
Research thesis, written in Chinese, on a literary, linguistic, or cultural topic. May not be taken concurrently with Chinese 84.1. Prerequisite: senior standing and 18 credits in advanced Chinese courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## French

## *1 Basic Language Skills I

3 hours, 1 hour multimedia laboratory; 3 credits
The first in a three-semester introductory sequence for beginners and those who have had one year or less of high school study. Emphasis on basic social functions, simple conversation, readings, and writing. Introduction to the cultures where French is spoken. (Not open to heritage speakers or to students who have completed French 1.5 or more than one year of high school French.)

## *1.2 Intensive Elementary French I

5 hours, 1 hour multimedia laboratory; 4 credits
The first course in an intensive two-semester sequence for beginners and those who have one year or less of high school study. Development of reading, writing, speaking, listening, and cultural awareness through classroom interaction and practice, utilizing a variety of multimedia materials. Designed for students wishing to proceed at an accelerated pace. Credit given only upon completion of French 3.2. (Not open to heritage speakers or to students who are enrolled in or have completed French 1, French 1.5, or more than one year of high school French.)
Prerequisite: None.

## *2 Basic Language Skills II

3 hours, 1 hour multimedia laboratory; 3 credits
Second in a three-semester introductory sequence.
Continued emphasis on basic social functions, simple
conversations, readings, and writing. Narration and
description of past and future events. Increased
understanding of the cultures where French is spoken. (Not open to heritage speakers or to students who have completed French 1.5.)
Prerequisite: French 1, or two years of high school French, or permission of the chairperson.

## *3 Basic Language Skills III

3 hours, 1 hour multimedia laboratory; 3 credits
Third in a three-semester introductory sequence. Further emphasis on basic social functions and practice in longer, more complex conversations, readings, and writing on a broader range of familiar topics. Communication of needs, ideas, and emotions. Continued study of cultures where French is spoken. (Not open to heritage speakers or to students who have completed French 3.7.)
Prerequisite: French 2, or three years of high school French without passing the level 3 Regents examination, or permission of the chairperson.

## *3.2 Intensive Elementary French II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in the two-semester intensive sequence. Continued development of reading, writing, speaking, listening, and cultural awareness through extensive classroom interaction, practice, and a variety of multimedia materials. Designed to prepare students for French 4. (Not open to heritage speakers or to students who are enrolled in or have completed French 1, 2, or 3.)
Prerequisite: French 1.2 or permission of the chairperson.

## *3.4 Fundamentals of Reading and Writing for Nonheritage Speakers

2 hours, 1 hour multimedia laboratory; 2 credits
Review and further development of intermediate-level reading and writing skills with special attention to grammar and style. An optional transitional course designed to prepare students for French 4. May be taken concurrently with French 3.6. (Not open to heritage speakers or to students who have recently completed four years of high school French or are enrolled in or have completed French 3.2.)
Prerequisite: French 3, or a passing grade on the level 3 Regents examination, or a significant time lag in language study at this level, or permission of the chairperson.

## *3.6 Basic Conversation Workshop

1 hour, 2 hours multimedia laboratory; 1 credit
A supplementary course providing additional practice speaking French on everyday topics using authentic materials from a variety of contemporary media such as newspapers, magazines, radio, television, and film. For nonheritage speakers who have completed French 3, 3.2, or their equivalent. May be taken concurrently with or independently of French 3.4. (Not open to heritage speakers.)
Prerequisite: French 3 or 3.2 , or a passing grade on the level 3 Regents examination, or four years of high school study, or permission of the chairperson.

## *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Fundamentals of writing and reading for students whose knowledge of French is limited to spoken communication. Emphasis on writing and the distinctions among various levels of dialect and language.
Prerequisite: permission of the chairperson.

## *4 Intermediate Language Skills for Nonheritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits Continued development of language skills and cultural understanding using a variety of authentic materials including film, video, and short literary texts. Class discussions, group activities, and team projects. Individual writing assignments with emphasis on accuracy and style. (Not open to heritage speakers.)
Prerequisite: Recent completion of French 3, or the level 3 Regents examination with a passing grade, or four years of high school French, or French 3.2 or 3.4, or permission of the chairperson.

## *4.5 Intermediate Conversation for the Professions for Nonheritage Speakers

2 hours, 2 hours multimedia laboratory; 2 credits
A supplementary course providing conversational practice in career-oriented situations such as interviews, telephone conversations, taking and leaving messages, providing and obtaining information. May be taken concurrently with or independently of French 4. (Not open to heritage speakers.)
Prerequisite: French 3.2, 3.4, or 3.6, or permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of French. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: French 3.8 or permission of the chairperson.

### 11.1 Advanced Language Skills I

3 hours, 3 credits
Development of advanced language skills for nonheritage speakers; analytical practice and self-expression in the written and spoken language; use of authentic literary and nonliterary texts. (Not open to heritage speakers or students who have completed French 4.3.)
Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 11.12 Advanced Language Skills II

3 hours; 3 credits
Continued practice in advanced written expression and in textual analysis for heritage and nonheritage speakers; composition modeled on selected literary texts.
Prerequisite: French 4.8 or permission of the chairperson.

### 11.31-11.37 French for Specific Purposes

 3 hours; 3 creditsAcquisition of the language skills, terminology, and procedures necessary to function in one or more specialized areas where French is routinely used. Designed to familiarize students with common interactions within the professional environment and with problems arising from cross-cultural misunderstandings. Intensive practice in speaking and writing. Reading and discussion of authentic materials related to the topic. May be taken before or concurrently with French 60.02.
11.31 French for the Arts
11.32 French for Business
11.33 French for Criminal Justice
11.35 French for the Media
11.36 French for Social Sciences
11.37 French for Social Work

Prerequisite: French 11.12 or permission of the chairperson.

### 15.50 Understanding Texts in French

3 hours; 3 credits
Development of reading and analytical skills in French. Short, authentic texts, both literary and nonliterary, representing diverse contemporary styles and genres. Discussions and frequent writing assignments using a variety of approaches and supplementary materials available in the multimedia laboratory. May be taken concurrently with or after French 4.8 or 11.1.
Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 17.50 Landmarks of French and Francophone Literatures

 3 hours; 3 creditsAn introductory course designed to familiarize students with major literary works in French within a chronological and cultural framework. Representative texts from the French-speaking world, providing an overview of French and Francophone writings that have shaped the lives of generations of readers. Frequent writing assignments in French to strengthen students' individual competencies. This core of texts, reviewed periodically by the department, serves as a foundation for advanced literature courses. (Not open to students who have completed French 18.) Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 18.50 Contemporary France

3 hours; 3 credits
An exploration of the major features of contemporary French society and other French-speaking European cultures from 1945 to the present with particular attention to developing an understanding of the concepts of cultural identity and difference within the changing European context. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the French print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after French 4.8 or 11.1. (Not open to students who have completed French 51.)
Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 18.75 The Contemporary Francophone World

## 3 hours; 3 credits

An exploration of the contemporary French-speaking world outside of Europe from 1945 to the present with particular attention to developing an understanding of the concepts of cultural identity and difference, nationalism, and la francophonie. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after French 4.8 or 11.1.
Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 19.50 History of French Civilization

 3 hours; 3 creditsA historical overview of the values, institutions, and cultural heritage of France and other French-speaking European cultures from their origins to the mid-twentieth century. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the French print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after French 4.8 or 11.1. (Not open to students who have completed French 51.)
Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 19.75 History of Francophone Cultures

3 hours; 3 credits
A historical overview of the cultural heritage of the major French-speaking cultures of the world outside of Europe from the foundations of French colonialism to 1945. Particular attention to developing an understanding of the concepts of colonialism; nationalism; and racial, regional, and national identities. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after French 4.8 or 11.1.
Prerequisite: French 4 or 4.8 or permission of the chairperson.

### 20.50: Thematic Readings in French Poetry

3 hours; 3 credits
Representative selections from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 20.75 Thematic Readings in Francophone Poetry

 3 hours; 3 creditsRepresentative selections from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 21.50 Thematic Readings in the French Novel

3 hours; 3 credits
Representative works from the origins to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 21.75 Thematic Readings in the Francophone Novel 3 hours; 3 credits

Representative works from the origins to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 22.50 Thematic Readings in French Short Fiction

 3 hours; 3 creditsRepresentative stories and short novels from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 22.75 Thematic Readings in Francophone Short Fiction

 3 hours; 3 creditsRepresentative stories and short novels from the origins to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 23.50 Thematic Readings in French Theater

## 3 hours; 3 credits

Representative works from the origins to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students make take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 23.75 Thematic Readings in Francophone Theater

 3 hours; 3 creditsRepresentative works from the Francophone theater within a specific thematic and cultural context. This course will study the tensions of an age torn between traditions and modernity in this important period of the Francophone world. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 24.50 Thematic Readings in the French Essay

3 hours; 3 credits
Representative works of French expository prose from the Middle Ages to the present within a specific thematic and cultural context. Course description available in department prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 24.75 Thematic Readings in the Francophone Essay

 3 hours; 3 creditsRepresentative works from Francophone thought. Political, social, and cultural milieu of the twentieth-century Francophone world within a specific thematic and cultural context. Emphasis on the historical, ideological, and cultural forces that have transformed the Francophone world from a dominated space into a free one. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 30.50 French Literature and Film

3 hours; 3 credits
The relationship between French literary works and the films they inspired. Course description available in department office prior to registration.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 31.50 Women in French Literature

3 hours; 3 credits
The image of women as expressed in selected French literary works. Course description available in department office prior to registration.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 32.50 Autobiographical Literature in French

## 3 hours; 3 credits

Autobiographical fiction and nonfiction in French literature. Memoirs, letters, diaries, journals, confessions. Course description available in department office prior to registration.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 33.50 Moral and Religious Themes in French and Francophone Literatures

3 hours; 3 credits
Religious beliefs and practices as expressed in selected literary works in French. Course description available in department office prior to registration.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 34.50 Historical and Social Visions in French and

 Francophone Literatures3 hours; 3 credits
French and Francophone history and/or society, past and present, as reflected in selected literary works. Course description available in department office prior to registration.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 35.50 French and Francophone Literatures and the Arts

 3 hours; 3 creditsThe relationship between French and Francophone literary works and the visual and/or performing arts. Outside lectures, visits to exhibitions and/or museums, attendance at musical and/or theatrical performances. Course description available in department office prior to registration.
Prerequisite: French 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 40.50 Writings of a Major French Author

3 hours; 3 credits
An in-depth, monographic study concentrating either on the opus of a major French writer or on one of the masterpieces of French literature.
Prerequisite: French 11.1 or 11.12 or 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

### 40.75 Writings of a Major Francophone Author

3 hours; 3 credits
An in-depth, monographic study concentrating either on the opus of a major Francophone writer or on one of the masterpieces of Francophone literature.
Prerequisite: French 11.1 or 11.12 or 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

## 70 Tutorial in Literature and Culture

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports and a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced French courses with an average of 3.0 or higher. Approval of topic by the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in French. May not be taken concurrently with French 85.
Prerequisite: junior or senior standing and 15 credits in advanced French courses approved by the chairperson with an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work§; 3 credits
Research thesis, written in French, on a literary, linguistic, or cultural topic. May not be taken concurrently with French 84.1.
Prerequisite: senior standing and 18 credits in advanced French courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## German

*1.2 Intensive Elementary German I
5 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for beginners and those who have had one year or less of high school study. Introduction to phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. (Not open to heritage speakers or to students who have completed German 1 or more than one year of high school German.)

## *3.2 Intensive Elementary German II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in the two-semester intensive sequence. Continued development of reading, writing, speaking, listening, and cultural awareness through extensive classroom interaction, practice, and a variety of multimedia materials. Designed to prepare students for German 4. (Not open to heritage speakers or to students who are enrolled in or have completed German 1, 2, or 3.)
Prerequisite: German 1.2 or permission of the chairperson.

## *4 Intermediate Language Skills for Nonheritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Continued development of language skills and cultural understanding using a variety of authentic materials including film, video, and short literary texts. Class discussions, group activities, and team projects. Individual writing assignments with emphasis on accuracy and style.
(Not open to heritage speakers.)
Prerequisite: German 3 or 3.2, or the level 3 Regents examination with a passing grade, or four years of high school German, or permission of the chairperson.

## *4.5 Intermediate Conversation for the Professions for Nonheritage Speakers

2 hours, 2 hours multimedia laboratory; 2 credits
A supplementary course providing conversational practice in career-oriented situations such as interviews, telephone conversations, taking and leaving messages, providing and obtaining information. May be taken concurrently with or independently of German 4. (Not open to heritage speakers.)
Prerequisite: German 3.2 or permission of the chairperson.

## *9 German Literature in Translation

3 hours; 3 credits
Development of German literature from the eighteenth through the twentieth century. Lectures, readings, and discussions in English.
Prerequisite: English 2 or permission of the chairperson.

### 11.1 Advanced Language Skills I

3 hours; 3 credits
Development of advanced language skills for nonheritage speakers; analytical practice and self-expression in the written and spoken language; use of authentic literary and nonliterary texts. (Not open to heritage speakers or students who have completed German 4.3.)
Prerequisite: German 4 or permission of the chairperson.

### 11.12 Advanced Language Skills II

3 hours; 3 credits
Continued practice in advanced written expression and in textual analysis for heritage and nonheritage speakers; composition modeled on selected literary texts.
Prerequisite: German 11.1 or permission of the chairperson.

### 11.31-11.37 German for Specific Purposes

3 hours; 3 credits
Acquisition of the language skills, terminology, and procedures necessary to function in one or more specialized areas where German is routinely used. Designed to familiarize students with common interactions within the professional environment and with problems arising from cross-cultural misunderstandings. Intensive practice in speaking and writing. Reading and discussion of authentic materials related to the topic. May be taken before or concurrently with German 60.02.
11.31 German for the Arts
11.32 German for Business
11.33 German for Criminal Justice
11.35 German for the Media
11.36 German for Social Sciences
11.37 German for Social Work

Prerequisite: German 11.12 or permission of the chairperson.

## 70 Tutorial in Literature and Culture

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports and a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced German courses with an average of 3.0 or higher. Approval of topic by chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in German. May not be taken concurrently with German 85.
Prerequisite: junior or senior standing and 15 credits in advanced German courses approved by the chairperson with an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work§; 3 credits
Research thesis, written in German, on a literary, linguistic, or cultural topic. May not be taken concurrently with German 84.1. Prerequisite: senior standing and 18 credits in advanced German courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## Greek (modern) <br> *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Fundamentals of writing and reading for students whose knowledge of modern Greek is limited to spoken communication. Emphasis on writing and the distinctions among various levels of dialect and language.
Prerequisite: permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of modern Greek. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Modern Greek 3.8 or permission of the chairperson.

## Haitian Creole <br> *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits Fundamentals of writing and reading for students whose knowledge of Haitian Creole is limited to spoken communication. Emphasis on writing and the distinctions among various levels of dialect and language.
Prerequisite: permission of the chairperson.
*4.8 Intermediate Writing and Reading Skills for Heritage Speakers
3 hours, 1 hour multimedia laboratory; 3 credits Further development of writing and reading skills for students with basic knowledge of the structure of Haitian Creole. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Haitian Creole 3.8 or permission of the chairperson.

## Italian

*1 Basic Language Skills I
3 hours, 1 hour multimedia laboratory; 3 credits
The first in a three-semester introductory sequence for beginners and those who have had one year or less of high school study. Emphasis on basic social functions, simple conversation, readings, and writing. Introduction to the cultures where Italian is spoken. (Not open to heritage speakers or to students who have completed Italian 1.5 or more than one year of high school Italian.)

## *1.1 Italian Diction for Singers

3 hours; 3 credits
Fundamental course in Italian diction as sung in Italian musical repertoire. Reading comprehension, vocabulary, and grammar. (Not open to students who have completed Italian 1, 1.5, 2, or 3 at Brooklyn College.)
Prerequisite: permission of the director of the Conservatory of Music.

## *1.2 Intensive Elementary Italian I

5 hours, 1 hour multimedia laboratory; 4 credits
The first course in an intensive two-semester sequence for beginners and those who have one year or less of high school study. Development of reading, writing, speaking, listening, and cultural awareness through classroom interaction and practice, utilizing a variety of multimedia materials. Designed for students wishing to proceed at an accelerated pace. Credit given only upon completion of Italian 3.2. (Not open to heritage speakers or to students who are enrolled in or have completed Italian 1, Italian 1.5, or more than one year of high school Italian.)
Prerequisite: none.

## *2 Basic Language Skills II

3 hours, 1 hour multimedia laboratory; 3 credits
Second in a three-semester introductory sequence. Continued emphasis on basic social functions, simple conversations, readings, and writing. Narration and description of past and future events. Increased understanding of the cultures where Italian is spoken. (Not open to heritage speakers or to students who have completed Italian 1.5.)
Prerequisite: Italian 1, or two years of high school Italian, or permission of the chairperson.

## *3 Basic Language Skills III

3 hours, 1 hour multimedia laboratory; 3 credits
Third in a three-semester introductory sequence. Further emphasis on basic social functions and practice in longer, more complex conversations, readings, and writing on a broader range of familiar topics. Communication of needs, ideas, and emotions. Continued study of cultures where Italian is spoken. (Not open to heritage speakers or to students who have completed Italian 3.7.)
Prerequisite: Italian 2, or three years of high school Italian without passing the level 3 Regents examination, or permission of the chairperson.

## *3.2 Intensive Elementary Italian II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in the two-semester intensive sequence. Continued development of reading, writing, speaking, listening, and cultural awareness through extensive classroom interaction, practice, and a variety of multimedia materials. Designed to prepare students for Italian 4. (Not open to heritage speakers or to students who are enrolled in or have completed Italian 1, 2, or 3.)
Prerequisite: Italian 1.2 or permission of the chairperson.

## *3.4 Fundamentals of Reading and Writing for Nonheritage Speakers

2 hours, 1 hour multimedia laboratory; 2 credits
Review and further development of intermediate-level reading and writing skills with special attention to grammar and style. An optional transitional course designed to prepare students for Italian 4. May be taken concurrently with Italian 3.6. (Not open to heritage speakers or to students who have recently completed four years of high school Italian or are enrolled in or have completed Italian 3.2.)
Prerequisite: Italian 3, or a passing grade on the level 3 Regents examination, or a significant time lag in language study at this level, or permission of the chairperson.

## *3.6 Basic Conversation Workshop

1 hour, 2 hours multimedia laboratory; 1 credit
A supplementary course providing additional practice speaking Italian on everyday topics using authentic materials from a variety of contemporary media such as newspapers, magazines, radio, television, and film. For nonheritage speakers who have completed Italian 3, 3.2, or their equivalent. May be taken concurrently with or independently of Italian 3.4. (Not open to heritage speakers.)
Prerequisite: Italian 3 or 3.2, or a passing grade on the level 3
Regents examination, or four years of high school study, or permission of the chairperson.

## *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Fundamentals of writing and reading for students whose knowledge of Italian is limited to spoken communication. Emphasis on writing and the distinctions among various levels of dialect and language.
Prerequisite: Permission of the chairperson.

## *4 Intermediate Language Skills for Nonheritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Continued development of language skills and cultural understanding using a variety of authentic materials including film, video, and short literary texts. Class discussions, group activities, and team projects. Individual writing assignments with emphasis on accuracy and style. (Not open to heritage speakers.)
Prerequisite: Recent completion of Italian 3, or the level 3 Regents examination with a passing grade, or four years of high school Italian, or Italian 3.2 or 3.4, or permission of the chairperson.

## *4.5 Intermediate Conversation for the Professions for Nonheritage Speakers

2 hours, 2 hours multimedia laboratory; 2 credits
A supplementary course providing conversational practice in career-oriented situations such as interviews, telephone conversations, taking and leaving messages, providing and obtaining information. May be taken concurrently with or independently of Italian 4. (Not open to heritage speakers.)
Prerequisite: Italian 3.2, 3.4, or 3.6, or permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of Italian. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Italian 3.8 or permission of the chairperson.

## *7 The Italian Cultural Heritage

3 hours; 3 credits
The cultural and ethnic experience of Italy and the Italian people. Conducted in English. Readings in English. (Not open to students who are enrolled in or have completed Italian 50.)

## *9 Italian Literature in Translation

3 hours; 3 credits
Survey of Italian literature from its origins to the present. Background lectures. Reading and discussion in English of representative masterpieces.

### 11.1 Advanced Language Skills I

3 hours; 3 credits
Development of advanced language skills for nonheritage speakers; analytical practice and self-expression in the written and spoken language; use of authentic literary and nonliterary texts. (Not open to heritage speakers or students who have completed Italian 4.3.)
Prerequisite: Italian 4 or permission of the chairperson.

### 11.12 Advanced Language Skills II

3 hours; 3 credits
Continued practice in advanced written expression and in textual analysis for heritage and nonheritage speakers; composition modeled on selected literary texts.
Prerequisite: Italian 4 or 4.8 or permission of the chairperson.

### 11.31-11.37 Italian for Specific Purposes

3 hours; 3 credits
Acquisition of the language skills, terminology, and procedures necessary to function in one or more specialized areas where Italian is routinely used. Designed to familiarize students with common interactions within the professional environment and with problems arising from cross-cultural misunderstandings. Intensive practice in speaking and writing. Reading and discussion of authentic materials related to the topic. May be taken before or concurrently with Italian 60.02.
11.31 Italian for the Arts
11.32 Italian for Business
11.33 Italian for Criminal Justice
11.35 Italian for the Media
11.36 Italian for Social Sciences
11.37 Italian for Social Work

Prerequisite: Italian 11.12 or permission of the chairperson.

## 15 Internship in Italian International Studies

9 hours fieldwork; 3 credits
A minimum of nine hours per week of supervised fieldwork in an approved professional international institution that is concerned with Italian cultural activities, diplomacy, trade, or banking. Scheduled conferences. Critical report written in Italian on the semester's experience. (Not open to students who have taken Italian 8.)
Prerequisite: Italian 4 or permission of the chairperson.

### 15.50 Understanding Texts in Italian

3 hours; 3 credits
Development of reading and analytical skills in Italian. Short, authentic texts, both literary and nonliterary, representing diverse contemporary styles and genres. Discussions and frequent writing assignments using a variety of approaches and supplementary materials available in the multimedia laboratory. (Students who have completed Italian 17.50 or more advanced literature courses may take Italian 15.50 with the permission of the chairperson.)
Prerequisite: Italian 4 or permission of the chairperson. Corequisite: Italian 4.8 or 11.1 or permission of the chairperson.

### 17.50 Landmarks of Italian Literature

3 hours; 3 credits
An introductory course designed to familiarize students with major literary works in Italian within a chronological and cultural framework. Representative texts from the Italian-speaking world, providing an overview of Italian writngs that have shaped the lives of generations of readers. Frequent writing assignments in Italian to strengthen students' individual competencies. This core of texts, reviewed periodically by the department, serves as a foundation for advanced literature courses. (Not open to students who have completed Italian 18.)
Prerequisite or corequisite: Italian 15.50 or permission of the chairperson.

### 18.50 Contemporary Italy

3 hours; 3 credits
An exploration of the major features of contemporary Italy from 1939 to the present with particular attention to developing an understanding of the concepts of cultural identity and difference within the changing European context. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the Italian print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Italian 4.8 or 11.1. (Not open to students who have completed Italian 50.)
Prerequisite: Italian 4 or 4.8 or permission of the chairperson.

### 18.75 Contemporary Italian Culture in America

 3 hours; 3 creditsAn exploration of the contemporary Italian-speaking community in the United States from 1945 to the present with particular attention to developing an understanding of the concepts of cultural identity. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Italian 4.8 or 11.1. (Not open to students who have completed Italian 50.)
Prerequisite: Italian 4 or 4.8 or permission of the chairperson.

### 19.50 History of Italian Civilization

3 hours; 3 credits
A historical overview of the values, institutions, and cultural heritage of Italy from the origins to the mid-twentieth century. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the Italian print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Italian 4.8 or 11.1. (Not open to students who have completed Italian 50.)
Prerequisite: Italian 4 or 4.8 or permission of the chairperson.

### 20.50 Thematic Readings in Italian Poetry

## 3 hours; 3 credits

Representative selections from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 21.50 Thematic Readings in the Italian Novel

## 3 hours; 3 credits

Representative works from the age of Enlightenment to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 22.50 Thematic Readings in Italian Short Fiction

## 3 hours; 3 credits

Representative stories and short novels from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 23.50 Thematic Readings in Italian Theater

## 3 hours; 3 credits

Representative works from the Renaissance to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 24.50 Thematic Readings in the Italian Essay

3 hours; 3 credits
Representative works of Italian expository prose from the Renaissance to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 30.50 Italian Literature and Film

## 3 hours; 3 credits

The relationship between Italian literary works and the films they inspired. Course description available in department office prior to registration. (Not open to students who have completed Italian 21.) This course is the same as Film 21.2. Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 31.50 Women in Italian Literature

3 hours; 3 credits
The image of women as expressed in selected Italian literary works. Course description available in department office prior to registration.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 32.50 Autobiographical Literature in Italian

 3 hours; 3 creditsAutobiographical fiction and nonfiction in Italian literature. Memoirs, letters, diaries, journals, confessions. Course description available in department office prior to registration.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 33.50 Moral and Religious Themes in Italian Literature

 3 hours; 3 creditsReligious beliefs and practices as expressed in selected Italian literary works. Course description available in department office prior to registration.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 34.50 Historical and Social Visions in Italian Literature

 3 hours; 3 creditsItalian history and/or society, past and present, as reflected in selected literary works. Course description available in department office prior to registration.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 35.50 Italian Literature and the Arts

## 3 hours; 3 credits

The relationship between Italian literary works and the visual and/or performing arts. Outside lectures, visits to exhibitions and/or museums, attendance at musical and/or theatrical performances. Course description available in department office prior to registration.
Prerequisite: Italian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 40.50 Writings of a Major Italian Author

3 hours; 3 credits
An in-depth, monographic study concentrating either on the opus of a major Italian writer or on one of the masterpieces of Italian literature.
Prerequisite: Italian 11.1 or 11.12 or 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

### 41.50 Dante's Divina Commedia

3 hours; 3 credits
An in-depth study of selections from Dante's Divina Commedia. (Not open to students who have completed Italian 53.1 or 53.2.)
Prerequisite: Italian 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

## 70 Tutorial in Literature and Culture

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports or a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced Italian courses with an average of 3.0 or higher. Approval of topic by chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in Italian. May not be taken concurrently with Italian 85.
Prerequisite: junior or senior standing and 15 credits in advanced Italian courses approved by the chairperson with
an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work§; 3 credits
Research thesis, written in Italian, on a literary, linguistic, or cultural topic. May not be taken concurrently with Italian 84.1. Prerequisite: senior standing and 18 credits in advanced Italian courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## Japanese

*1.1 Intensive Elementary Japanese I
5 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for beginners and those who have had one year or less of high school study. Introduction to phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. (Not open to heritage speakers or to students who have completed Japanese 1 or more than one year of high school Japanese.)
Prerequisite: none.

## *2.1 Intensive Elementary Japanese II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence. Expanded acquisition of phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. Designed to prepare students for Japanese 3.1. (Not open to heritage speakers or to students who have completed Japanese 1 or 2.)
Prerequisite: Japanese 1.1 or permission of the chairperson.

## *3.1 Intensive Intermediate Japanese I

4 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for students who have completed Japanese 1.1 and 2.1 or the equivalent, or have had four years of high school study. Continued development of oral fluency and writing in social interaction and in systematic vocabulary building. Increased awareness of cultural diversity in areas where language is spoken. (Not open to heritage speakers or to students who have completed Japanese 3.)
Prerequisite: Japanese 2.1 or permission of the chairperson.

## *4.1 Intensive Intermediate Japanese II

4 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence for students who have completed Japanese 3.1 or its equivalent. Further refinement of oral fluency and writing in social interaction and in systematic vocabulary building. Expanded awareness of cultural diversity through study of literary and nonliterary texts and other media of communication. (Not open to heritage speakers or students who have completed Japanese 4.)
Prerequisite: Japanese 3.1 or permission of the chairperson.

## Portuguese

*1.2 Intensive Elementary Portuguese I
5 hours, 1 hour multimedia laboratory; 4 credits
The first course in an intensive two-semester sequence for beginners and those who have one year or less of high school study. Development of reading, writing, speaking, listening, and cultural awareness through classroom
interaction and practice, utilizing a variety of multimedia materials. Designed for students wishing to proceed at an accelerated pace. Credit given only upon completion of Portuguese 3.2. (Not open to heritage speakers or to students who have completed Portuguese 1, Portuguese 1.5, or more than one year of high school Portuguese.)
Prerequisite: none.

## *3.2 Intensive Elementary Portuguese II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in the two-semester intensive sequence. Continued development of reading, writing, speaking, listening, and cultural awareness through extensive classroom interaction, practice, and a variety of multimedia materials. Designed to prepare students for Portuguese 4. (Not open to heritage speakers or to students who have completed Portuguese 1, 2, or 3.)
Prerequisite: Portuguese 1.2 or permission of the chairperson.

## *4 Intermediate Language Skills for Nonheritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Continued development of language skills and cultural understanding using a variety of authentic materials including film, video, and short literary texts. Class discussions, group activities, and team projects. Individual writing assignments with emphasis on accuracy and style. (Not open to heritage speakers.)
Prerequisite: Portuguese 3.2, or the level 3 Regents examination with a passing grade, or four years of high school Portuguese, or permission of the chairperson.

## *4.5 Intermediate Conversation for the Professions for Nonheritage Speakers

2 hours, 2 hours multimedia laboratory; 2 credits
A supplementary course providing conversational practice in career-oriented situations such as interviews, telephone conversations, taking and leaving messages, providing and obtaining information. May be taken concurrently with or independently of Portuguese 4. (Not open to heritage speakers.)
Prerequisite: Portuguese 3.2 or permission of the chairperson.

## Russian

*1.1 Intensive Elementary Russian I
5 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for beginners and those who have had one year or less of high school study. Introduction to phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. (Not open to heritage speakers or to students who have completed Russian 1 or more than one year of high school Russian.)
Prerequisite: none.

## *2.1 Intensive Elementary Russian II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence. Expanded acquisition of phonetics and writing systems. Development of communicative skills and cultural awareness through extensive classroom interaction and a variety of multimedia materials. Designed to prepare students for Russian 3.1. (Not open to heritage speakers or to students who have completed Russian 1 or 2.)
Prerequisite: Russian 1.1 or permission of the chairperson.

## *3.1 Intensive Intermediate Russian I

4 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for students who have completed Russian 1.1 and 2.1 or the equivalent, or have had four years of high school study. Continued development of oral fluency and writing in social interaction and in systematic vocabulary building. Increased awareness of cultural diversity in areas where language is spoken.
(Not open to heritage speakers or to students who have completed Russian 3.)
Prerequisite: Russian 2.1 or permission of the chairperson.

## *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Fundamentals of writing and reading for students whose knowledge of Russian is limited to spoken communication. Emphasis on spelling, word order, and verb tenses, based on authentic literary and nonliterary texts. Practice in written self-expression.
Prerequisite: permission of the chairperson.

## *4.1 Intensive Intermediate Russian II

4 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence for students who have completed Russian 3.1 or its equivalent. Further refinement of oral fluency and writing in social interaction and in systematic vocabulary building. Expanded awareness of cultural diversity through study of literary and nonliterary texts and other media of communication. (Not open to heritage speakers or students who have completed Russian 4.)
Prerequisite: Russian 3.1 or permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of Russian. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Russian 3.8 or permission of the chairperson.

## *7 Russian Civilization, with Emphasis on the

 Soviet Period3 hours; 3 credits
Religion, education, and literature and the other creative arts in the Soviet Union in relation to their development in prerevolutionary Russia. Conducted in English.

## *9 Russian Literature in Translation

3 hours; 3 credits
Selected masterpieces of Russian literature. Background lectures. Readings and discussions in English.
Prerequisite: English 2 or permission of the chairperson.

### 11.1 Advanced Language Skills I

## 3 hours; 3 credits

Development of advanced language skills for nonheritage speakers; analytical practice and self-expression in the written and spoken language; use of authentic literary and nonliterary texts. (Not open to heritage speakers.)
Prerequisite: Russian 4.1 or permission of the chairperson.

### 11.12 Advanced Language Skills II

3 hours; 3 credits
Continued practice in advanced written expression and in textual analysis for heritage and nonheritage speakers;
composition modeled on selected literary texts.
Prerequisite: Russian 4.1 or 4.8 or permission of the chairperson.

### 11.31-11.37 Russian for Specific Purposes

3 hours; 3 credits
Acquisition of the language skills, terminology, and procedures necessary to function in one or more specialized areas where Russian is routinely used. Designed to familiarize students with common interactions within the professional environment and with problems arising from cross-cultural misunderstandings. Intensive practice in speaking and writing. Reading and discussion of authentic materials related to the topic. May be taken before or concurrently with Russian 60.02.
11.31 Russian for the Arts
11.32 Russian for Business
11.33 Russian for Criminal Justice
11.35 Russian for the Media
11.36 Russian for Social Sciences
11.37 Russian for Social Work

Prerequisite: Russian 11.12 or permission of the chairperson.

### 15.50 Understanding Texts in Russian

3 hours; 3 credits
Development of reading and analytical skills in Russian. Short, authentic texts, both literary and nonliterary, representing diverse contemporary styles and genres. Discussions and frequent writing assignments using a variety of approaches and supplementary materials available in the multimedia laboratory. (Not open to students who have completed Russian 17.50 or more advanced literature courses.)
Prerequisite: Russian 4.1 or permission of the chairperson. Corequisite: Russian 4.8 or 11.1 or permission of the chairperson.

### 17.50 Landmarks of Russian Literature

3 hours; 3 credits
An introductory course designed to familiarize students with major literary works in Russian within a chronological and cultural framework. Representative texts from the Russianspeaking world, providing an overview of writings that have shaped the lives of generations of readers. Frequent writing assignments in Russian to strengthen students' individual competencies. This core of texts, reviewed periodically by the department, serves as a foundation for advanced literature courses.
Prerequisite: Russian 4.1 or 4.8 or permission of the chairperson.

### 18.50 Contemporary Russia

## 3 hours; 3 credits

An exploration of the major features of contemporary Russian society and the Russian-speaking parts of the world, which arose due to the expansion of the Soviet state, from 1917 to the present, with particular attention to developing an understanding of the concepts of cultural identity and difference within the changing European and Central Asian context. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the Russian print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with Russian 4.8 or 11.1.
Prerequisite: Russian 4.1 or permission of the chairperson.

### 19.50 History of Russian Civilization

3 hours; 3 credits
A historical overview of the values, institutions, and cultural heritage of Russia and East-Slavic cultures from their origins to the mid-twentieth century. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from Russian broadcast and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Russian 4.8 or 11.1.
Prerequisite: Russian 4.1 or permission of the chairperson.

### 20.50 Thematic Readings in Russian Poetry

 3 hours; 3 creditsRepresentative selections from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 21.50 Thematic Readings in the Russian Novel

3 hours; 3 credits
Representative works from the great age of the Russian novel to the present, within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 22.50 Thematic Readings in Russian Short Fiction

 3 hours; 3 creditsRepresentative stories and short novels from early times to the present within a specific thematic and cultural context. Course description available in the department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 23.50 Thematic Readings in Russian Theater

3 hours; 3 credits
Representative drama and theater from early times to the present within a specific thematic and cultural context. Course description available in the department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 24.50 Thematic Readings in the Russian Essay

## 3 hours; 3 credits

Representative works of Russian expository prose from the Middle Ages to the present within a specific thematic and cultural context. Course description available in department prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 30.50 Russian Literature and Film

3 hours; 3 credits
The relationship between Russian literary works and the films they inspired. Course description available in department office prior to registration.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 31.50 Women in Russian Literature

3 hours; 3 credits
The image of women as expressed in selected Russian literary works. Course description available in department office prior to registration.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 32.50 Autobiographical Literature in Russian

3 hours; 3 credits
Autobiographical fiction and nonfiction in Russian literature. Memoirs, letters, diaries, journals, confessions. Course description available in department office prior to registration.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.
33.50 Moral and Religious Themes in Russian Literature 3 hours; 3 credits
Religious beliefs and practices as expressed in selected Russian literary works. Course description available in department office prior to registration.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 34.50 Historical and Social Visions in Russian Literature

 3 hours; 3 creditsRussian history and/or society, past and present, as reflected in selected literary works. Course description available in department office prior to registration.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 35.50 Russian Literature and the Arts

 3 hours; 3 creditsThe relationship between Russian literary works and the visual and/or performing arts. Outside lectures, visits to exhibitions and/or museums, attendance at musical and/or theatrical performances. Course description available in department office prior to registration.
Prerequisite: Russian 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 40.50 Writings of a Major Russian Author <br> 3 hours; 3 credits

An in-depth, monographic study concentrating either on the opus of a major Russian writer or on one of the masterpieces of Russian literature.
Prerequisite: Russian 11.1 or 11.12 or 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

### 41.50 Tolstoy's War and Peace

3 hours; 3 credits
An in-depth study of Tolstoy's War and Peace.
Prerequisite: Russian 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

## 70 Tutorial in Literature and Culture

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports and a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced Russian courses with an average of 3.0 or higher. Approval of topic by chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in Russian. May not be taken concurrently with Russian 85.
Prerequisite: junior or senior standing and 15 credits in advanced Russian courses approved by the chairperson with an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work§; 3 credits
Research thesis, written in Russian, on a literary, linguistic, or cultural topic. May not be taken concurrently with Russian 84.1. Prerequisite: senior standing and 18 credits in advanced Russian courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## Spanish

*1 Basic Language Skills I
3 hours, 1 hour multimedia laboratory; 3 credits
The first in a three-semester introductory sequence for beginners and those who have had one year or less of high school study. Emphasis on basic social functions, simple conversation, readings, and writing. Introduction to the cultures where Spanish is spoken. (Not open to heritage speakers or to students who have completed Spanish 1.5 or more than one year of high school Spanish.)

## *1.2 Intensive Elementary Spanish I

5 hours, 1 hour multimedia laboratory; 4 credits
First in a two-semester intensive sequence for beginners and those who have had one year or less of high school study. Development of reading, writing, speaking, listening, and cultural awareness through extensive classroom interaction, practice, and a variety of multimedia materials. Designed for students wishing to proceed at an accelerated pace. Credit given only upon completion of Spanish 3.2. (Not open to heritage speakers or to students who are enrolled in or have completed Spanish 1 or 1.5 or more than one year of high school Spanish.)

## *2 Basic Language Skills II

3 hours, 1 hour multimedia laboratory; 3 credits
Second in a three-semester introductory sequence. Continued emphasis on basic social functions, simple conversations, readings, and writing. Narration and description of past and future events. Increased understanding of the cultures where Spanish is spoken. (Not open to heritage speakers or to students who have completed Spanish 1.5.)
Prerequisite: Spanish 1, or two years of high school Spanish, or permission of the chairperson.

## *3 Basic Language Skills III

3 hours, 1 hour multimedia laboratory; 3 credits
Third in a three-semester introductory sequence. Further emphasis on basic social functions and practice in longer,
more complex conversations, readings, and writing on a broader range of familiar topics. Communication of needs, ideas, and emotions. Continued study of cultures where Spanish is spoken. (Not open to heritage speakers or to students who have completed Spanish 3.7.)
Prerequisite: Spanish 2, or three years of high school Spanish without passing the level 3 Regents examination, or permission of the chairperson.

## *3.2 Intensive Elementary Spanish II

5 hours, 1 hour multimedia laboratory; 4 credits
Second in a two-semester intensive sequence. Continued development of reading, writing, speaking, listening, and cultural awareness through extensive classroom interaction, practice, and a variety of multimedia materials. Designed to prepare students for Spanish 4. (Not open to heritage speakers or to students who are enrolled in or have completed Spanish 1, 1.5, 2, 3, or 3.7.)
Prerequisite: Spanish 1.2 or permission of the chairperson.

## *3.4 Fundamentals of Reading and Writing for Nonheritage Speakers

2 hours recitation, 1 hour multimedia laboratory; 2 credits Review and further development of intermediate-level reading and writing skills with special attention to grammar and style. An optional transitional course designed to prepare students for Spanish 4. May be taken concurrently with Spanish 3.6. (Not open to heritage speakers or to students who have recently completed four years of high school Spanish or are enrolled in or have completed Spanish 3.2.)
Prerequisite: Spanish 3, or a passing grade on the level 3 Regents examination, or a significant time lag in language study at this level, or permission of the chairperson.

## *3.6 Basic Conversation Workshop

1 hour recitation, 2 hours multimedia laboratory; 1 credit A supplementary course providing additional practice speaking Spanish on everyday topics using authentic materials from a variety of contemporary media such as newspapers, magazines, radio, television, and film. For nonheritage speakers who have completed Spanish 3, 3.2, or their equivalent. May be taken concurrently with or independently of Spanish 3.4. (Not open to heritage speakers.)
Prerequisite: Spanish 3 or 3.2, or a passing grade on the level 3 Regents examination, or four years of high school study, or permission of the chairperson.

## *3.8 Basic Writing and Reading Skills for Heritage Speakers

3 hours recitation, 1 hour multimedia laboratory; 3 credits Fundamentals of writing and reading for students whose knowledge of Spanish is limited to spoken communication. Emphasis on writing and the distinctions among various levels of dialect and language.
Prerequisite: permission of the chairperson.

## *4 Intermediate Language Skills for Nonheritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Continued development of language skills and cultural understanding using a variety of authentic materials including film, video, and short literary texts. Class discussions, group activities, and team projects. Individual writing assignments with emphasis on accuracy and style. (Not open to heritage speakers.)
Prerequisite: Recent completion of Spanish 3, or the level 3 Regents examination with a passing grade, or four years of
high school Spanish, or Spanish 3.2 or 3.4, or permission of the chairperson.

## *4.5 Intermediate Conversation for the Professions for Nonheritage Speakers

 2 hours, 2 hours multimedia laboratory; 2 credits A supplementary course providing conversational practice in career-oriented situations such as interviews, telephone conversations, taking and leaving messages, providing and obtaining information. May be taken concurrently with or independently of Spanish 4. (Not open to heritage speakers.)Prerequisite: Spanish 3.2, 3.4, or 3.6, or permission of the chairperson.

## *4.8 Intermediate Writing and Reading Skills for Heritage Speakers

3 hours, 1 hour multimedia laboratory; 3 credits
Further development of writing and reading skills for students with basic knowledge of the structure of Spanish. Continued practice in reading and understanding authentic literary and nonliterary texts on a variety of levels.
Prerequisite: Spanish 3.8 or permission of the chairperson.

## *9.1 Spanish-American Literature in Translation

 3 hours; 3 creditsSelected masterpieces of Spanish-American literature. Background lectures. Reading and discussion in English. Prerequisite: English 2 or permission of the chairperson.

### 11.1 Advanced Language Skills I

## 3 hours; 3 credits

Development of advanced language skills for nonheritage speakers; analytical practice and self-expression in the written and spoken language; use of authentic literary and nonliterary texts. (Not open to heritage speakers.)
Prerequisite: Spanish 4 or permission of the chairperson.

### 11.12 Advanced Language Skills II

## 3 hours; 3 credits

Continued practice in advanced written expression and in textual analysis for heritage and nonheritage speakers; composition modeled on selected literary texts.
Prerequisite: Spanish 4 or 4.8 or permission of the chairperson.

### 11.2 Tutorial in Writing

1 hour; 1 credit
Development of proficiency in written expression with attention to the particular needs of the specific student.
Prerequisite: Spanish 11.1 or 12.1.

### 11.31-11.37 Spanish for Specific Purposes

3 hours; 3 credits
Acquisition of the language skills, terminology, and procedures necessary to function in one or more specialized areas where Spanish is routinely used. Designed to familiarize students with common interactions within the professional environment and with problems arising from cross-cultural misunderstandings. Intensive practice in speaking and writing. Reading and discussion of authentic materials related to the topic. May be taken before or concurrently with Spanish 60.02.
11.31 Spanish for the Arts
11.32 Spanish for Business
11.33 Spanish for Criminal Justice
11.35 Spanish for the Media
11.36 Spanish for Social Sciences
11.37 Spanish for Social Work

Prerequisite: Spanish 11.12 or permission of the chairperson.

### 12.1 Spanish Composition

3 hours; 3 credits
Practice in composition and translation. Problems in style.
Prerequisite: Spanish 4 or 4.1 or permission of the chairperson.

### 15.50 Understanding Texts in Spanish

## 3 hours; 3 credits

Development of reading and analytical skills in Spanish. Short, authentic texts, both literary and nonliterary, representing diverse contemporary styles and genres. Discussions and frequent writing assignments using a variety of approaches and supplementary materials available in the multimedia laboratory. Not open to students who have completed Spanish 17.50 or more advanced literature courses.
Prerequisite: Spanish 4 or permission of the chairperson. Corequisite: Spanish 4.8 or 11.1 or permission of the chairperson.

### 17.50 Landmarks of Spanish and Latin American Literatures <br> 3 hours; 3 credits

An introductory course designed to familiarize students with major literary works in Spanish within a chronological and cultural framework. Representative texts from the Spanish-speaking world, providing an overview of Spanish and Latin American writings that have shaped the lives of generations of readers. Frequent writing assignments in Spanish to strengthen students' individual competencies. This core of texts, reviewed periodically by the department, serves as a foundation for advanced literature courses. (Not open to students who have completed Spanish 18 or 19.1.)
Prerequisite: Spanish 4 or 4.8 or permission of the chairperson.

### 18.50 Contemporary Spain

3 hours; 3 credits
An exploration of the major features of contemporary Spain from 1939 to the present with particular attention to developing an understanding of the concepts of cultural identity and difference within the changing European context. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the Spanish print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Spanish 4.8 or 11.1. (Not open to students who have completed Spanish 50 or 51 .)
Prerequisite: Spanish 4 or 4.8 or permission of the chairperson.

### 18.75 Contemporary Latin America Cultures

3 hours; 3 credits
An exploration of the contemporary Latin American world from 1898 to the present with particular attention to developing an understanding of the concepts of multicultural identity in the Americas. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Spanish 4.8 or 11.1. (Not open to students who have completed Spanish 51.)
Prerequisite: Spanish 4 or 4.8 or permission of the chairperson.

### 19.50 History of Spanish Civilization

3 hours; 3 credits
A historical overview of the values, institutions, and cultural heritage of Spain from its origins to the mid-twentieth century. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the Spanish print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Spanish 4.8 or 11.1. (Not open to students who have completed Spanish 50 or 51 .)
Prerequisite: Spanish 4 or 4.8 or permission of the chairperson.

### 19.75 History of Latin American Cultures

 3 hours; 3 creditsA historical overview of the cultural heritage of Latin America from the Pre-Columbian era, the conquest and colonial periods, to independence in the nineteenth century and the Spanish-American War of 1898. The creation of the multiple New World identities that emerged in the region from these historical events. Discussions and frequent writing assignments using a variety of approaches and supplementary materials from the print, broadcast, and electronic media. Field trips to museums and cultural events. May be taken concurrently with or after Spanish 4.8 or 11.1. (Not open to students who have completed Spanish 51.)
Prerequisite: Spanish 4 or 4.8 or permission of the chairperson.

### 20.50 Thematic Readings in Spanish Poetry

3 hours; 3 credits
Representative selections from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 20.50W Thematic Readings in Spanish Poetry

## 4 hours; 3 credits

Representative selections from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different. Writing-intensive section.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson; English 2.

### 20.75 Thematic Readings in Latin American Poetry 3 hours; 3 credits

Representative selections from colonial times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 21.50 Thematic Readings in the Spanish Novel

 3 hours; 3 creditsRepresentative works from the Golden Age to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 21.75 Thematic Readings in the Latin American Novel

 3 hours; 3 creditsRepresentative novels from colonial times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 22.50 Thematic Readings in Spanish Short Fiction

## 3 hours; 3 credits

Representative stories and short novels from medieval times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.
22.75 Thematic Readings in Latin American Short Fiction 3 hours; 3 credits
Representative stories and short novels from colonial times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 23.50 Thematic Readings in Spanish Theater

3 hours; 3 credits
Representative works from the Golden Age to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 23.50W Thematic Readings in Spanish Theater

 4 hours; 3 creditsRepresentative works from the Golden Age to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice, provided the theme and content are different. Writing-intensive section.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson; English 2.

### 23.75 Thematic Readings in Latin American Theater 3 hours; 3 credits

Representative plays from colonial times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 24.50 Thematic Readings in the Spanish Essay

3 hours; 3 credits
Representative works of Spanish expository prose from the Middle Ages to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 24.75 Thematic Readings in the Latin American Essay

 3 hours; 3 creditsRepresentative works of Latin American expository prose from colonial times to the present within a specific thematic and cultural context. Course description available in department office prior to registration. Students may take the course twice provided the theme and content are different.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 30.50 Hispanic Literatures and Film

3 hours; 3 credits
The relationship between Spanish and/or Latin American literary works and the films they inspired. Course description available in department office prior to registration.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 31.50 Women in Hispanic Literatures

3 hours; 3 credits
The image of women as expressed in selected Spanish and/or Latin American literary works. Course description available in department office prior to registration.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 32.50 Autobiographical Literatures in Spanish

3 hours; 3 credits
Autobiographical fiction and nonfiction in Spanish and/or Latin American literatures. Memoirs, letters, diaries, journals, confessions. Course description available in department office prior to registration.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 33.50 Moral and Religious Themes in Hispanic Literatures

 3 hours; 3 creditsReligious beliefs and practices as expressed in selected Spanish and/or Latin American literary works. Course description available in department office prior to registration.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 34.50 Historical and Social Visions in

## Hispanic Literatures

3 hours; 3 credits
Spanish and/or Latin American history and/or society, past and present, as reflected in selected literary works. Course description available in department office prior to registration. Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 35.50 Hispanic Literatures and the Arts

3 hours; 3 credits
The relationship between Spanish and/or Latin American literary works and the visual and/or performing arts. Outside lectures, visits to exhibitions and/or museums, attendance at musical and/or theatrical performances. Course description available in department office prior to registration.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 40.50 Writings of a Major Spanish Author

3 hours; 3 credits
An in-depth, monographic study concentrating either on the opus of a major Spanish writer or on one of the masterpieces
of Spanish literature.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

### 40.75 Writings of a Major Latin American Author

3 hours; 3 credits
An in-depth, monographic study concentrating either on the opus of a major Spanish-American writer or on one of the masterpieces of Spanish-American literature.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.
41.50 Cervantes' Don Quijote de la Mancha

3 hours; 3 credits
An in-depth study of Don Quijote de la Mancha. (Not open to students who have completed Spanish 53.)
Prerequisite: Spanish 17.50 and two courses from Tiers II and/or III, or permission of the chairperson.

### 43.75 Contemporary Caribbean Literature in Spanish

 3 hours; 3 creditsThe literary production of the Spanish-speaking Caribbean since the early twentieth century. (Not open to students who have completed Spanish 49 or 59.1 topic "Caribbean Literature in Spanish.")
Prerequisite: Spanish 17.50 or permission of the chairperson.

## 70 Tutorial in Literature and Culture

Minimum of 14 hours conference meetings and independent work§; 3 credits
Study of a special topic at an advanced level. Periodic reports and a final paper or examination.
Prerequisite: junior or senior standing and 12 credits in advanced Spanish courses with an average of 3.0 or higher. Approval of topic by chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.

### 84.1 Seminar

1 hour conference, minimum 8 hours independent work§; 3 credits
Study of a literary topic, including but not limited to periods, genres, or major writers. Substantial paper in Spanish. May not be taken concurrently with Spanish 85 .
Prerequisite: junior or senior standing and 15 credits in advanced Spanish courses approved by the chairperson with an average of 3.5 or higher. Students may take this course for credit twice, but may not repeat topics.

## 85 Seminar and Senior Thesis

1 hour conference, minimum 8 hours independent work§; 3 credits
Research thesis, written in Spanish, on a literary, linguistic, or cultural topic. May not be taken concurrently with Spanish 84.1.
Prerequisite: senior standing and 18 credits in advanced Spanish courses with an average of 3.5 or higher. Approval of the research topic by the instructor and the chairperson.

## Brooklyn College in Spain <br> *1.5 Elementary Spanish for Teachers of <br> Other Languages <br> 3 hours, 2 hours multimedia laboratory; 3 credits <br> Fundamentals of the Spanish language for teachers with a background and experience in second-language acquisition. Essential grammar, authentic materials, self-expression. Intensive individual practice in multimedia laboratory. Offered only at the Brooklyn College Summer Institute for Teachers in Madrid, Spain.

## *3.5 Intermediate Spanish for Teachers of Other Languages

3 hours, 2 hours multimedia laboratory; 3 credits
Intermediate Spanish language for teachers with a background and experience in second-language acquisition. Review of grammar, short literary texts, written and oral expression. Intensive individual practice in multimedia laboratory. Offered only at the Brooklyn College Summer Institute for Teachers in Madrid, Spain
Prerequisite: Spanish 1.5 or permission of the chairperson.

### 60.50 Spain as a Cultural Crossroad in the Middle Ages and Renaissance

3 hours, minimum of 6 hours fieldwork and excursions; 6 credits
A consideration of the complex cultural heritage of medieval and Renaissance Spain. Turbulent relations versus peaceful coexistence between and among Christians, Moslems, and Jews. Birth of a nation and consecration of a language. Influence of Africa, European countries, and the New World. Study of history, literature, art, architecture, and music enriched by visits to museums. Excursions to cities and castles. All written work to be done in Spanish.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 61.50 The Golden Age of Spanish Literature and the Arts

3 hours, minimum of 6 hours fieldwork and excursions; 6 credits
An examination of the cultural heritage of the Spanish Golden Age through a comparative study of representative masterpieces of Renaissance and baroque literature, art, architecture, and music. Spanish life under the rule of the House of Austria (1515-1700). Economic prosperity and decline, Reformation and Counter-Reformation, and the exploration and colonization of the Americas as a backdrop for various works. Excursions. Visits to museums. All written work to be done in Spanish.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 62.50 From Reason to Revolution in Spanish History,

 Literature, and the Arts during the Lifetime of
## Francisco de Goya

2 hours, minimum of 2 hours fieldwork and excursions; 3 credits
An examination of a major period of social upheaval and cultural transition in Europe and the Americas, documented in Spain. The influence of France; the Napoleonic invasion and subsequent War of Independence. The struggle between liberalism and absolutism in Spain and between colonial dependency and freedom in the Americas. The life and works of Goya as a historical, social, and cultural backdrop for the study of neoclassicism, romanticism, and costumbrismo in literature and the arts. Visits to museums. Excursions. All written work to be done in Spanish.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.
63.50 City and Society in the Realistic Novels of Benito Pérez Galdós and Leopoldo Alas ("Clarín")
2 hours, minimum of 2 hours fieldwork and excursions; 3 credits
An on-site exploration of the city and its inhabitants in the final quarter of the nineteenth century as major components of the narrative fiction of Spain's two most important realistic novelists. Visits to important locations and museums. Excursions. All written work to be done in Spanish.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.
64.50 The Emergence of Modern Spain as Conceived and Captured by Writers and Artists Prior to the Civil War 2 hours, minimum of 2 hours fieldwork and excursions; 3 credits
An integrated examination of the historical, ethical, and aesthetic concerns of Spanish intellectuals and creative artists in the cultural renaissance that took place during the early decades of the twentieth century as expressed in narrative fiction, poetry, painting, music, and film. Visits to museums. Excursions. All written work to be done in Spanish.
Prerequisite: Spanish 11.1 or 11.12 or 17.50 or permission of the chairperson.

### 65.50 The Image of Spain in Contemporary Spanish Culture and Society

2 hours, minimum of 2 hours fieldwork and excursions; 3 credits
An on-site examination of the image contemporary Spaniards hold of themselves as expressed in literature, the press, and the arts. Unity versus diversity in geography, society, politics, culture, and language. Visits to museums, newspaper offices, and the parliament. Excursions. All written work to be done in Spanish.
Prerequisite: Spanish 17.50 or permission of the chairperson.

### 66.50 Concurrent Workshop in Written and Oral Self-Expression <br> 3 hours, 1 hour conference; 3 credits

Further enhancement of intermediate and advanced communication skills for personal and professional development and in conjunction with materials studied in a linked content course. Individualized attention according to level of oral and written proficiency of each student. Frequent writing assignments and revisions, journals, oral reports, final portfolio. Offered only at the Brooklyn College Summer Institute in Madrid, Spain, and only in conjunction with a previously specified content course. Students may take the course twice with permission of department chairperson but may not repeat topics.
Prerequisite: Permission of the chairperson.

## Music

Conservatory office: 422 Whitehead Hall
Telephone: 951-5286, 951-5287
Director: Nancy Hager
Assistant Director, CLAS and SGS: Philip Rupprecht
Assistant Director, Division of Graduate Studies:
Bruce MacIntyre
Professors: Atlas, Hager, Hedwig, Kawasaki, Lang, León, MacIntyre, Shelden;
Associate Professor: Allen, Barrett, Hisama, Palmquist, Rupprecht, Taylor, Wolman;
Assistant Professor: Washington;
Instructor: Babcock.
The Conservatory of Music offers the following undergraduate degree programs: B.A. in music; B.Mus. in performance; B.Mus. in composition; and, in cooperation with the School of Education, a B.Mus. in music education (all grades). The B.A. degree program includes courses in ear training, harmonic and contrapuntal techniques, analysis, history, and performance. Students in the B.Mus. program also take these courses, with additional concentration either in composition or performance. Admission to the B.Mus. program is based solely on an audition and interview. Interested students should contact the Conservatory of Music early in their junior or senior year of high school.
Individual vocal and instrumental instruction for majors is offered by professionals widely recognized in their fields. Those working toward a B.A. or B.Mus. in composition degree receive two terms of instruction, and students in the B.Mus. in performance program may receive instruction each term they are enrolled.
The conservatory sponsors the chorus and chamber chorus, opera workshop, opera theater, orchestra, and brass, woodwind, contemporary music, jazz, percussion and various chamber ensembles. Concerts by these organizations and individual recitals by students and faculty members total more than 100 performances a year.

## Core curriculum

The Conservatory of Music participates in the college's core curriculum through Core Studies 2.2.
Students who have completed Music 11.1 are exempt from Core Studies 2.2.

## Placement in music courses

Admission to Music 6.1 through 11.4, 69.1, 79.1, and ensemble courses Music 70 through 78 is only by placement examination given before registration. Dates and times for examinations are available in the conservatory office. Music majors should demonstrate a minimum keyboard proficiency when they enter the program. Students who do not demonstrate minimum proficiency may be assigned to Music 69.1 and 69.2 (one credit each), which are taken in the first two terms.
Music majors must pass the performance audition required in all degree programs before registering beyond 60 credits.

## Admission to degree programs in music

An audition is required of all prospective music majors before they are admitted to a degree program in music. In addition, students in the bachelor of music degree program for music teacher (all grades) must be interviewed by the program coordinator. Students should indicate their intention to major in music on their application for admission to the college.

## B.A. degree program in music HEGIS code 1005

Program requirements (49 credits plus foreign language study or proficiency)
All of the following: Music 6.1, 7.1, 11.1.
Music 6.2, 7.2, 11.2.
Music 6.3, 7.3, 11.3.
Music 6.4, 7.4, 11.4.
Music 43 or 43.1 or 44 ; and 45 or 46 or 47 ; and 79.1, 79.2.
Two credits in ensemble performance from Music 70 through 78 as assigned by the Conservatory of Music.
One seminar in music numbered in the 90s or a suitable advanced course in another department or program, approved in advance by the director.
All music courses offered to satisfy the requirements for a major in music must be completed with a grade of C or higher.

## Bachelor of music degree program in performance HEGIS code 1004

Program requirements ( 62 credits plus foreign language study or proficiency)
All of the following: Music 6.1, 7.1, 11.1.
Music 6.2, 7.2, 11.2.
Music 6.3, 7.3, 11.3.
Music 6.4, 7.4, 11.4.
Music 43 or 43.1 or 44 ; and 45 or 46 or 47 ; and 79.1, 79.2, 79.3, 79.4, 79.5, 79.6.

Six credits in ensemble performance from Music 70 through 78 as assigned by the Conservatory of Music.
In addition to the course listings above, an approved recital, and approval of the faculty are required for the bachelor of music degree.
A successful jury examination in performance must be completed at the conclusion of each semester of Music 79 (Performance). Students taking Music 79.3 will present to the faculty a longer performance jury, at which time their overall progress in the program will be evaluated, and permission to continue in the program granted or denied. Music majors aiming toward professional careers as performers are strongly urged to take additional ensembles each semester, including at least two terms of Music 74.1, 74.2, 74.3, 74.5, or 78 (i.e., Contemporary Music Ensemble, Brass Ensemble, Woodwind Chamber Music, Small Jazz Ensemble, or Jazz Ensemble).
All music courses offered to satisfy the requirements for a major in music must be completed with a grade of C or higher.

## Performance faculty

Brass
Bonvissuto, Hedwig, Howard, Powell, Rojas, Scott.
Brooklyn College Chorus
Babcock.
Chamber Chorus
Babcock.
Conducting
Babcock, Barrett, León.
Contemporary Music Ensemble
León.
Guitar
Frandsen.
Harp
Cutler.
Opera Theater
Barrett.

## Orchestra

Babcock, Barrett, Lang, Léon.
Percussion Ensemble
Lang.
Piano/Organ/Accompaniment
Biegel, Diez, Eguchi, Kaminski, Rogers, Shin.
Strings
Chai, Feldman, Gallagher, Hirsh, Kang, Kawasaki, Lee, Reichert, Tanaka.
Timpani and percussion
Lang.
Voice
Alexander, Barrett, Birnbaum, Bonazzi, Cultice, Dunn, Harte, Makarina, McCaffrey, Woodruff.

## Woodwinds

Adam, Begelman, Botti, Cohen, Coleman, Ellis, Friedman, Goldberg, Hindell, Jones, Lucarelli, Shelden, Spellman, Taylor, Weber.

## Bachelor of music degree program in composition

 HEGIS code 1004.10Program requirements ( 67 credits plus foreign language study or proficiency)
All of the following: Music 6.1, 7.1, 11.1.
Music 6.2, 7.2, 11.2.
Music 6.3, 7.3, 11.3.
Music 6.4, 7.4, 11.4.
Music 25.1, 25.2, 25.3, 25.4, 25.5, 25.6.
Music 36; and 43 or 43.1 or 44 ; and 45 or 46 or 47; and 79.1, 79.2.
Two credits in ensemble performance from Music 70 through 78 as assigned by the Conservatory of Music.
In addition to the courses listed above, a faculty approved portfolio and approval of the Conservatory faculty are required for the bachelor of music degree. The portfolio will consist of representative works from required (Music 25.1 through Music 25.6), elective, and honors composition courses.

Students must submit a portfolio of work for review by a composition jury at the end of each semester of Music 25 (Composition). A special jury for students in Music 25.2 includes evaluation of overall progress in the program, on the basis of which permission to continue in the composition program is granted or denied.
All music courses offered to satisfy the requirements for a major in music must be completed with a grade of C or higher.

## Program prerequisite

Students who do not demonstrate the performing proficiency required for admission to Music 79.1 must prepare to demonstrate proficiency in an audition not later than the beginning of their junior year.

## Program recommendations

Music majors should complete Music 6.1 and 7.1 in the lower-freshman term.
Students planning to obtain New York State music teacher certification (all grades) should consult a Conservatory of Music counselor in their first term.
B.Mus. degree program in adolescence education: music teacher (all grades)
HEGIS code 0832; SED program Code 26815
Program requirements (89 credits)
Students must complete the Conservatory of Music and School of Education requirements in sections I, II, and III
below for the B.Mus. degree program in music education.
I. Music core ( 53 credits)

Music 6.1, 6.2, 6.3, and 6.4. (8 credits)
Music 7.1, 7.2, 7.3, and 7.4. (12 credits)
Music 43, 43.1, or 44, or a course in American or non-western cultures approved by the director of the Conservatory of Music. (3 credits)
Music 11.1, 11.2, 11.3, and 11.4. (12 credits)
Music 70-78. ( 6 credits chosen from these courses)
Music 79.12, 79.22, 79.32, 79.42, 79.52, and 79.62.
(12 credits)

## II. Music education courses ( 24 credits)

American Studies 51/Music 3 or a course including cultural and musical diversity and a field component as approved by the director of the Conservatory of Music. (3 credits)
Music 35 or 35.2. (3 credits)
Music 51. (0 credits)
Music 52. (1 credit)
Music 58.1, 58.2, and 58.3. (9 credits)
Music 59. (2 credits)
Music 60-66.1. (5 credits chosen from these courses)
Music 69.3 (1 credit)
III. Education courses ( 12 credits)

Students must complete the following pedagogical courses, which are described in the "Education" section of this Bulletin: Education 16, 34, and 65. (12 credits)
Students should also consult the "Education" section for specific grade requirements for the degree program in music education.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the B.A. degree program for music teacher ( $\mathrm{K}-12$ ) that appeared in the 2000-2003 Bulletin for undergraduate programs.

## Music concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and who elect a concentration in music must complete 30 credits in the Conservatory of Music with a grade of C or higher in each course.

## Concentration requirements:

One course chosen from Music 1.4, 1.5, 7.1. Four courses chosen from Music 70 through 78. Two credits chosen from Music 6.1, 60, 66.1, 69.1, 69.2, 69.3. Five courses chosen from Music 3, 10.1, 11.1, 20.3, 20.4, 44, 50. Music 58.1 and 58.3. A placement examination is required for certain theory, performance, and history/repertoire courses.

## Recommendations for prospective graduate students

Prospective graduate students in music should fulfill the foreign language requirement in French, German, or Italian.

## Division of Graduate Studies

The Conservatory of Music offers the following graduate programs: master of arts degree program in music; master of arts degree program in performance practice; master of arts degree program for music teacher (all grades); master of music degree program in performance; master of music degree program in composition. Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the conservatory's assistant director for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in the conservatory.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## No reading knowledge of music is required for the following courses.

*1.4 Fundamentals of Music
3 hours; 3 credits
Introduction to music beginning with notation, reading in treble and bass clefs, scale constructions, intervals, simple chord progressions, basic cadences, elementary ear training, and use of a musical score in following performances and recordings.

## *3 Music in New York City

2 hours lecture and 3 field hours per week; 3 credits
Exploration of music performance in the music institutions and diverse cultural resources of New York City. Students will attend musical performances and carry out field documentation of a local music culture or institution. This course is the same as American Studies 51.
Prerequisite: Core Studies 2.2 or permission of the director.

## *10.1 African American Music

3 hours; 3 credits
African American music from its African roots to the present. Synthesis of tradition and distinct African elements in American musical culture. This course is the same as Africana Studies 24.3.

## *20.3 Opera

3 hours; 3 credits
A study of opera through live performance, videotape, and film. Required listening and reading, and attendance at opera performances.
Prerequisite: Core Studies 2.2 or Music 11.1.

## *20.4 History of Jazz

3 hours; 3 credits
Origin, early development, and history of jazz to the present. Required reading and listening. This course is the same as Africana Studies 24.35.
Prerequisite: Core Studies 2.2 or permission of the director.

## *50 Music of the United States

3 hours; 3 credits
Music in the United States from a historical perspective, including folk, popular, jazz, and concert hall traditions. Interaction of European, African, and various ethnic styles in America. Relationship of music to select movements in American theater, dance, and art. This course is the same as American Studies 50.

Reading knowledge of music is the minimum prerequisite of the following courses. Additional prerequisites are in the course descriptions.

### 6.1 Introductory Studies in Musicianship: Ear Training

2 hours recitation, 2 hours laboratory; 2 credits
Intensive training in sight-reading and dictation. Study in bass and treble clefs of diatonic melodies, rhythms through quadruple subdivisions of the beat with syncopation, chords (functions and types), and intervals.
Prerequisite: placement examination.
Corequisite: Music 7.1; and Music 69.1 or the minimum piano requirement for music majors.

### 6.2 Eighteenth-Century Studies: Ear Training

2 hours recitation, 2 hours laboratory; 2 credits
Continuation of Music 6.1. Musical language and repertory of the pre-Classical and Classical eras. Two-part and harmonic dictation. The C-clef.
Prerequisite: Music 6.1 and 7.1.
Corequisite: Music 7.2; and Music 69.2 or the minimum piano requirement for music majors.

### 6.3 Nineteenth-Century Studies: Ear Training

2 hours recitation, 2 hours laboratory; 2 credits
Continuation of Music 6.2. Musical language and repertory of the Romantic era.
Prerequisite: Music 6.2 and 7.2; and Music 69.2 or the minimum piano requirement for music majors.
Corequisite: Music 7.3.

### 6.4 Twentieth-Century Studies: Ear Training

2 hours recitation, 2 hours laboratory; 2 credits
Continuation of Music 6.3. Musical language and repertory of the modern era.
Prerequisite: Music 6.3 and 7.3.
Corequisite: Music 7.4.

### 7.1 Introductory Studies in Musicianship: Theory of Music <br> 3 hours; 3 credits

Introduction to melodic structure, rhythmic and metric organization, harmony, and voice-leading. Development of basic writing skills.
Prerequisite: placement examination.
Corequisite: Music 6.1; and Music 69.1 or the minimum piano requirement for music majors.

### 7.2 Eighteenth-Century Studies: Theory of Music

 3 hours; 3 creditsContinuation of Music 7.1. Harmonic and contrapuntal vocabulary and techniques of the pre-Classical and Classical eras. Application to writing after appropriate models.
Prerequisite: Music 6.1 and 7.1.
Corequisite: Music 6.2; and Music 69.2 or the minimum piano requirement for music majors.

### 7.3 Nineteenth-Century Studies: Theory of Music

3 hours; 3 credits
Continuation of Music 7.2. Harmonic and contrapuntal vocabulary and techniques of the Romantic era. Application to writing after appropriate models.
Prerequisite: Music 6.2 and 7.2; and Music 69.2 or the minimum piano requirement for music majors.
Corequisite: Music 6.3.

### 7.4 Twentieth-Century Studies: Theory of Music

 3 hours; 3 creditsContinuation of Music 7.3. Harmonic and contrapuntal vocabulary and techniques of the modern era. Application to writing after appropriate models.
Prerequisite: Music 6.3 and 7.3.
Corequisite: Music 6.4.

### 11.1 Music History and Score Analysis I: Introductory Studies

3 hours; 3 credits
Techniques of score analysis as a tool for the perception of musical styles and forms in Western art music. Aural approach to selected non-Western traditions. Introduction to a basic music repertoire; historical eras; sources and techniques for writing about music.
Prerequisite: Music 6.1 and 7.1 and English 1, and two core studies courses (Core Studies 2.1 and 4 are recommended); or permission of the director.

### 11.1W Music History and Score Analysis I: Introductory Studies

4 hours; 3 credits
Techniques of score analysis as a tool for the perception of musical styles and forms in Western art music. Aural approach to selected non-Western traditions. Introduction to a basic music repertoire; historical eras; sources and techniques for writing about music. Writing-intensive section. Prerequisite: Music 6.1 and 7.1 and English 2, and two core studies courses (Core Studies 2.1 and 4 are recommended); or permission of the director.

### 11.2 Music History and Score Analysis II: Middle Ages through Late Baroque <br> 3 hours; 3 credits

Western music from the Middle Ages through the mideighteenth century. Major genres, forms, styles, composers, cultural features. Score analysis.
Prerequisite: Music 6.1, 7.1, and 11.1; or permission of the director.

### 11.3 Music History and Score Analysis III: Pre-Classical through Romanticism <br> 3 hours; 3 credits

Western music from the mid-eighteenth through midnineteenth centuries. Major genres, forms, styles, composers, cultural features. Score analysis.
Prerequisite: Music 11.2 or permission of the director.

### 11.4 Music History and Score Analysis IV: TwentiethCentury to the Present

## 3 hours; 3 credits

Western music from 1900 to the present. Major genres, forms, styles, composers, cultural features. Score analysis. Prerequisite: Music 11.3 or permission of the director.

### 25.1 Composition I

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 3 credits
Original writing in various forms and media. (Not open to students who are enrolled in or have completed Music 86.1.) Prerequisite: Music 69.2 or the minimum piano requirement for music majors; and permission of the director.

### 25.2 Composition II

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 3 credits
Continuation of Music 25.1.
Prerequisite: Music 25.1 and permission of the director.

### 25.3 Composition III

2 hours lecture, 1 hour recitation, at least 6 hours
independent work§; 3 credits
Continuation of Music 25.2.
Prerequisite: Music 25.2 and permission of the director.

### 25.4 Composition IV

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 3 credits
Continuation of Music 25.3.
Prerequisite: Music 25.3 and permission of the director.

### 25.5 Composition V

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 3 credits
Continuation of Music 25.4.
Prerequisite: Music 25.4 and permission of the director.

### 25.6 Composition VI

2 hours lecture, 1 hour recitation, at least 6 hours
independent work§; 3 credits
Continuation of Music 25.5.
Prerequisite: Music 25.5 and permission of the director.

### 26.1 Introduction to Electro-Acoustic Music

3 hours; 3 credits
Introduction to the tools of electro-acoustic music, including basic studio techniques, computer music, MIDI, and live electronic performance. Practical experience in composing in this medium and exposure to important works in this repertoire. (Not open to students who have completed Music 26.)
Prerequisite: permission of the director.

### 26.2 Electro-Acoustic Music

## 3 hours; 3 credits

In-depth investigation of electronic music making, with special attention to tape composition, digital sound synthesis, MIDI software applications, live sound processing, and related performance techniques. Advanced practical experience and opportunities to compose in this medium.
Prerequisite: Music 26 or 26.1 or permission of the director.

### 31.5 Orchestration

3 hours; 3 credits
Scoring for strings, winds, full orchestra, and concert band.
Prerequisite: Music 6.3 and 7.3; and either 8.3 and 9.3, or 11.3.

### 32.2 Techniques for Recording Music

3 hours; 3 credits
Special problems and techniques of audio recording as they relate to the professional musician. Audio engineering with analog and digital systems. (Not open to students who completed Music 49.1 in spring, 1991, or summer, 1993.)
Prerequisite: permission of the director.

## 35 Conducting I

3 hours; 3 credits
Principles of conducting based on analysis of representative orchestral and choral compositions. Instruction and training in baton technique and rehearsal techniques. Students attend rehearsals of the conservatory's performing organizations.
Prerequisite: Music 6.3 and 7.3; and either 8.3 and 9.3, or 11.3.

### 35.2 Conducting and Rehearsal Techniques

## 3 hours; 3 credits

Intensive practical instruction in conducting, rehearsal techniques, and materials applicable to vocal and instrumental performance ensembles in the public schools. Emphasis on conducting, score study, rehearsal planning, organization and pacing, error detection and correction, student motivation, repertoire and concert programming, music performance curriculum, large and small choral and instrumental ensembles. Field observations and fieldwork in the public schools.
Prerequisite: Music 6.3, 7.3, and 11.2; 61.1 or 62.1 ; and 63 , 64 , and 65 ; or permission of the director. Corequisite: Music 51.

## 36 Advanced Ear Training

3 hours; 3 credits
Development of advanced skills in sight-reading and dictation. Prerequisite: Music 6.4, 7.4 and 11.4.

## 43 American Music

3 hours; 3 credits
Exploration of distinctive American repertories from a cultural perspective. Concert music, African-American traditions, experimental innovations, the role of women. Relationships to the European past, composers, and audiences; the impact of technology, the effects of pluralism.
Prerequisite: Music 6.4, 7.4, and 11.4; or permission of the director.

### 43.1 The Jazz Tradition

3 hours; 3 credits
Jazz history from its origins to the present. Analysis of recordings, arrangements, and transcriptions. Cultural, economic, and sociological issues that have influenced the development of jazz. Connections between jazz and the aesthetic and philosophical principles of African American artistic expression.
Prerequisite: Music 6.4, 7.4, and 11.4; or permission of the director.

## 44 Music of the World's People

## 3 hours; 3 credits

Cross-cultural studies of world music repertories. Development of new perspectives on music and its role in diverse societies. Emphasis on the ways in which musicians acquire and exercise their art and on the uses and meanings of music.
Prerequisite: Music 6.4, 7.4, 11.4, and Core Studies 9; or permission of the director.

## 45 Linear Analysis of Tonal Music

3 hours; 3 credits
Study of voice-leading and harmony in selected works from the eighteenth and nineteenth centuries. Concept of structural levels; techniques of prolongation and embellishment; sources of continuity and coherence.
Prerequisite: Music 6.4, 7.3, and 11.3; or permission of the director.

## 46 Analysis of Twentieth-Century Music

3 hours; 3 credits
Analytic approaches to the study of twentieth-century music. The emphasis is on methods and projects that enhance hearing. Expanded tonality, circular progressions, symmetry, motives and sets, concepts of orders: rhythm, timbre, texture, form.
Prerequisite: Music 6.4, 7.4, and 11.4; or permission of the director.

## 47 Advanced Musicianship: Jazz

3 hours; 3 credits
Work in advanced ear-training, harmonic function, chordal progression, blues patterns, and vocabulary of jazz; aural recreations and written transcriptions of improvisations; principles of major/minor, modal, pentatonic, altered, and whole-tone scale constructions; exploration of the relationship between improvisation and harmonic context.
Prerequisite: Music 6.4 and 7.4 , or permission of the director.

### 49.1 Special Topics

1 hour, 1 credit
Special topic, problem, figure, style, form, or genre not otherwise covered in the regular courses of the curriculum. Topics vary and reflect the special interests of students and faculty. May be taken more than once for credit, but topics may not be repeated.
Prerequisite: permission of the director.

### 49.2 Special Topics

2 hours; 2 credits
Special topic, problem, figure, style, form, or genre not otherwise covered in the regular courses of the curriculum. Topics vary and reflect the special interests of students and faculty. May be taken more than once for credit, but topics may not be repeated.
Prerequisite: permission of the director.

### 49.3 Special Topics

3 hours; 3 credits
Special topic, problem, figure, style, form, or genre not otherwise covered in the regular courses of the curriculum. Topics vary and reflect the special interests of students and faculty. May be taken more than once for credit, but topics may not be repeated.
Prerequisite: permission of the director.

## Performance courses

### 67.1 Piano Repertory Class

2 hours; 0 credits
Study of solo piano repertoire from the 1600 s to the present through critique of student performance. Piano history, literature, performance practice, and performance. Practical application in solo performance settings as assigned. May be taken more than once.
Prerequisite: permission to take Music 79.1-79.6, or $79.12-79.62$, or 84.1 , or 84.2 or permission of the director. Corequisite: Music 79.1-79.6, or 79.12-79.62, or 84.1, or 84.2, as applicable.

### 67.2 String Repertory Class

2 hours; 0 credits
Performance by string majors of solo and chamber music repertory in a master-class setting. Guided discussion of important issues and areas of technique and interpretation to enhance performance, increase self-confidence, and
eliminate performance anxiety. Constructive observations and suggestions from class members, string faculty, and invited guests. Required of all string majors.
Prerequisite: permission of the director.
Corequisite: a course in the Music 79 or Music 84 sequence.

### 68.1 Accompanying at the Keyboard I

2 hours recitation, minimum 2 hours practicum; 3 credits Skills for instrumental and vocal accompanying at the keyboard. Repertory includes instrumental sonatas, vocal songs, and orchestra reductions of string, wind, operatic, and choral literature. Sight-reading and transposition. Practical application in performing situations, as assigned. (Not open to students who completed Music 49.3 in fall 2000.)
Prerequisite: Music 79.1 (in piano, organ, or harpsichord) and permission of the director.

### 68.2 Accompanying at the Keyboard II

2 hours recitation, minimum 2 hours practicum; 3 credits
Continuation of 68.1. (Not open to students who completed Music 49.3 in fall 2000.)
Prerequisite: Music 68.1 and 79.2 (in piano, organ, or harpsichord) and permission of the director.

### 69.1 Keyboard Workshop I

1 hour recitation, a minimum of 5 hours independent practice; 1 credit
Reading bass and treble clefs. Major and minor scales, simple chord progressions and their application, block chord pieces, simple dances. Sight-reading and prepared pieces.
(Not open to students who satisfy the minimum piano requirement for music majors.)
Prerequisite: placement examination.

### 69.2 Keyboard Workshop II

1 hour recitation, a minimum of 5 hours independent practice; 1 credit
Continuation of Music 69.1. Harmonic sequences. Sightreading a simple block-chord piece. Playing a prepared piece at the level of Bach's Notebook for Anna Magdalena Bach or Bartok's Mikrokosmos, Book 2.
Prerequisite: Music 69.1.
Music 70 through 78 may be taken for credit each term the student is enrolled.
70 Opera Workshop
3 hours; 1 credit
Study and performance of scenes from operas. Fundamentals of operatic techniques, coordination of singing and stage movement.
Prerequisite: audition.

## 71 Chorus

3 hours; 1 credit
Study and performance of standard choral literature for mixed voices.
Prerequisite: audition.

### 71.1 Chamber Chorus

3 hours; 1 credit
Study and performance of chamber chorus literature for mixed voices.
Prerequisite: audition.

## 72 Percussion Ensemble

3 hours; 1 credit
Study and performance of music for percussion.
Prerequisite: audition.

## 73 Collegium Musicum

3 hours; 1 credit
Singing and playing of old and new compositions scored for small groups.
Prerequisite: audition.

## 74 Chamber Music

3 hours; 1 credit
Playing of trios, quartets, and various ensembles of stringed and wind instruments with and without pianoforte.
Prerequisite: At least two terms (in any combination) of Music $74.1,74.2,74.3,74.5$, or 78 ; and permission of the director..

### 74.1 Contemporary Music Ensemble

3 hours; 1 credit
Study and performance of contemporary music.
Prerequisite: audition.

### 74.2 Brass Ensemble

3 hours; 1 credit
Study and performance of music for brass ensemble.
Prerequisite: audition.

### 74.3 Woodwind Chamber Music

3 hours; 1 credit
Study and performance of music for woodwind
chamber ensembles.
Prerequisite: audition.

### 74.5 Small Ensemble Jazz

3 hours; 1 credit
Study and performance of music for small jazz combo, including practical experience with jazz improvisation techniques and styles.
Prerequisite: audition.

## 75 Orchestra

3 hours; 1 credit
Study and performance of literature for orchestra.
Prerequisite: audition.

### 75.1 String Orchestra

3 hours; 1 credit
Study and performance of literature for string orchestra.
Prerequisite: audition.

## 76 Wind Ensemble

3 hours; 1 credit
Study and performance of literature for band.
Prerequisite: audition.

## 77 Ensemble in Non-Western Music

3 hours; 1 credit
Performance of non-Western music scored for small groups.

## 78 Jazz Ensemble

3 hours; 1 credit
Study and performance of old and new jazz literature.
Prerequisite: audition.

### 79.1 Performance I

2 hours lecture, 1 hour recitation, at least 8 hours independent work§; 3 credits
Intermediate and advanced performance in voice or on an instrument. One weekly repertoire class and one hour individual instruction.
Prerequisite or corequisite: all of the following: candidacy for the B.A. or B.Mus. degree in music, Music 6.1, 7.1, Music 69.1 or the minimum piano requirement for music majors, permission of the director.
Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

### 79.2 Performance II

2 hours lecture, 1 hour recitation, at least 8 hours independent work§; 3 credits
Continuation of Music 79.1. Students must continue in voice or on the instrument studied in Music 79.1.
Prerequisite or corequisite: all of the following: candidacy for the B.A. or B.Mus. degree in music, Music 6.2, 7.2, and 11.2; Music 69.2 or the minimum piano requirement for music majors; permission of the director.
Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

### 79.3 Performance III

2 hours lecture, 1 hour recitation, at least 8 hours independent work§; 3 credits
Continuation of Music 79.2. Students must continue in voice or on the instrument studied in Music 79.2.
Prerequisite or corequisite: all of the following: candidacy for the B.A. or B.Mus. degree in music, Music 6.3, 7.3, and 11.1; permission of the director.
Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

### 79.4 Performance IV

2 hours lecture, 1 hour recitation, at least 8 hours independent work§; 3 credits
Continuation of Music 79.3. Students must continue in voice or on the instrument studied in Music 79.3.
Prerequisite or corequisite: all of the following: candidacy for the B.A. or B.Mus. degree in music, Music 6.4, 7.4, and 11.2; permission of the director.
Corequisite: an ensemble course (Music 70 through 78) as
assigned through audition and permission of the director.

### 79.5 Performance V

2 hours lecture, 1 hour recitation, at least 8 hours independent work§; 3 credits
Continuation of Music 79.4. Students must continue in voice or on the instrument studied in Music 79.4.
Prerequisite: candidacy for the B.A. or B.Mus. degree in music, Music 11.3 and Music 79.4 and permission of the director. Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

### 79.6 Performance VI

2 hours lecture, 1 hour recitation, at least 8 hours independent work§; 3 credits
Continuation of Music 79.5. Students must continue in voice or on the instrument studied in Music 79.5.
Prerequisite: candidacy for the B.A. or B.Mus. degree in music, Music 11.4 and Music 79.5 and permission of the director. Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

## Music education

## 51 Music Education Colloquium

1 hour; 0 credit
A colloquium for music education majors. Guest speakers, student and faculty presentations, discussions of current topics in music education. Required of music education majors for six semesters. Field observations and teaching in the public schools. Non-graded course.

## 52 Introduction to Music Education

2 hours; 1 credit
Overview of the music education profession: philosophy, history, pedagogical approaches, standards and practices of the profession, current issues, and practical applications. Field observations in the public schools.
Corequisite: Music 51.

## 57 Teaching Music Concepts <br> 1 hour; 1 credit

Overview of approaches to teaching music elements and aspects common to all instrumental instruction (tone quality, pitch, rhythm, etc.) emphasizing musicianship. Course is paired with an instrumental workshop in the Music 61-66 series that entails field observations and fieldwork in the public schools.
Prerequisite: Music 6.1 and 7.1; or permission of the director. Corequisite: Music 51; and 61.1, 62.1, 63, 64, 65, or 66.1 .

### 58.1 Music in the Elementary Schools

3 hours, including fieldwork; 3 credits
Techniques, methods, and materials used in teaching music in the elementary schools including instruction for prekindergarten children. Development and application of music, teaching, and observation skills; assessment and organization in the context of the overall elementary school music program; child development. Includes observation and supervised teaching in public schools.
Prerequisite: Music 6.2, 7.2, and 52.
Corequisite: Music 51.

### 58.2 Music in the Secondary Schools

3 hours, including fieldwork; 3 credits
Techniques, methods, and materials used in teaching music in the secondary schools, including choral and instrumental ensembles and general music courses. Recruitment, curriculum, materials analysis, assessment, adolescent development, technology, special learners, and current issues. Includes observation and supervised teaching in public schools.
Prerequisite: Music 6.2, 7.2, and 52, or permission of the director.
Corequisite: Music 51.

### 58.3 Music in Special Education

3 hours, including fieldwork; 3 credits
Techniques, methods, and materials used in teaching music to special learners of different ages and developmental levels, especially in an inclusive classroom setting. Current issues. Field observation.

## 59 The School Music Program: Choral, instrumental, and General

2 hours, including fieldwork; 2 credits
Organization and structure of overall musical program (preK-12), including curriculum, technology, inclusion, legal and governmental aspects, relationships with parents, administrators, teachers, structure of the New York City and state educational systems, budgets, funding, evaluation, assessment, etc.
Prerequisite: Music 58.1 or 58.2; or permission of the director. Corequisite: Music 51.

## 60 Voice Production

2 hours; 1 credit
Principles of singing, breath support, tone placement, phrasing, enunciation, diction. Practice in singing simple songs. Individual and group instruction.
Prerequisite: Music 6.2 and 7.2 and 11.2 or permission of the director.

### 61.1 String Class: Violin and Viola

3 hours; 1 credit
Tuning, bowing, and positions for violin and viola. Practice in reading simple compositions. For beginners. No previous knowledge of a stringed instrument required.
Prerequisite: ability to read music and permission of the director.

### 62.1 String Class: Violoncello and Bass Viol 3 hours; 1 credit

Tuning, bowing, and positions for bass viol and violoncello. Practice in reading simple compositions. For beginners. No previous knowledge of a stringed instrument is required.
Prerequisite: ability to read music and permission of the director.

## 63 Woodwind Class

3 hours; 1 credit
Mechanism, embouchure, and tone production of the flute, oboe, clarinet, bassoon. Practice in reading simple compositions. For beginners. No previous knowledge of a woodwind instrument is required.
Prerequisite: ability to read music and permission of the director.

## 64 Brass Class

3 hours; 1 credit
Fingering, embouchure, and tone production of the trumpet, French horn, trombone, tuba. Practice in reading simple compositions. For beginners. No previous knowledge of a brass instrument is required.
Prerequisite: ability to read music and permission of the director.

## 65 Percussion Class

3 hours; 1 credit
Principles of percussion technique. Practice in reading simple compositions. For beginners. No previous knowledge of a percussion instrument is required.
Prerequisite: ability to read music and permission of the director.

### 66.1 Fretted Instrument Workshop

3 hours; 1 credit
Tuning, sound production, and positions for fretted instruments (guitars and lutes). Practice in reading simple compositions. Primarily for use in public school teaching. No previous knowledge of a fretted instrument is required.
Prerequisite: ability to read music and permission of the director.

### 69.3 Functional Keyboard Skills

2 hours recitation, a minimum of 5 hours independent practice; 1 credit
Functional keyboard skills applicable to music education settings in public schools. Includes accompanying, harmonizing, improvising, aural keyboard skills, and keyboard performance in different music styles and genres.
Prerequisite: Familiarity with electronic keyboards and MIDI applications, Music 69.1 and 69.2, or permission of the director. Corequisite: Music 51.

### 79.12 Performance I, Music Education Majors

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 2 credits
Intermediate and advanced performance in voice or on an instrument. One weekly repertoire class and one hour individual instruction.
Prerequisite or corequisite: all of the following: candidacy for the B.Mus. in Music Education degree; Music 6.1 and 7.1; Music 69.1 or the minimum piano requirement for music majors; and permission of the director.
Corequisite: an ensemble course chosen from Music 70 through 78, as assigned through audition, and permission of the director.

### 79.22 Performance II, Music Education Majors

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 2 credits
Continuation of Music 79.12. Students must continue in voice or on the instrument studied in Music 79.12.
Prerequisite or corequisite: all of the following: candidacy for the B.Mus. in Music Education degree; Music 6.2 and 7.2; Music 69.2 or the minimum piano requirement for music majors; and permission of the director.
Corequisite: an ensemble course chosen from Music 70 through 78, as assigned through audition, and permission of the director.

### 79.32 Performance III, Music Education Majors

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 2 credits
Continuation of Music 79.22. Students must continue in voice or on the instrument studied in Music 79.22.
Prerequisite or corequisite: all of the following: candidacy for the B.Mus. in Music Education degree; Music 6.3, 7.3, and 11.1; Music 69.3 or the minimum piano requirement for music majors; and permission of the director.
Corequisite: an ensemble course chosen from Music 70 through 78, as assigned through audition, and permission of the director.

### 79.42 Performance IV, Music Education Majors

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 2 credits
Continuation of Music 79.32. Students must continue in voice or on the instrument studied in Music 79.32.
Prerequisite or corequisite: all of the following: candidacy for the B.Mus. in Music Education degree; Music 6.4, 7.4, and 11.2; and permission of the director. Corequisite: an ensemble course chosen from Music 70 through 78, as assigned through audition, and permission of the director.

### 79.52 Performance V, Music Education Majors

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 2 credits
Continuation of Music 79.42. Students must continue in voice or on the instrument studied in Music 79.42.
Prerequisite or corequisite: all of the following: adequate progress in completing the B.Mus. in Music Education degree and successful completion of the qualifying sophomore jury; Music 11.3; and permission of the director. Corequisite: an ensemble course chosen from Music 70 through 78, as assigned through audition, and permission of the director.

### 79.62 Performance VI, Music Education Majors

2 hours lecture, 1 hour recitation, at least 6 hours independent work§; 2 credits
Continuation of Music 79.52. Students must continue in voice or on the instrument studied in Music 79.52.
Prerequisite or corequisite: all of the following: candidacy for the B.Mus. in Music Education degree; Music 11.4; and permission of the director.
Corequisite: an ensemble course chosen from Music 70 through 78, as assigned through audition, and permission of the director.

## 85.1, 85.2 Independent Research in Music Education I, II

 See "Honors courses" below.
## Honors courses

Students with superior records and the recommendation of a Conservatory of Music faculty member may apply to the director to register for the courses described below. Students may not register for more than six credits in honors courses in the program in one term.
83.1, 83.2 Independent Research in Music History I, II Minimum of 9 hours conference and independent work§; 3 credits
Independent research in music history supervised by a faculty member. Thesis or report.
Prerequisite: completion of an approved program of advanced music courses and permission of the director.

### 84.1 Advanced Performance I

Minimum of 10 hours conference and independent work§; 3 credits
Preparation and presentation of a public performance. Students must continue in voice or on the instrument studied in Music 79.6.
Prerequisite: Music 79.6 and permission of the director. Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

### 84.2 Advanced Performance II

Minimum of 10 hours conference and independent work§; 3 credits
Continuation of Music 84.1. Students must continue in voice or on the instrument studied in Music 84.1.
Prerequisite: Music 84.1 and permission of the director. Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.
85.1, 85.2 Independent Research in Music Education I, II Minimum of 9 hours conference and independent work§; 3 credits
Independent project or research in music education supervised by a faculty member. Thesis, report, or project.
Prerequisite: Completion of an approved program of advanced music courses and permission of the director.

### 86.1 Advanced Composition I

Minimum of 9 hours conference and independent work§; 3 credits
Individual work in advanced music composition in extended form. Required composition of an original work.
Prerequisite: Completion of an approved program of advanced music courses and permission of the director.

### 86.2 Advanced Composition II

Minimum of 9 hours conference and independent work§; 3 credits
Continuation of Music 86.1.
Prerequisite: Music 86.1 and permission of the director.

### 86.5 Advanced Conducting I

Minimum of 9 hours independent work§, class meetings, and conference; 3 credits
Prerequisite or corequisite: all of the following: candidacy for the B.A. or B.Mus. degree in music, Music 6.3, 7.3, and either 8.3 and 9.3 , or 11.1 ; permission of the director.

Corequisite: an ensemble course (Music 70 through 78) as assigned through audition and permission of the director.

### 86.6 Advanced Conducting II

Minimum of 9 hours independent work§, class meetings, and conference; 3 credits
Continuation of Music 86.5.
Prerequisite: Music 86.5 and permission of the director.
87.1 Independent Research in Non-Western Music I

Minimum of 9 hours conference and independent work§; 3 credits
Independent research in non-Western music supervised by a faculty member. Weekly conference. Thesis or report.
Prerequisite: completion of an approved program of advanced music courses, including Music 77, and permission of the director.

### 88.1 Music Internship

3 hours; 1 credit
Supervised on- or off-campus work at least one day per week in an office or classroom of a business, educational facility, or other agency providing professional experience in music, music performance, or music research. Submission of a critical report on the experience. This course may be taken for credit twice, but students may not offer more than six credits from Music 88.1, 88.2, and 88.3 toward a degree.
Prerequisite: Music 6.3, 7.3, 11.3; junior or senior standing; permission of the director. Permission requires the submission of letters from two faculty members attesting to the student's capacity to complete successfully the proposed internship project.

### 88.2 Music Internship

## 6 hours; 2 credits

Supervised on- or off-campus work at least one day per week in an office or classroom of a business, educational facility, or other agency providing professional experience in music, music performance, or music research. Submission of a critical report on the experience. This course may be taken for credit twice, but students may not offer more than six credits from Music 88.1, 88.2, and 88.3 toward a degree.
Prerequisite: Music 6.3, 7.3, 11.3; junior or senior standing; permission of the director. Permission requires the submission of letters from two faculty members attesting to the student's capacity to complete successfully the proposed internship project.

### 88.3 Music Internship

9 hours; 3 credits
Supervised on- or off-campus work at least one day per week in an office or classroom of a business, educational facility, or other agency providing professional experience in music, music performance, or music research. Submission of a critical report on the experience. This course may be taken for credit twice, but students may not offer more than six credits from Music 88.1, 88.2, and 88.3 toward a degree.
Prerequisite: Music 6.3, 7.3, 11.3; junior or senior standing; permission of the director. Permission requires the submission of letters from two faculty members attesting to the student's capacity to complete successfully the proposed internship project.

## Seminars

## 90 Seminar in Advanced Analysis

Minimum of 9 hours independent work§, seminar meetings, and conference; 3 credits
Investigation of selected works from varied analytic standpoints. Independent research in special areas. Assigned projects. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 6.4 and 7.4 and either 11.4; or 44 or 45.

## 91 Seminar in Music History

Minimum of 9 hours independent work§, seminar meetings, and conference; 3 credits
Investigation of a period or problem in music history. Independent research in special areas. Assigned projects. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 11.4 or permission of the director.

## 92 Seminar in Style Criticism

Minimum of 9 hours independent work§, seminar meetings, and conference; 3 credits
Investigation of principles of evaluation in music. Comparative studies of styles and trends. Critical study of selected compositions. Independent research in special areas. Assigned projects. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 6.4 and 7.4 and 11.4.

## 93 Seminar in Contemporary Music

Minimum of 9 hours independent work§, seminar meetings, and conference; 3 credits
Examination of changing concepts during the twentieth century through detailed study of selected major works. Independent research, conferences, and seminar projects. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 6.4 and 7.4 and 11.4.

## 94 Seminar in American Music

3 hours; 3 credits
Studies in the development of folk, popular, religious, and art music in North America from the time of the first European settlers. Selected topics. Independent research, conferences, and seminar projects. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 11.4 or permission of the director.

### 94.1 Seminar in Jazz History

3 hours; 3 credits
Selected topics in the history of jazz, from its origins to the present. Research and analysis of recordings, transcriptions, and arrangements. Emphasis on social and cultural context. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 11.4 or permission of the director.

## 95 Seminar in Performance Practice

## 3 hours; 3 credits

Study of documents and vocal and instrumental techniques relating to the authentic performance practice of music from the seventeenth through the twentieth century. Topic to be announced. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Music 79.6 or permission of the director.
The following courses are inactive and will be offered only if there is sufficient demand:

1.5 Basic Music Skills<br>30.3 Music of Beethoven<br>32.1 Preparing Music Manuscripts<br>33.2 Instrument Repair: Woodwinds<br>33.5 The Mechanism and Maintenance of the Piano<br>35.1 Conducting II<br>75.2 Theater Orchestra

## Philosophy

Department office: 3308 Boylan Hall
Telephone: 951-5311, 951-5312
Chairperson: Emily Michael
Deputy Chairperson, SGS: Edward Kent
Professors: Adler, Funk, Levy, Michael, Steinberg;
Associate Professors: Kent, Nuzzo, Vasiliou;
Assistant Professors: Lurz, Menser, Moore.

## Core curriculum

The Department of Philosophy participates in the college's core curriculum through Core Studies 10.

## B.A. degree program in philosophy <br> <br> HEGIS code 1509

 <br> <br> HEGIS code 1509}Department requirements (25-38 credits)

## Option I: Philosophy

Recommended for students planning graduate study in philosophy and for others for whom a broad background in philosophy is desirable.
All of the following: Philosophy 11.1, 12.1, 23, 26, 27.
Philosophy 13 or 33.
One additional Philosophy Department course other than Core Studies 10, Philosophy 1.1, and 2.

## Option II: Philosophy and Law

Recommended for students planning careers involving public affairs, law, or planning and management.
All of the following: Philosophy 20, 21, 23, 26, 43.
Philosophy 10 or 13.
One of the following: Philosophy 6, 8, 14, 15.1, 15.2, or 15.3 .

## Option III: Philosophy and other Fields

Recommended for students planning careers in medicine, cognitive science, and for other students interested in acquiring a knowledge of philosophy that also contributes to the understanding of another field.
Students must satisfy A, B, and C below.
A. All of the following: Philosophy 11.1 or $12.1,26$ or 27 or 28,21 or 23,10 or 13 or 33.
B. Three courses: One course from each of the following groups, (1), (2), and (3) below. The course chosen from each group may not be used to satisfy any of the above Option III-A requirements.
(1) One of: Philosophy 12.4, 16, 17, 18, 19, 20, 21, $22,22.1,26,27,28,28.1,29,34,37,42,43,44$, 45, 46, 47.
(2) One of: Philosophy 7, 11.1, 11.2, 11.3, 11.4, 12.1, 12.2, 12.3, 12.4, 50, 54.
(3) One of: Philosophy 5, 6, 6.5, 8, 14, 15.1, 15.2, 15.3, 16.1, 37.
C. One of the following, (1), (2), or (3) below:
(1) At least 12 credits in courses taken in a single department or program outside the Philosophy Department.
(2) At least 12 credits in any selection of the following science courses: Biology 3, 4; Chemistry 1, 1.1, 1.2, 2, 5, 50, 51, 52; Health and Nutrition Sciences 20 or 21; Physics 1, 1.1, 1.2, 1.5, 2, 2.3, 2.5.
(3) A Minor in Cognitive Science. (Philosophy courses taken to complete a minor in cognitive science can also be applied towards the satisfaction of Option III-A and Option III-B requirements for a major in philosophy.)

## Option IV: Philosophy and Business

Recommended for students planning careers in business.
Philosophy 14 and 23.
One course from each of the following groups, A), B), C), D), and E ):
A) Philosophy 10 or 13.
B) Philosophy 5, 12.3, 19, 26, or 27.
C) Philosophy 11.1, 11.2, 11.3, 11.4, 12.1, 12.2, 12.4 or 20.
D) Philosophy 21 or 43.
E) Philosophy 6, 8, 15.1, 15.2, 15.3, or 50.

One of the following groups, either Marketing/Management or Finance:
Marketing/Management:
All of the following: Business 40.3 or Psychology 12.7; Business 50.1, 50.2, 50.7.
Finance:
Accounting 1 and either Business 30.2 or Economics 30.2. Two of the following: Economics 70.1, Business 70.2 or 70.3 .

## Department honors

To qualify for honors in philosophy, a student must complete at least three credits of honors work in philosophy with a grade of B- or higher and must have an academic index of 3.50 or higher in all philosophy courses completed.

## Requirements for a minor in philosophy

At least 12 credits, in at least four advanced electives in philosophy, with a grade of C or higher.

Philosophy concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in philosophy must complete one of the following 30 -credit options in the Philosophy Department with a grade of C or higher in each course. Option A:
Philosophy 6, 10, 18; 20 or 12.4; 22 or 22.1. Two of the following courses: Philosophy 8, 14, 15.1, 15.2, 45.
One course from each of the following groups.
a) Philosophy 9, 21, 23.
b) Philosophy 11.1, 11.2, 11.3, 11.4, 12.1, 12.2.
c) Philosophy 26, 44, 42, 46.

Option B:
Philosophy 6 or $18 ; 10,11.1,12.1,20,21,23,26$.

## Requirements for a minor in cognitive science

An interdisciplinary and interdepartmental minor, offered by the Department of Computer and Information Science, the Department of Philosophy, and the Department of Psychology, requiring 12 to 13 credits in advanced electives.
All of the following: Philosophy 5, Computer and Information
Science 1.5, Psychology 1.1, Psychology 57.1.
One from each of the following groups, a) and b):
a) Philosophy $12.3,26,27,28$, or 42.
b) Computer and Information Science 32 or 32.1, or Philosophy 29, or Psychology 57.2.

## Recommendation for prospective graduate students

Prospective graduate students in philosophy should develop reading comprehension in at least one of the following languages: French, German, Greek, Latin.

## Division of Graduate Studies

The Philosophy Department offers graduate courses for students in other fields. For information, students should consult the department chairperson. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirements of no fewer than 21 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *1.1 Introduction to the Problems of Philosophy

 3 hours; 3 creditsSurvey of basic philosophical problems and different solutions proposed by philosophers. Such topics as the nature and scope of knowledge, meaning and verification, the existence of God, determinism and free will, the mind-body problem, and the nature of moral judgments. (Not open to students who are enrolled in or have completed Philosophy 1.2 or 2 or Core Studies 10.)

## *2 Landmarks in Philosophy

3 hours; 3 credits
Selections from works of such major Western philosophers as Plato, Aristotle, Augustine, Aquinas, Maimonides, Descartes, Hume, Kant, Marx, Russell from at least three of the following periods: ancient, medieval, modern, contemporary. (Not open to students who are enrolled in or have completed Philosophy 1.1 or 1.2 or Humanities 10.4.)

## 5 Philosophical Issues in Cognitive Science

 3 hours; 3 creditsIntroduction to select foundational issues in cognitive science. Consideration of such topics as concept formation, meaning, representation, language, reasoning, consciousness, rationality, the human mind, and machine intelligence.
Prerequisite: Core Studies 10, or one course in philosophy, or a course in computer and information science, or a psychology course, or permission of the chairperson.

## 6 Ethics and Society

3 hours; 3 credits
Critical consideration of issues in social ethics. Discussion of such topics as racism and sexism, economic justice, civil disobedience, capital punishment, environmental pollution, nuclear power and weaponry, abortion, euthanasia, freedom of information, the right to privacy

### 6.5 Ethics and Personal Relations

3 hours; 3 credits
Critical examination of issues in personal ethics. Moral obligations to self, family, friends, love partners, neighbors, schoolmates, coworkers. Autonomy and integrity; responsibility and special obligation. Discussion of such topics as suicide, substance abuse, marriage, divorce, love
and sex, parent-child relations, surrogacy, gambling, lying, and cheating. Conceptions of family, work, and leisure. Classical and contemporary philosophers.

## 7 Philosophy of Nature

## 3 hours; 3 credits

A critical examination of the development of theories of nature, life, and cosmology. Classical and modern issues in natural philosophy. Such topics as the structure of the natural world, the nature of space and time, theories of the organism, classic debates concerning mechanism, vitalism, atomism and monism, determinism, the relation between God and nature. Views on issues in natural philosophy of such thinkers as Anaximander, Democritus, Plato, Aristotle, Epicurus, Aquinas, Descartes, Gassendi, Boyle, Locke, Leibniz, Hume. Prerequisite: Core Studies 10 or one course in philosophy.

## 8 Race, Justice, and Equality

3 hours; 3 credits
A philosophical examination of race and racism centered around the moral values of justice and equality. Topics addressed include race as a social category, racial identity, the nature of racism, race neutrality and race consciousness, multiculturalism, and the relationships among values such as fairness, equality, and well-being. Contrasting points of view on measures designed to counter racism, including civil disobedience, affirmative action, racial reparations, and race-based restrictions on speech.
Prerequisite: Core Studies 10, one course in philosophy, or permission of the chairperson.

## 9 Virtue: Ideals of Human Goodness

3 hours; 3 credits
Comparative and critical analysis of contrasting ideals of human virtue and prescriptions for its attainment. Focus on philosophic and literary texts representing several different cultures and historical periods.
Prerequisite: Core Studies 10, or one course in philosophy, or permission of the chairperson.

## 10 Reasoning

3 hours; 3 credits
Examination and development of reasoning skills. Informal logic. Topics such as meaning, definition, the analysis of arguments, fallacies. Use of examples in reasoning to apply principles studied. Legal reasoning, support for claims about public policy, scientific and philosophical arguments.

## 10W Reasoning

4 hours; 3 credits
Examination and development of reasoning skills. Informal logic. Topics such as meaning, definition, the analysis of arguments, fallacies. Use of examples in reasoning to apply principles studied. Legal reasoning, support for claims about public policy, scientific and philosophical arguments. Writingintensive section.
Prerequisite: English 2.

### 10.5 Reasoning and Rationality

3 hours; 3 credits
Theoretical investigation of reasoning and rationality. Advanced treatment of some topics in logic and critical thinking, including missing premises, the principle of charity, pragmatics, fallacies, contrasts between inductive and deductive logic, and scientific reasoning. Study of logicsmodal, epistemic, paraconsistent-besides classical. Puzzles in social choice reasoning-Prisoner's Dilemma. Study of a
relevant historical work or author such as Aristotle's writings on logic and rhetoric. Debates in cognitive science on rationality, rules in reasoning, or change of belief.

### 11.1 Ancient Philosophy

4 hours; 4 credits
Development of metaphysics, epistemology, and ethics in ancient thought. Influence on medieval and modern thought. Emphasis on Plato and Aristotle. (Not open to students who have completed Philosophy 11.)

### 11.2 Medieval Philosophy

3 hours; 3 credits
The development of epistemology, metaphysics, and ethics in medieval thought. Free choice of the will; the existence and properties of God; the nature of truth and human knowledge; the problem of universals. Jewish, Arabic, and Christian thought. Such medieval philosophers as Augustine, Abelard, Anselm, Maimonides, Aquinas, Scotus, Ockham. (Not open to students who have completed Philosophy 41.)

### 11.3 Hellenistic and Roman Philosophy

## 3 hours; 3 credits

The development of epistemology, metaphysics, ethics, natural philosophy, and logic in Hellenistic and Roman philosophy. Critical examination of such movements as Epicureanism, Stoicism, Skepticism, and of such philosophers as Cicero, Lucretius, Seneca, Philo Judaeus, Plotinus.

### 11.4 Renaissance Philosophy

3 hours; 3 credits
The development of epistemology, metaphysics, ethics, and logic in Renaissance philosophy. Critical examination of Renaissance Humanism, Platonism, Aristotelianism, Skepticism. Such thinkers as Ficino, Pico della Mirandola, Bruno, Bacon, Galileo, Montaigne, Machiavelli.

### 12.1 Modern Philosophy

4 hours; 4 credits
Development of metaphysics, epistemology, and ethics since the Renaissance. Emphasis on Descartes, Spinoza, Locke, Leibniz, Berkeley, Hume, and Kant. (Not open to students who have completed Philosophy 12.)

### 12.2 Nineteenth-Century Philosophy

3 hours; 3 credits
Critical examination of nineteenth-century philosophical movements and of such philosophers as Hegel, Schopenhauer, Kierkegaard, Nietzsche, and Marx. The empirical tradition, including such philosophers as J.S. Mill and Brentano, may also be explored. (Not open to students who have completed Philosophy 49.)

### 12.3 Twentieth-Century Philosophy

3 hours; 3 credits
Such major trends in analytic philosophy as logical atomism, logical positivism, and ordinary language analysis. Critical examination of the writings of such exponents of these approaches as Russell, Moore, Ayer, Ryle, Austin, and Wittgenstein. Some continental philosophers may also be examined. (Not open to students who have completed Philosophy 55.)
Prerequisite: one course in philosophy or Core Studies 10.

### 12.4 American Philosophy

3 hours; 3 credits
Critical study of major philosophers and philosophical movements in American philosophy. Such authors as Peirce, James, Dewey, Royce, C.I. Lewis, Whitehead. (Not open to students who have completed Philosophy 48.)
Prerequisite: One course in philosophy or Core Studies 10.

## 13 Introductory Formal Logic

## 3 hours; 3 credits

An introduction to modern sentential and predicate logic. Among the topics are validity, consistency and proof, formal analysis of sentences and arguments in natural language. (Not open to students who are enrolled in or have completed Philosophy 33.)

## 14 Moral Issues in Business

3 hours; 3 credits
Basic approaches to moral reasoning and their application to such issues as justice and economic systems; corporate responsibility to society, the environment, and developing nations; and the duties of businesses to their employees, their customers, and their competitors.
Prerequisite: one course in philosophy or one course in economics, or Core Studies 10.

### 15.1 Environmental Ethics

3 hours; 3 credits
Ethical aspects of human treatment of the natural environment, including the moral basis for pollution control, wilderness preservation, energy and resource conservation, protection of endangered species, and sustaining the earth's ecological diversity. Major theories of environmental ethics and their valuational foundations will be examined critically. Prerequisite: one course in philosophy, or Core Studies 10, or permission of the chairperson.

### 15.2 Philosophy and Feminism

3 hours; 3 credits
Philosophical feminism. Critical examination of current issues in feminist scholarship. Issues of discrimination, equality, and difference; women in relation to science, epistemology, and political and moral philosophy. This course is the same as Women's Studies 47.
Prerequisite: Core Studies 10, or one course in philosophy, or one women's studies course, or permission of the chairperson.

### 15.3 Medical Ethics

3 hours; 3 credits
Analysis and discussion of problems concerning the physician-patient relationship, life and death, medicine on a social scale. (Not open to students who have completed Philosophy 24.)
Prerequisite: one course in philosophy, or Core Studies 10, or permission of the chairperson.

### 15.4 Ethical Issues in the Electronic Mass Media

3 hours; 3 credits
Analysis and discussion of ethical issues related to television and radio. Case histories and role playing provide value judgments concerning entertainment, information, and advertising functions of mass media. This course is the same as Television and Radio 23. (Not open to students who have completed Philosophy 24.1.)
Prerequisite: Television and Radio 6.5; Philosophy 6 or Core Studies 10.

## 16 Philosophy of Biology

3 hours; 3 credits
Intensive study of selected areas in the philosophy of biology including the origin of life: teleological, functional, and mechanistic explanations; the theory of evolution and the neo-Darwinian synthesis; reductionism, genetics, and hierarchies; taxonomy and the species problem; and sociobiology. This course is the same as Biology 6.
Prerequisite: Core Studies 8.1 or its equivalent, or Core Studies 10, or one course in philosophy or permission of the chairperson.

## 17 A History of Ideas in Physics

3 hours; 3 credits
Development of philosophical points of view in physics from ancient times to the present. Interplay of ideas from science, philosophy, and the world views of various societies. (Not open to students who have completed Physics 36.) This course is the same as Physics 0.17.
Prerequisite: Core Studies 7.2 or its equivalent, or Core Studies 10, or one course in philosophy, or permission of the chairperson.

## 18 Philosophy of Education

3 hours; 3 credits
Critical analysis of concepts of education; major philosophies of education; aims of education; social issues and education. (Not open to students who have completed Education 18.)
Prerequisite: one course in philosophy or Core Studies 10.

## 19 Philosophy of Language

3 hours; 3 credits
Survey of the main topics in the philosophy of language. Different approaches to the description of language. Types of grammar. Acquisition and use of language. Classification, definition, and meaning. Place of linguistic data in philosophical arguments.
Prerequisite: one course in philosophy or Core Studies 10.

## 20 Political Philosophy

## 4 hours; 4 credits

History of theories of the underlying principles of law and social organization. Principles of just distribution; rule of men versus rule of law; natural law and social contract theories; social justice versus individual liberty. Such philosophers as Plato, Aristotle, Hobbes, Locke, Rousseau, Kant, Hegel, Marx, Mill, Thoreau, Rawls, and Nozick are discussed. (Not open to students who have completed Philosophy 39.)
Prerequisite: one course in philosophy or Core Studies 10.

## 21 Social Philosophy

4 hours; 4 credits
Philosophical theories of society and human nature. Analysis of such social concepts as authority, law, rights, the state, justice, the common good, liberty, and sovereignty. Methods of justifying political principles. Social ideals and general theory of value. (Not open to students who have completed Philosophy 40.)
Prerequisite: one course in philosophy or Core Studies 10.

## 22 Philosophy of Art

3 hours; 3 credits
Nature and value of art and aesthetic experience. Aesthetic theories examined abstractly and with reference to the living arts. Methods and criteria for forming aesthetic judgments.
Prerequisite: one course in philosophy or Core Studies 10.

### 22.1 Philosophy of Literature <br> 3 hours; 3 credits

A critical examination of the philosophical dimensions of various theories of literature and literary criticism.
Prerequisite: Core Studies 10, or one course in philosophy or literature, or permission of the chairperson.

## 23 Foundations of Ethics

4 hours; 4 credits
Systematic study of the nature and grounds of moral judgments. Methods of justifying moral standards. Analysis of moral concepts. Ethical theories of classical and contemporary writers critically examined.
Prerequisite: one course in philosophy or Core Studies 10.

## 26 Epistemology: Theory of Knowledge

4 hours; 4 credits
Classical and contemporary theories of the nature of knowledge and belief. Discussion of skepticism, rationalism, empiricism, coherentism, foundationalism. Analysis of such concepts as probability, certainty, perception, evidence, truth.
Prerequisite: one course in philosophy or Core Studies 10.

## 27 Metaphysics

4 hours; 4 credits
Classical and contemporary theories of being and reality. Analysis of such concepts as particular, quality, relation, personal identity, free will and determinism, universals, substance, mind, matter, space, and time. Possibility of metaphysical knowledge. The relationship between metaphysics and other disciplines.
Prerequisite: one course in philosophy or Core Studies 10.

## 28 Philosophy of Mind

3 hours; 3 credits
Philosophic analysis of such mental and psychological concepts as intention, want, belief, emotion, will, desire, pleasure, imagination, and thought. Such contemporary problems as the identity thesis, behaviorism, the analysis of mental acts, and the intentionality thesis.
Prerequisite: one course in philosophy or Core Studies 10.

### 28.1 Problems in the Philosophy of Psychology

 3 hours; 3 creditsPhilosophical questions raised by psychoanalysis, behaviorism, cognitive science, and sociobiology. Philosophical problems related to theories of unconscious mental processes, repressed memories, multiple personality, mental illness, innate knowledge, the origins of concepts of truth and moral rightness, animal cognition. Theories of classical and contemporary thinkers critically examined.
Prerequisite: One course in philosophy or Core Studies 10 or permission of the chairperson.

## 29 Philosophy and Artificial Intelligence

3 hours; 3 credits
Such contemporary issues in philosophy and psychology as the mind-machine analogy, the artificial intelligence model of the human mind, intentionality, representation, consciousness, concept formation, free will, behaviorism, mechanism. Discussion and evaluation of contemporary work in the field. This course is the same as Computer and Information Science 32.1 and Psychology 57.2.
Prerequisite: Core Studies 5 or 5.1 or a course in computer and information science, and Core Studies 10 or one course in philosophy; or permission of the chairperson of the offering department.

## 33 Symbolic Logic

3 hours; 3 credits
Symbolic methods of modern deductive logic and their application to language. Metalogical techniques for the study of logistic systems. Alternative logics. Probability calculus. Higher functions. Type theory. Godelean incompleteness.

## 34 Philosophy of Logic

3 hours; 3 credits
Philosophical problems of formal logic: logical truth, entailment, meaning and reference, ontology, logical and semantical paradoxes, semantic categories, relation of formal logic to natural languages.
Prerequisite: Philosophy 13 or 33 , or an equivalent logic course or permission of the chairperson.

## 37 Philosophical Issues Concerning Animals

## 3 hours; 3 credits

Can animals think? Do animals have rights? Examination of such issues as animal consciousness, cognition, intelligence; obligations to animals; pets and pests; vegetarianism; experimentation with animal subjects; genetic engineering of animals; endangered species. Classical and contemporary philosophers.
Prerequisite: one course in philosophy or Core Studies 10 or permission of the chairperson.

## 42 Philosophy of Science

3 hours; 3 credits
Logical structure of mathematics and of the natural sciences. Explanation in the physical sciences. Cognitive status of scientific laws and theories.
Prerequisite: one course in philosophy or Core Studies 10.

## 43 Philosophy of Law

3 hours; 3 credits
Basic legal concepts and philosophical problems relating to law. General legal theory; human and legal rights; legal responsibility; punishment; justice; property; judicial reasoning; the legal enforcement of morals.
Prerequisite: one course in philosophy or Core Studies 10.

## 44 Philosophy of Religion

3 hours; 3 credits
Philosophical interpretations of the data of religious experience. Religion and magic, science, ethics, and world views. Religious language. Criteria of religious knowledge. Prerequisite: one course in philosophy or Core Studies 10.

## 45 Asian Philosophy

3 hours; 3 credits
Development of Indian thought in the Vedic hymns, the Upanishads, the Bhagavadgita, Jainism, Buddhism, and the darshana. Chinese thought through the ancient, medieval, and modern periods.
Prerequisite: one course in philosophy or Core Studies 10.

## 46 Philosophy of the Social Sciences

3 hours; 3 credits
Logic of social scientific inquiry. Behaviorism, functionalism, historicism, methodological individualism, and structuralism. Analysis of such basic social scientific concepts as culture, group, norm, person, action, and ideology. Values in the social sciences.
Prerequisite: one course in philosophy or Core Studies 10.

## 54 Existentialism and Phenomenology

3 hours; 3 credits
Phenomenological-existentialist critique of positivism, psychologism, and traditional humanism and the counter-claim to a deeper and more philosophical interpretation of man and his "being in the world." Readings from such philosophers as Husserl, Heidegger, Sartre, and Merleau-Ponty.
Prerequisite: one course in philosophy or Core Studies 10.

### 60.1 Special Topics

3 hours; 3 credits
Special topic, problem, figure, or school of thought in philosophy not otherwise covered in the regular courses of the curriculum. Topics vary and reflect special interests of students and faculty. Course description may be obtained in the department office before registration.
Prerequisite: one course in philosophy or Core Studies 10.

## 79 Philosophy Research and Writing

Minimum of 9 hours of conference and independent work§; 3 credits
Intensive study of an area of philosophy. Approved reading, research, and writing assignments, and final examination.
Prerequisite: two courses in philosophy and permission of the instructor and of the chairperson.

## Seminars

### 70.1 Seminar in the History of Philosophy

3 hours and independent work§; 4 credits
A period in history of philosophy, a school of philosophy, or an individual philosopher. Course description may be obtained in the department office before registration.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the chairperson.

### 75.1 Seminar in the Problems of Philosophy

3 hours and independent work§; 4 credits
A philosophical problem or set of connected problems. Course description may be obtained in the department office before registration.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the chairperson.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 84.1, 84.2 Seminar I, II

Minimum of 9 hours conference and independent work§; 3 credits
An advanced problem in philosophy selected by the instructor and students. Thesis or final examination.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the chairperson.

## 84.3, 84.4 Seminar I, II

3 hours; 3 credits
An outstanding philosophic thinker selected by the instructor and students. Thesis or final examination.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the chairperson.

### 84.7 Interdepartmental Humanities Seminar

3 hours; 3 credits
A significant recurrent theme in Western literature and philosophy. Course description may be obtained in the department office before registration. Reports and term paper. Offered jointly by the Departments of Philosophy, Classics, English, and the Comparative Literature Program. This course is the same as Classics 84.7, Comparative Literature 74.7, English 74.7.
Prerequisite: a grade of B or higher in six credits in advanced courses in the major field and permission of the instructors and the chairperson.

### 88.1 Independent Study I

Minimum of 9 hours conference and independent work§; 3 credits
Independent study in a major area of philosophy supervised by a faculty member. Approved reading. Final examination.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the instructor and the chairperson.

### 88.2 Independent Study II

Minimum of 9 hours conference and independent work§; 3 credits
Independent study of an outstanding philosophic thinker or group of related thinkers. Approved reading. Final examination.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the instructor and the chairperson.

## 89 Independent Study for

## Comprehensive Honors Examination

Minimum of 9 hours conference and independent work§; 3 credits
Independent study for a comprehensive examination in the student's major field supervised by a faculty member. Approved reading. Examination.
Prerequisite: completion of a program, approved by the chairperson, of advanced courses in philosophy and permission of the instructor or the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 16.1 Ethical Issues in Biology

25 Theory of Value
47 Philosophy of History
50 Philosophical Foundations in Marxism

## Physical Education and Exercise Science

Department office: 107 Roosevelt Hall
Telephone: 951-5514, 951-5515, 951-5516
Chairperson: Charles Tobey
Deputy Chairperson, CLAS and SGS: Michael Hipscher Deputy Chairperson, Division of Graduate Studies:

## Donald Michielli

Professors: Dunbar, Kleinman, Michielli, Tobey; Associate Professor: Schoenberg;
Assistant Professors: Sgherza, Smith, Yingling; Lecturer: Hipscher.

The Department of Physical Education and Exercise Science offers two degree programs: 1) B.S. in Physical Education with three focus areas (adaptive physical education, exercise science, and recreation) and 2) B.S. degree program for physical education teacher (all grades). The department also offers a minor in physical education.
Students majoring in the Department of Physical Education and Exercise Science must complete the department core requirements and either the requirements of at least one focus area or the degree program in teacher education. Careful course selection may permit the student to meet the requirements in more than one focus area.

## Department core requirements

All majors must complete the following:
a. Physical Education 1, 2, 4.4, 13, 22.71, 22.75, 23, 30, 51, 75.
b. One course in dance chosen from the following: Physical Education 17.11, 17.14, 17.21, 18.11, 18.14, 18.21, 47.1, Dance 9 series, Dance 16 series. Students selecting the Recreation Focus Area must select Physical Education 17.11.
c. Competency in aquatics. Competency may be demonstrated by either of the following:
(i) Completion of any aquatics course number 17.23 or higher or the equivalent.
(ii) Successful completion of the departmental swimming test. Consult the department office for application deadlines, test components, and test administration dates. The test is administered only once per semester.
d. Competency in gymnastics.

Competency may be demonstrated by either of the following:
(i) Completion of Physical Education 1.4.
(ii) Successful completion of the departmental gymnastics test. Consult the department office for application deadlines, test components, and test administration dates. The test is administered only once per semester.

## B.S. degree program in physical education <br> HEGIS code 0835 <br> Department requirements (511/2-63 credits, including the core requirements above)

All of the requirements in at least one of the following focus areas: $A, B$, or $C$.
A. Focus Area: Adaptive Physical Education (for students who plan to work with people who are physically or mentally challenged).

All of the following
a. Physical Education 22.1, 52.1, 52.2, 52.3.
b. At least one course selected from Physical Education 24, 35, 36, 37.
c. At least two courses selected from Physical Education 31.2, 31.3, 31.4, 32.3, 55, 56.
d. At least one course selected from Physical Education 31.1, 32.2, 32.4, 33, 34, 47.1 (if not used to fulfill departmental core dance requirement above), 53, 57.1, 58.
e. At least one additional course selected from the Physical Education series 18 and 19, 31.1, 31.2, 31.3, 31.4, 32.2, $32.3,32.4,33,34,35,36,37,38,47.1,49.2,53,55,56$, 57.1, 58.
f. Psychology 1 or 2.

Department recommendations: Health and Nutrition Sciences 25.1, 32; Physical Education 78; Psychology 20 or 30; Speech 12.
B. Focus Area: Exercise Science (for students who plan to work in areas related to exercise science or fitness).
All of the following:
a. Physical Education 22.2 and 30.1.
b. At least one course selected from Physical Education 31.2, 31.3, 31.4, 32.3, 55, 56.
c. At least one course selected from Physical Education 31.1, 32.2, 32.4, 33, 34, 47.1 (if not used to fulfill departmental core dance requirement above), 53 , 57.1, 58.
d. Health and Nutrition Sciences 29.
e. Physical Education 21 or Psychology 1 or 2.
f. Chemistry 1 or 1.1 and 1.2 , or 5 .*
g. Biology 3 and 4.*
*Completion of the requirements in sections (f) and ( g ) serves as a substitution for Core Studies 7.1 and 8.1, thus reducing the student's college core requirements by 4 credits.

Department recommendations: Individuals completing this program will have met the educational eligibility requirements for certification by the American College of Sports Medicine as a Health/Fitness Instructor, Health/Fitness Director, and Preventive and Rehabilitative Exercise Specialist. Practical experience and written and practical examinations are also required for these certifications. Additionally, this focus area provides a good undergraduate background in exercise science for individuals preparing for graduate work in exercise physiology, medicine, physical and occupational therapy, physician's assistant, and other health-related professions. Students interested in these fields should consult with the college's preprofessional career counselor about courses required for particular programs.
C. Focus Area: Recreation (for students who plan to work in areas related to recreation).
All of the following:
a. Physical Education 7, 16, 20, 22.1, 35, 38, 52.2, 70, 79.1, 79.2.
b. At least two courses selected from Physical Education 31.2, 31.3, 31.4, 32.3, 55, 56.
c. At least two courses selected from Physical Education 31.1, 32.2, 32.4, 33, 34, 47.1 (if not used to fulfill departmental core dance requirement above), 53, 57.1, 58.

Department recommendations: Health and Nutrition Sciences 6.1 and 40; Physical Education 78

## B.S. degree program in adolescence education: <br> physical education teacher (all grades) <br> HEGIS code 0835; SED program code 26746

Department requirements ( $63^{1 / 2}-72$ credits)
School Physical Education (for students who plan to teach physical education, K-12, or coach in New York public schools and obtain New York State teacher certification)

Students must complete the department core requirements (above) and all of the following:
a. Physical Education 22.2, 38.
b. At least one course selected from Physical Education $24,35,36,37$.
c. At least two courses selected from Physical Education 31.2, 31.3, 31.4, 32.3, 55, 56.
d. At least one course selected from Physical Education 31.1, 32.2, 32.4, 33, 34, 47.1 (if not used to fulfill the departmental core dance requirement above), 53, 57.1, 58.
e. At least one course from each of the following groups: (1) Physical Education 17.11, 17.14, 17.21, 18.21. (2) Dance 9 or 16 series. Students may use one of the above courses taken to fulfill the department core requirement in dance to fulfill the requirement of one group.
f. Physical Education 52.1 or 52.3.
g. At least two additional courses selected from the Physical Education series 18 and 19, 31.1, 31.2, 31.3, 31.4, 32.2, 32.3, 32.4, 33, 34, 35, 36, 37, 47.1, 49.2, 52.1, 52.3, 53, 55, 56, 57.1, 58, or from Dance 9, 10, or 16 series (if not used to fulfill the departmental dance requirement); 18.1, 18.2, 74.1, 74.2, 84.1, 84.2, 85.1, 85.2, 86.1, 86.2.
h. Education 16, 34, 64.1, 69, 71.13, and 72.13. Students must have a GPA of 2.50 based on a minimum of 30 credits in liberal arts and sciences to take Education 16 and Education 34; to take Education 64.1 and 69, students must have a GPA of 2.50 in the liberal arts and sciences courses and a 2.75 GPA in Education 16 and Education 34; to take Education 71.13, students must have a 2.75 GPA in liberal arts and sciences courses, a 2.75 GPA in education courses and a 2.75 or higher in courses taken in the Department of Physical Education and Exercise Science, and/or permission of the chairperson of the Department of Physical Education and Exercise Science and the head of Adolescence Education and Special Subjects; to take Education 72.13, students must have a B or better in Education 71.13, a 2.75 GPA in their major and/or the permission of the chairperson of the Department of Physical Education and Exercise Science and the head of Adolescence Education and Special Subjects.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.
Department recommendations: Physical Education 78; Health and Nutrition Sciences 6.1, 12, 29, 35, 39. Students should begin the education sequence in the junior year. Students should complete Physical Education 22.2 before applying for admission to Education 65.13.

## Requirements for a minor in physical education

Physical Education 1 or 2 and a program of 12 credits of advanced courses in physical education, each completed with a grade of C or higher, including at least one course each from a) and b) and c) and d).
a) Physical Education 11, 13, 21, 22.71
b) Physical Education 24, 35, 36, 37
c) Physical Education 52.1, 52.2, 52.3
d) Physical Education 31.1, 31.2, 31.3, 31.4, 32.2, 32.3, 32.4, 33, 47.1, 49.1, 49.2, 53, 55, 56, 57.1, 58.

## Requirements for a minor in exercise science

Physical Education 22.71 or Health and Nutrition Sciences 22.71; Physical Education 22.75; and any two of the following: Physical Education 11, 13, 21, 23, 30, 30.1. Each of these courses must be passed with a grade of C or higher.

## Requirement for readmitted students

Students who are readmitted to Brooklyn College after a term or more of absence must meet the requirements for degrees in effect at the time of readmission.

## Department honors

To qualify for honors in physical education, a major must maintain a scholastic index of at least 3.50 in all advanced work in the major; and satisfactorily complete the following: Physical Education 82 and 83; or Physical Education 82 or 83 plus honors work in an advanced elective in the department. In addition, the student must have the recommendation of the Physical Education Department.

## Division of Graduate Studies

The Department of Physical Education and Exercise Science offers a master of science in physical education with areas of concentration in sports management and the psychosocial aspects of physical activity, a master of science in exercise science and rehabilitation, and a master of science in education program for physical education teacher ( $\mathrm{K}-12$ ). For information, students should consult the department's deputy for graduate study. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
$\dagger$ No more than eight credits in courses in physical education marked ( $\dagger$ ) may be counted toward the bachelor of arts degree by students who are not physical education majors. §Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *0.2 Special Topics in Physical Education and Exercise Science

1 hour; 1 credit
A special topic in physical education or exercise science not covered in the regular curriculum. Topics vary and reflect the interests of students and faculty. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics.

## *0.6 Special Topics in Physical Education Activities

 4 hours; 2 creditsA special topic in activities not covered in the regular curriculum. Topics vary and reflect the interests of students and faculty. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics.

## *1 Philosophical Perspectives of Physical Education

 3 hours; 3 creditsIntroduction to the historical and philosophical development of physical education. (Not open to students who have completed Health and Physical Education (W) 15.)

## * $\dagger 1.4$ Stunts and Gymnastics

3 hours; 11/2 credits
Fundamental techniques and skills in calisthenics, tumbling, and with heavy apparatus.
Prerequisite: candidacy for the B.S. degree with a major in physical education or permission of the chairperson.

## *2 Behavioral Perspectives

2 hours; 2 credits
Effect of movement activity on people as individuals and as members of society. Theoretical examination of sociological and psychological aspects of physical education, sport, and dance.

## * $\dagger$ 4.4 Fundamentals of Physical Conditioning

1 hour lecture, 2 hours activity; 2 credits
Principles of physical conditioning of athletes and nonathletes. Practical experience in the development of fitness, including strength, flexibility, and endurance. Investigation of rationale underlying sound conditioning programs.
Prerequisite: Physical Education 22.75, candidacy for the B.S. degree with a major in physical education, or permission of the instructor.

## *6 The Olympic Games

2 lecture hours; 2 credits
The history, philosophy, ideals, and objectives of the Olympic movement. Training and development of the Olympic athlete. Controversies, politics, and drama surrounding the games from the time of the ancient Greeks to the present. (Not open to students who completed Physical Education 0.1, spring, 1980, or fall, 1980.)

## *8 Theory of Exercise and Fitness

3 hours; 3 credits
Application of principles of fitness and diet to the development of exercise programs with emphasis upon the particular needs of the individual student.
Prerequisite: two semesters of science (biology, chemistry, or physics) at high school or college.

## 11 Movement Perspectives

3 hours; 3 credits
Consideration of various theoretical aspects of physical education, sports, and dance. Theory and practice through movement.

## 13 Motor Learning and Human Performance

 3 hours; 3 creditsFactors that affect the learning and performance of motor skills. Motor-learning principles, motor ability traits, transfer of motor skills, proactive and retroactive inhibition, and motivation.

## * $\dagger 17$ series Fundamental Skills in Movement Activity

 2 hours; 1 creditFundamental techniques and skills in individual and dual sports, team sports, gymnastics, aquatic sports, and rhythmic movement activities. Students may be required to provide equipment or supplies for these courses. (Not open to students who have completed an equivalent course.)
*t17.2 Archery.
*17.3 Badminton.

* 17.7 Fencing.
* 17.8 Field Hockey.
* 17.11 Folk and Square Dance.
* $\dagger 17.12$ Golf.
* $\dagger 17.13$ Gymnastics (women).
* $\dagger 17.14$ Israeli Folk Dance.
* $\dagger 17.19$ Recreational Activities.
* $\dagger 17.20$ Self-defense.
* 17.21 Ballroom Dancing.
* 17.22 Softball.
* $\dagger 17.23$ Swimming.
* $\dagger 17.25$ Tennis.
* 17.26 Track and Field.
* 17.27 Volleyball.
* $\dagger 17.28$ Wall Sports.
* 17.29 Yoga.
* $\dagger 17.33$ Basketball (men).
* 17.35 Body Conditioning.
* 17.38 Soccer.
* $\dagger 17.39$ Touch Football.
${ }^{*}+17.41$ Skiing.
* $\dagger 17.44$ Team Handball.
* $\dagger 17.45$ Aerobics.
* $\dagger 17.46$ Advanced Beginning Swimming

2 hours; 1 credit
Prerequisite: Physical Education 17.23 or a current American Red Cross Beginner Swimmer Certificate or the equivalent.

## $\dagger 18$ series Intermediate Skills in Movement Activity

2 hours; 1 credit
Intermediate techniques and skills in individual and dual sports, team sports, gymnastics, aquatic sports, and rhythmic movement activities. Students may be required to provide equipment or supplies for these courses.
$\dagger 18.2$ Archery.
$\dagger 18.3$ Badminton.
$\dagger 18.7$ Fencing.
$\dagger 18.11$ Folk and Square Dance.
$\dagger 18.14$ Israeli Folk Dance.
$\dagger 18.20$ Self-defense.
$\dagger 18.21$ Social Dance.
$\dagger 18.22$ Softball.
$\dagger 18.23$ Swimming.
$\dagger 18.25$ Tennis.
$\dagger 18.27$ Volleyball.
$\dagger 18.28$ Wall Sports.
$\dagger 18.29$ Yoga.
$\dagger 18.33$ Basketball (men).
$\dagger 18.35$ Body Conditioning.
$\dagger 18.38$ Soccer.
$\dagger 18.44$ Team Handball.
Prerequisite: adequate preparation for the intermediate course. Students should consult the department about preparation required for each activity.

## $\dagger 19$ series Advanced Techniques in Movement Activity

2 hours; 1 credit
Advanced techniques and skills in individual and dual sports, team sports, gymnastics, aquatic sports, and rhythmic movement activities. Students may be required to provide equipment or supplies for these courses.
$\dagger 19.3$ Badminton.
$\dagger 19.7$ Fencing.
$\dagger 19.23$ Swimming.
$\dagger 19.25$ Tennis.
$\dagger 19.27$ Volleyball.
$\dagger 19.28$ Wall Sports.
Prerequisite: adequate preparation for the advanced course. Students should consult the department about preparation required for each activity.

### 22.1 Field Experience I

2 hours; 1 credit
Experience in an area of the student's expressed professional objective in which the student participates and observes behavior in a setting outside the college community. A student who has had community experience in another course, such as Physical Education 70, may ask to be excused. It is recommended that this course be taken in the sophomore year.
Prerequisite: candidacy for a B.S. degree with a major in physical education and sophomore standing.

### 22.2 Field Experience II

2 hours; 1 credit
In-service experience in an area of the student's expressed professional objective, within the college setting. Students should consult a counselor before registration.
Prerequisite: all of the following: candidacy for a B.S. degree with a major in physical education, junior or senior standing, permission of the chairperson, a department average of 2.70 or higher in physical education courses, a scholastic index of 2.00 or higher.

### 22.71 Human Physiology

## 3 hours; 3 credits

Application of physiological concepts to health and life.
The mechanisms and control systems that allow for functional harmony. Systemic approach to the physiology of bone, muscle, nerve, special senses, circulation, respiration, digestion, metabolism, the endocrine glands, and reproduction. This course is the same as Health and Nutrition Sciences 22.71. (Not open to students who are enrolled in or have completed Biology 6.1 or 6.2.)
Prerequisite: one of the following: Biology 1,3, Chemistry 0.4 , 1, 1.5, 5 , Core Studies 7.1, 8.1.

### 22.75 Human Anatomy

3 hours lecture, 2 hours laboratory; 4 credits
Structure of systems in the human body. Macroscopic dissection of a mammalian specimen. (Not open to students who are enrolled in or have completed Biology 6.1 or 6.2 or 24.2 or Health and Physical Education 22.7 or Health Science 22.75.)

## 23 First Aid and Safety

4 hours; 3 credits
Theory and practice of cardiopulmonary resuscitation and first aid. Safety procedures in school and community. Incidence and prevention of accidental injuries. This course is the same as Health and Nutrition Sciences 14. (Not open to students who are enrolled in or have completed Physical Education 44.1, 44.2, or 45.)

## 26 Health Aspects and Techniques for the Athletic Trainer

 3 hours; 3 creditsComprehensive guide for medical and health supervision of school and college sports activities for the athletic trainer and physical educator. Procedures of examining with team physician training, conditioning, reconditioning, evaluating, and treating the athlete. Study of physical examination, legal implications in school athletics, common injuries in sports, health hazards associated with specific sports, and reconditioning the injured athlete.
Prerequisite: Physical Education 22.71 and 22.75 or the equivalent.

## 27 Advanced Athletic Training

2 hours lecture, 2 hours laboratory; 3 credits
Advanced concepts and techniques of athletic training; recognition, evaluation, and management of athletic injuries. Prerequisite: Physical Education 26.

## 30 Physiology of Exercise

2 hours lecture, 2 hours laboratory; 3 credits Physiological factors involved in bodily movement and performance of work. Such phenomena as responsive changes in circulation and respiration coincident with exercise, and adaptation to environmental conditions. Efficiency, physical fitness, coordination, and fatigue.
Prerequisite: Physical Education 22.71 and 22.75 or the equivalent.

## 30W Physiology of Exercise

2 hours lecture; 2 hours laboratory;
1 hour additional writing exercises; 3 credits
Physiological factors involved in bodily movement and performance of work. Such phenomena as responsive changes in circulation and respiration coincident with exercise, and adaptation to environmental conditions. Efficiency, physical fitness, coordination, and fatigue. Writing-intensive section.
Prerequisite: Physical Education 22.71 and 22.75 or the equivalent; English 2.

### 30.1 Exercise Testing and Prescription

2 hours lecture, 2 hours laboratory; 3 credits
Maximal and sub-maximal tests for the evaluation of cardiovascular fitness. Laboratory and field procedures for the measurement of body composition, muscular strength, endurance, and power. Risk assessment and stratification. Interpreting test results and developing exercise prescriptions for healthy adults. Assessing progress.
Prerequisite: Physical Education 4.4, 22.71, 22.75, 30.
Prerequisite or corequisite: Physical Education 75.

## $\dagger 31.2$ Theory and Practice of Basketball

1 hour lecture, 2 hours activity; 2 credits.
Theory and practice of basketball and modified forms of the game. Participation in team formations. Organization and conduct of programs. Coaching techniques.
Prerequisite: Physical Education 17.33 or the equivalent.

## $\dagger 31.3$ Theory and Practice of Football

1 hour lecture, 2 hours activity; 2 credits
Theory and practice of football, six-player football, touch football, and other modified forms of the game. Participation in offensive and defensive formations. Organization and conduct of programs. Techniques of coaching.
Prerequisite: Physical Education 17.39 or the equivalent.

## $\dagger 31.4$ Theory and Practice of Soccer

1 hour lecture, 2 hours activity; 2 credits
Theory and practice of soccer and modified forms of the game. Organization and conduct of programs and games. Techniques of coaching.
Prerequisite: Physical Education 17.38 or the equivalent.

## $\dagger$ 32.2 Theory and Practice of Dual Games

1 hour lecture, 2 hours activity; 2 credits
Theory and practice in tennis and badminton. Participation in planned contests. Organization and conduct of programs. Techniques of coaching.
Prerequisite: Physical Education 15.1; or Physical Education 17.3 and 17.25 ; or the equivalent of the courses.

## $\dagger$ 32.3 Theory and Practice of Baseball

1 hour lecture, 2 hours activity; 2 credits
Theory and practice of baseball, softball, indoor baseball, and related games. Team play, organization and conduct of programs. Techniques of coaching.
Prerequisite: Physical Education 17.22 or the equivalent.

## $\dagger 32.4$ Theory and Practice of Track and Field

1 hour lecture, 2 hours activity; 2 credits
Theory and practice of track and field. Organization and conduct of programs and meets. Techniques of coaching.
Prerequisite: Physical Education 17.26 or the equivalent.

## $\dagger 35$ Group Games

1 hour recitation, 2 hours activity; 2 credits
Group games of low organization adaptable for children of elementary school age. Emphasis on development of skill, techniques, and methods of organizing and conducting such activities.

## $\dagger 38$ Officiating at Team Games

1 hour lecture, 2 hours activity; 2 credits
Principles and practice in rules and regulations of sports. Practice in officiating at intramurals.
Prerequisite: Physical Education 31.2 and 56; or the equivalent.
The following courses, "Emergency Care" and
"Emergency Care Practicum," include the curricular material required by the Department of Health of the State of New York for the preparation of certified Emergency Medical Technicians. Upon successful completion of both classes, and following the attainment of a passing grade on the State Health Department practical examination and final written examination, students will be eligible for certification.

### 44.1 Emergency Care

4 hours; 4 credits
Techniques of emergency medical care considered to be within the responsibility of the emergency medical technician. Prerequisite: certification in cardiopulmonary resuscitation and first aid by one of the following: American Red Cross, American Heart Association, National Safety Council, New York City Regional Emergency Medical Service Council; and department permission.
Corequisite: Physical Education 44.2.

### 44.2 Emergency Care Practicum

4 hours laboratory including supervised practice,
1 hour fieldwork; $2^{11 / 2}$ credits
Development of emergency care skills. Supervised fieldwork in a hospital emergency room.
Prerequisite: certification in cardiopulmonary resuscitation
and first aid by one of the following: American Red Cross, American Heart Association, National Safety Council,New York City Regional Emergency Medical Service Council; and department permission.
Corequisite: Physical Education 44.1.

## 45 Leadership in Emergency Care

2 hours lecture, 2 hours laboratory; 3 credits
Organization and administration of cardiopulmonary resuscitation, automatic external defibrillation (AED), and first aid programs. Analysis and testing of emergency care skills. Fulfills the minimum requirements for American Red Cross instructor certification in cardiopulmonary resuscitation, first aid, and AED courses.
Prerequisite: American Red Cross Certification in CPR, first aid, and AED or Emergency Medical Technician (EMT) certification or the equivalent.

## $\dagger 47.1$ Theory and Practice of Folk Dancing

1 hour lecture, 2 hours activity; 2 credits
Theory and practice of fundamental and traditional folk dance steps and patterns. Techniques for various age groups; integration of cultural background of folk dances of different nations.
Prerequisite: one of the following: Physical Education 17.11, 18.11, 17.14, 18.14, the equivalent of one of these.

### 49.1 Lifeguarding

1 hour recitation, 2 hours activity,
2 hours supervised field experience; 3 credits
Skills and knowledge necessary to provide a safe aquatic environment at a lakefront or pool; entry level requirement for beach lifeguarding. Organizational and administrative practices. Supervised internship as lifeguard at Brooklyn College pool. Students successfully completing this course may be eligible to apply for American Red Cross Lifeguard certification.
Prerequisite: permission of the department chairperson; and a current American Red Cross certificate for first aid and for cardiopulmonary resuscitation; and the ability to swim continuously 500 yards.

### 49.2 Leadership in Aquatics

1 hour recitation, 2 hours activity; 2 credits
Organization and administration of aquatic programs in schools, community centers, and summer camps. Study of standards of safety and sanitation of swimming areas. Analysis and methods of teaching strokes, safety, skills, diving, and lifesaving techniques. Officiating. Fulfills the requirements of the Red Cross water safety instructor's certificate.
Prerequisite: the ability to swim the following strokes: front crawl, breast, side, and elementary back, and the ability to swim continuously 500 yards.

## 51 Applied Anatomy and Kinesiology

3 hours; 3 credits
Mechanical principles of human motion; macroscopic analysis of bones and muscles; joint leverage and limitations; type of muscular contraction and relations of muscular efficiency to posture; analysis of motor activities.
Prerequisite: Physical Education 11 and 22.75 or the equivalent of the courses.

### 52.1 Physical Education for the Emotionally Disturbed and Physically Disabled

## 3 hours; 3 credits

Physically disabling emotional and physical disorders. Special services and programs to aid disabled people in developing their full potential; role of physical education in this development. Principles and methods of adapted physical education.
Prerequisite: one of the following: Physical Education 1, Education 48.1, 58.1, 60.1, permission of the chairperson.

### 52.2 Recreational Therapy

$21 / 2$ hours lecture, 1 hour fieldwork; 3 credits
Overview of recreational therapy programs and services for the disabled. Program planning for schools, institutions, and the community.
Prerequisite: Physical Education 7 or permission of the chairperson.

### 52.3 Activities for the Mentally Retarded

$2^{1 / 2}$ hours lecture, 1 hour fieldwork; 3 credits
Characteristics and needs of people who are mentally retarded. Physical education and recreational activities programs. Methods of teaching basic motor skills and movement perception.
$\dagger 56$ Theory and Practice of Volleyball and Softball 1 hour lecture, 2 hours activity; 2 credits
Theory and practice in volleyball and softball. Techniques of coaching.
Prerequisite: Physical Education 17.22 and 17.27 or the equivalent of the courses.
$\dagger 58$ Theory and Practice of Archery and Fencing 1 hour lecture, 2 hours activity; 2 credits
Theory and practice in archery and fencing. Practice in organizing and conducting these activities. Techniques of coaching.
Prerequisite: Physical Education 15.1; or Physical Education 17.2 and 17.7; or the equivalent of the courses.

## 70 Principles, Materials, and Leadership in Recreation

 2 hours; 2 creditsPrinciples, methods and materials, leadership techniques, areas, and facilities. Their application to recreation and contribution to evaluation of the field.
Prerequisite: sophomore or junior or senior standing.

## 75 Evaluation in Physical Education

3 hours; 3 credits
Elementary statistical techniques applied to tests and measurements. Historical background and evaluation of tests including those designated to measure health attitudes and knowledge, physical fitness, and neuromuscular proficiency. (Not open to students who are enrolled in or have completed Health Science 60.)
Prerequisite: candidacy for a B.S. degree with a major in physical education or permission of the chairperson; and junior or senior standing; and eight credits in advanced courses in the Department of Physical Education.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for the courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 82 Independent Study

6 hours conference and independent work§; 2 credits Independent study and readings in an area of specialization in the profession of physical education. Conferences. Report or term paper.
Prerequisite: senior standing and an index of 3.00 or higher in physical education courses and a scholastic index of 2.50 or higher and permission of the chairperson.

## 83 Directed Research

6 hours conference and independent work§; 2 credits The structuring and completion of a research topic in any area in the field of physical education. Design, test, and evaluation of research data. Report or term paper.
Prerequisite: all of the following: Physical Education 72, senior standing, an index of 3.00 or higher in physical education courses, a scholastic index of 2.70 or higher, permission of the chairperson.

## Dance

9.1, 9.2 Introduction to Modern Dance Technique I

4 hours; 2 credits each term
Introduction to the basic elements of modern dance technique. Dance 9.1 and 9.2 may each be taken twice for credit, but no more than 8 credits can be taken in any combination of Dance 9, 9.1, and 9.2.

## 10.1, 10.2 Introduction to Modern Dance Technique II

 4 hours; 2 credits each termFurther exploration of the elements of modern dance technique. Dance 10.1 and 10.2 may be taken twice each for credit, but no more than 8 credits can be taken in any combination of Dance 10, 10.1, and 10.2.
Prerequisite: Dance 9.1 and 9.2 or the equivalent.

## 84.1, 84.2 Independent Work in Dance

Minimum of 3 hours conference and independent work§; 1 credit each term
Independent work and research in dance, dance production, and dance composition.
Prerequisite: permission of the instructor.

## 85.1, 85.2 Independent Work in Dance

Minimum of 6 hours conference and independent work§;
2 credits each term
Independent work and research in dance, dance production, and dance composition.
Prerequisite: permission of the instructor.
86.1, 86.2 Independent Work in Dance

Minimum of 9 hours conference and independent work§ in dance composition, production, or research;
3 credits each term
Prerequisite: permission of the instructor.

## 90 Seminar in Style Criticism

3 hours; 3 credits
Investigation of principles and influences in dance. Comparative studies of styles and trends. Critical study of selected works. The effect of other arts and cultures on choreography. Independent research. Assigned projects. Prerequisite: permission of the instructor.
Students interested in dance should note that, in addition to the dance courses listed above, the Department of Physical Education and Exercise Science also offers:
17.11: Folk and Square Dance
18.11: Folk and Square Dance
17.14: Israeli Folk Dance
17.21: Ballroom Dancing
18.14: Israeli Folk Dance
47.1: Theory and Practice of Folk Dancing

Students should see the physical education course listings for descriptions.

The following courses are inactive and will be offered only if there is sufficient demand:
0.1 Special Topics in Physical Education and Exercise Science
0.4 Special Topics in Physical Education and Exercise Science
14 Coaching
21 Psychology of Sport and Physical Activity
24 Physical Education in the Elementary School
31.1 Theory and Practice of Combative Sports

34 Swimming and Diving
36 Movement Activities in Early Childhood
37 Skill Activity in the Upper Elementary Grades
55 Theory and Practice of Field Hockey
57.1 Theory and Practice of Wall Sports

72 Research Processes in Physical Education
78 Organization and Administration in Physical Education
Dance 1.3 Survey of Twentieth-Century Dance
Dance 16.1, 16.2 Ballet
Dance 18.1, 18.2 Ethnic Styles in Dance I, II

## Physics

Department office: 3438 Ingersoll Hall
Telephone: 951-5418, 951-5419, 951-5420
Chairperson: Carl M. Shakin
Deputy Chairperson, CLAS: Carl M. Shakin
Deputy Chairperson, SGS: Ming-Kung Liou
Deputy Chairperson, Division of Graduate Studies:
Ming-Kung Liou
Professors: Bond, Celenza, Franco, Krieger, Lesser, Liou, Pollak, Sahni, Schwartz, Shakin, Sobel, Tomkiewicz, Tung; Associate Professor: Miyano;
Assistant Professor: Holden.

## Core curriculum

The Department of Physics participates in the college's core curriculum through Core Studies 7.2.

## Courses for reentering students

A student who has credit for courses in physics at Brooklyn College that are no longer offered and who wants to take additional courses in physics, must consult a department counselor to determine which courses in the present numbering system are equivalent to those for which credit has already been earned.

## Recommendations for prospective physics majors

Prospective physics majors should consult a department counselor prior to registering for the lower-freshman term about the recommended program of study.
Depending on their objectives, students follow one of the sequences of study outlined below.

## B.A. and B.S. degree programs in physics HEGIS code 1902

Sequence for students planning graduate work toward a Ph.D. degree in physics or astronomy.
Department requirements ( $651 / 2$ credits)
To enroll in advanced physics courses, students must earn a grade of C or higher in the physics and mathematics prerequisites of the courses, unless they are excused from this requirement by the chairperson. A student who receives a grade of $D$ in a required physics or mathematics course must consult the chairperson before registering for another physics course. The student is usually advised to repeat the course.
All of the following: Physics $1.5,2.5,10.5,16,18,19,29$, 61.2, 61.5, 62.6, 62.7, 67.1 .

Chemistry 1 and 2.
Computer and Information Science 1.5 or 1.10 or 1.20.
Mathematics 3.3 and 4.3 and 5.3.
Mathematics 13 .
Sequence for students not planning graduate work toward a Ph.D. degree in physics or astronomy
This sequence is intended for premedical and predental students, for students preparing for teaching in secondary school, and for others for whom a broad background in physics is desirable.

Department requirements ( $52-53^{1} / 2$ credits)
To enroll in advanced physics courses, students must earn a grade of C or higher in the physics and mathematics prerequisites of the courses, unless they are excused from this requirement by the chairperson. A student who receives a grade of $D$ in a required physics or mathematics course must consult the chairperson before registering for another physics course. The student is usually advised to repeat the course.
a) Physics 1 or 1.5 ; and 2 or 2.5 .
b) All of the following: Physics $10.2,10.5,18,19,38$ or 39 , 67.1, 76.
c) Two physics courses numbered in the 40 s .
d) Two physics courses numbered between 50 and 65 . With the permission of the chairperson, either Physics 11.3 or 13.3 may be substituted for one of these courses.
e) Chemistry 1 and 2; or Chemistry 1.1, 1.2, and 2.
f) Mathematics 3.3 and 4.3.

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in physics must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Physics Department. These 24 credits must be completed at Brooklyn College with a grade of C or higher in each course.
The following courses may be applied toward the 60 credits in science and mathematics:
A) All courses in the departments of biology, chemistry, computer and information science, geology, mathematics, physics, and psychology.
B) Courses marked with a $(\cdot)$ symbol in the Department of Health and Nutrition Sciences.
C) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3 .
Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2.
Economics 30.2, 30.3, 31.1, 31.2.
Philosophy 13, 33, 42.
Physical Education 22.71, 22.75, 23, 30, 51.
Sociology 77.1.

## B.A. degree program in adolescence education: physics teacher <br> HEGIS code 1902.01; SED program code 26808

The School of Education and the Department of Physics jointly offer a program for students who plan to teach physics in grades 7 through 12. Additional information may be obtained from the School of Education or the Department of Physics. Students should consult a counselor as early as possible to plan their program.
Program requirements ( $73-741 / 2$ credits):
To enroll in advanced physics courses, students must earn a grade of C or higher in the physics and mathematics prerequisites of the courses, unless they are excused from this requirement by the chairperson. A student who receives a grade of $D$ in a required physics or mathematics course must consult the chairperson before registering for another physics course. The student is usually advised to repeat the course.
Students must complete a) through f):
a) Physics *1 or *1.5 and Physics *2 or *2.5.

Prerequisites: For Physics *1: a grade of C or higher in Mathematics 2.9 or 2.92 or in any mathematics course numbered higher than 2.92; or placement in Mathematics 3.3 on the basis of the calculus placement test. Students who think they are insufficiently prepared in problem solving are advised to take Physics 1.1 and 1.2 instead of Physics 1.

For Physics *1.5: as a prerequisite or corequisite Mathematics 4.3 .
For Physics *2: Physics 1 or 1.5 ; or Physics 1.2 with a grade of $C$ or higher.
For Physics *2.5: a grade of $C$ or higher in Physics 1.5 and Mathematics 4.3; as a prerequisite or corequisite:
Mathematics 5.3
b) All of the following: Physics 10.2 (prerequisite: Physics 2 or 2.5); 10.5 (prerequisite: Physics 2.5; or Physics 2 and Mathematics 4.3); Physics 18 (prerequisite: Physics 2 or 2.5); Physics 19 (prerequisite: Physics 18); Physics 38 (prerequisite: Physics 2 or 2.5; Mathematics 3.3); Physics 39 (prerequisite: Physics 2 and Mathematics 3.3, or Physics 2.5); Physics 67.1 (prerequisite: Physics 18; prerequisite or corequisite: Physics 19); Physics 76 (prerequisite: Physics 10.5, 19, and 67.1).
c) Two physics courses numbered in the 40 s .
d) Two physics courses numbered between 50 and 65 . With the permission of the chairperson, either Physics 11.3 or 13.3 may be substituted for one of these courses.
e) Chemistry 1 and 2; or Chemistry 1.1, 1.2, and 2.
f) Mathematics 3.3 and 4.3.

The following pedagogical courses: Education 16, 34, 64.1,
$69,71.04$, and 72.04 . These courses are described in the
"Education" section of this Bulletin. Also consult the "Education" section for specific grade requirements for the degree program for physics teacher.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs.

## Division of Graduate Studies

The Physics Department offers master of arts degree programs in physics and physics teacher (grades 7 through 12). Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Workshops

No credit
Voluntary sessions for students enrolled in Physics 1, 1.5, 2 , and 2.5 who need additional assistance. Emphasis on the solution of problems encountered in these courses.

## *0.11 Introduction to Astronomy

3 hours; 3 credits
Organization of the universe. Time and distance scales. Stars and stellar evolution. Galaxies. The evolutionary universe. Recommended for nonscience majors. (Not open to students who are enrolled in or who have completed Physics 0.6 or 31 or 32.)
Prerequisite: Core Studies 7.2 or its equivalent.

## *0.12 The Search for Life in the Universe

3 hours; 3 credits
The solar system. Exploration of the planets. Life in the solar system. The search for extraterrestrial intelligence.

Interstellar communication and space travel. Recommended for nonscience majors. Physics 0.11 is not a prerequisite for Physics 0.12. (Not open to students who are enrolled in or who have completed Physics 0.6 or 31 or 32.)
Prerequisite: Core Studies 7.2 or its equivalent.

## *1 General Physics I

3 hours lecture, 1 hour recitation, 2 hours laboratory; 5 credits
Introduction to mechanics, heat, and sound. Intended for students interested in the biological sciences, medicine, or dentistry. (Not open to students who are enrolled in or have completed any of the following: Physics 1.1, 1.2, 1.5.)
Prerequisite: a grade of C or higher in Mathematics 2.9 or 2.92 or in any mathematics course numbered higher than 2.92; or placement in Mathematics 3.3 on the basis of the calculus placement test. Students who think they are insufficiently prepared in problem solving are advised to take Physics 1.1 and 1.2 instead of Physics 1.

## *1.1 General Physics IA

3 hours; 2 credits
Introduction to mechanics with more introductory material than is covered in Physics 1. Physics 1.1 and 1.2 constitute a two-term sequence intended for students who are not prepared for Physics 1. (Not open to students who are enrolled in or have completed Physics 0.7 or 1 or 1.5.)
Prerequisite: a grade of C or higher in Mathematics 2.9 or 2.92 or in any mathematics course numbered higher than 2.92; or placement in Mathematics 3.3 on the basis of the calculus placement test.

## *1.2 General Physics IB

4 hours lecture, 2 hours laboratory; 4 credits
Continuation of Physics 1.1 and an introduction to heat and sound. Students who complete this course with a grade of $C$ or higher may register for Physics 2. (Not open to students who are enrolled in or have completed Physics 1 or 1.5.) Prerequisite: a grade of C or higher in Physics 1.1.

## *1.5 General Physics I

3 hours lecture, 1 hour recitation, 2 hours laboratory; 5 credits Introduction to mechanics and heat. Intended for students majoring in the physical sciences or engineering. (Not open to students who are enrolled in or have completed any of the following: Physics 1, 1.1, 1.2.)
Prerequisite or corequisite: Mathematics 4.3.

## *2 General Physics II

3 hours lecture, 1 hour recitation, 2 hours laboratory; 5 credits
Introduction to light, electricity, and modern physics. Intended for students interested in the biological sciences, medicine, or dentistry. (Not open to students who are enrolled in or have completed Physics 2.5.)
Prerequisite: Physics 1 or 1.5 ; or Physics 1.2 with a grade of C or higher.

## *2.3 General Physics and the Computer

3 hours lecture, 3 hours laboratory; 4 credits
Introduction to basic concepts in electricity and magnetism with application to electronics and computer technology. Intended for students majoring in computer and information science.
Prerequisite: a grade of C or higher in Mathematics 2.9 or 2.92 or in any mathematics course numbered higher than 2.92; or placement in Mathematics 3.3 on the basis of the calculus placement test.

## *2.5 General Physics II

3 hours lecture, 1 hour recitation, 2 hours laboratory; 5 credits Introduction to wave phenomena, electricity, and magnetism. Intended for students majoring in the physical sciences or engineering. (Not open to students who are enrolled in or have completed Physics 2.)
Prerequisite: a grade of $C$ or higher in Physics 1.5 and in Mathematics 4.3.
Prerequisite or corequisite: Mathematics 5.3.
To enroll in physics courses not marked (*), students must earn a grade of $C$ or higher in the physics and mathematics prerequisites of such courses unless excused from this requirement by the chairperson.

### 10.5 Introduction to Modern Physics

3 hours; 3 credits
Introduction to modern physics. Intended for students majoring in the physical sciences. (Not open to students who have completed Physics 14.1.)
Prerequisite: Physics 2.5; or Physics 2 and Mathematics 4.3.

### 11.3 Mechanics

4 hours; 4 credits
Vector treatment of static equilibrium of rigid bodies. Static analysis of trusses and other mechanical structures. Vector treatment of kinematics of particles and rigid bodies. Forces and motion. Analysis of rotational motion; moments of inertia. (Not open to students who are enrolled in or have completed Physics 11 or 11.1 or 61.2.)
Prerequisite: Physics 1.5 or permission of the chairperson. Prerequisite or corequisite: Mathematics 5.3.

### 13.3 Electric Circuits

4 hours; 4 credits
Passive and active circuit elements. Voltage, current, and power. Kirchhoff's laws; mesh and node analysis. Thevenin's and Norton's theorems. Source-free and forced RL, RC, and RLC circuits. (Not open to students who are enrolled in or have completed Physics 13 or 13.1 or 61.5 .)
Prerequisite: Physics 2.5.
Prerequisite or corequisite: Mathematics 13.

## 16 Introduction to Theoretical Physics

4 hours; 4 credits
Methods of theoretical physics applied to selected topics in mechanics, thermodynamics, electricity and magnetism, and wave phenomena.
Prerequisite: Physics 2.5.
Prerequisite or corequisite: Mathematics 13.

## 18 Analog Electronics Laboratory

4 hours; 2 credits
Experimental study of basic electrical measurements and instruments. Experiments in analog electronics and uses of electronic equipment.
Prerequisite: Physics 2 or 2.5.

## 19 Digital Electronics Laboratory

3 hours; $11 / 2$ credits
Experiments and design projects in digital electronics.
Prerequisite: Physics 18.

## 39 Physics in Medicine

3 hours; 3 credits
Blood flow. Sound waves and hearing, pulse echo-techniques.
Electrocardiography. Optics of the eye. X-rays, CAT scanning. Nuclear radiation, emission tomography, MRI and PET scanning. Prerequisite: Physics 2 and Mathematics 3.3, or Physics 2.5.

## 51 Topics in Condensed Matter Physics

3 hours; 3 credits
The nature of crystals; diffraction and periodicity; electrical properties of materials; semiconductors and semiconductor devices; interaction of light with solids; LED's and solid-state lasers; superconductivity; surfaces and interfaces.
Prerequisite: Physics 10.5 and 67.1.

### 67.1 Advanced Laboratory I

4 hours; 2 credits
Advanced experiments in optics, electricity, electronics, and in atomic and nuclear physics.
Prerequisite: Physics 18.
Prerequisite or corequisite: Physics 19.

## Seminar

74.1, 74.2 Seminar I, II

3 hours; 3 credits
Group study of topics in physics or in its social, economic, moral, or ethical implications.
Prerequisite: permission of the chairperson.

## 76 Senior Project

6 hours conference and independent work; 2 credits Independent project or set of related projects supervised by a faculty member. Projects may include original design and prototype of lecture demonstration equipment, physics museum display, new equipment or procedures for undergradaute instructional laboratories, or a written thesis. Emphasis on the communication of physics concepts and their application. Presentation of projects at a departmental seminar is required.
Prerequisite: Physics 10.5, 19, and 67.1.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in physics in one term. Permission to register for honors courses is usually given only to superior students in their senior year.

## 83.1, 83.2 Independent Research I, II

Minimum of 9 hours conference and independent work; 3 credits
Independent research supervised by a faculty member. Weekly conference. Thesis or report.
Prerequisite of 83.1: completion of an approved program of advanced Physics Department courses and permission of the instructor and the chairperson.
Prerequisite of 83.2: Physics 83.1 and permission of the instructor and the chairperson.
88.1, 88.2 Independent Study I, II

Minimum of 9 hours conference and independent work; 3 credits
Independent study supervised by a faculty member. Approved reading. Written examination.
Prerequisite of 88.1: completion of an approved program of advanced Physics Department courses and permission of the instructor and the chairperson.
Prerequisite of 88.2: Physics 88.1 and permission of the instructor and the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 0.17 A History of Ideas in Physics

0.3 Energy in a Technological Society
0.6 Survey of the Universe
10.2 Techniques of Experimental Research

29 Electronics
38 Astrophysics and Cosmology
41 Historical and Biographical Studies in Physics
42 Issues in Physics and Society
52 Topics in Nuclear Physics
61.2 Analytical Mechanics
61.5 Electromagnetic Theory
62.6 Atomic Physics and Quantum Mechanics I
62.7 Atomic Physics and Quantum Mechanics II
64.2 Statistical Physics
64.5 Solid-state Physics
67.2 Advanced Laboratory II

## Political Science

Department office: 3413 James Hall
Telephone: 951-5306, 951-5307
Chairperson: Vincent Fuccillo
Deputy Chairperson, CLAS: Sally Bermanzohn
Deputy Chairperson, Division of Graduate Studies:
Mark Ungar
Deputy Chairperson, Worker Education Program:
Immanuel Ness
Professors: Farber, Wilson;
Associate Professors: Bermanzohn, Currah, Fuccillo, London, Ness, Okome, Ungar;
Assistant Professors: Alonso, Robin, Theoharis.

## Core curriculum

The Department of Political Science participates in the college's core curriculum through Core Studies 3 .

## B.A. degree program in political science

HEGIS code 2207
Department requirements (24-27 credits)

1. Political Science *1.51 or *1.7.
2. A total of seven courses chosen from the following fields in political science plus any prerequisite of the courses: American and urban politics; international politics; comparative politics; and political theory and methodology. At least one course must be chosen from each field. Political Science 20.11 and/or 20.12, if completed with a grade of C or higher, may be counted in the field of American and urban politics. With permission of the chairperson, one special topics course chosen from Political Science 60.1 through 60.5 may be substituted for one of the seven courses.
3. One seminar chosen from Political Science 79.11 through 79.52.

## Requirements for a minor in political science

At least 12 credits of advanced electives in political science. Each course must be completed at Brooklyn College with a grade of $C$ or higher. Students are advised to consult with a departmental counselor to plan their minor.

Requirements for an interdisciplinary minor in law and society
Courses in political science presented for this minor may not be counted toward the political science major.
Twelve credits chosen from the courses of two or more departments as specified below. Each course must be completed with a grade of C or higher.
Africana Studies 43, 43.2; Anthropology and Archaeology 34, 35; Classics 34; Political Science 21, 22, 26.2, 45.1; Sociology 43.5, 51.4.

## Department honors

Students who want to qualify for honors in political science must have an average of 3.50 or higher in all political science courses, except Political Science 1.51 or 1.6 or 1.7, and a grade of A - or higher in a seminar. All course work eligible for consideration for department honors must be taken at Brooklyn College.

## B.A. degree program in adolescence education: social studies teacher <br> HEGIS code 2201.01; SED program code 26754

See the "Social Studies" and "Education" sections in this Bulletin.

## Political science concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6) <br> The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in political science must complete at least 30 credits in the Political Science Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

Political Science 1.51 and 1.7.
Twenty-four credits of advanced electives chosen from courses listed in the following five fields. Students must select at least one course from each field.
American and Urban Politics: Political Science 25, 28, 31, 33, 37.1, 37.2, 38, 75.7, 75.8.

International Politics: Political Science 41, 45.2, 46, 76.3, 76.5, 76.6, 76.7.

Comparative Politics: Political Science 48, 49.1, 49.2, 49.3, 49.4, 49.8.

Political Theory and Methodology: Political Science 54, 59, 78.1 .

Seminars: An advanced seminar in political science.
Recommendation for prospective graduate students
Prospective graduate students in political science should develop reading comprehension in at least one foreign language given at the college.

## Division of Graduate Studies

The Political Science Department offers a master of arts degree program in political science. Some courses may be creditable toward the CUNY doctoral degree.
For information, students should consult the department's deputy chairperson for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.
*1.51 Introduction to American Government
3 hours; 3 credits
Fundamental concepts, political principles, processes, and institutions of American government. Topics may include: constitutional foundations, civil liberties, the mass media, public opinion, special interest groups, political parties, elections, the presidency, Congress, and the courts.

## *1.7 Introduction to Politics

3 hours; 3 credits
Introduction to political science and contemporary issues. The concepts and uses of power, the nature and role of the state, the development and politics of identity, political economy, political change, the global financial order. Application to specific countries and problems.

## American and urban politics <br> 21 Law and the Political Process <br> 3 hours; 3 credits

Role of legal concepts in the American political system. Judicial behavior and administration.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 22 The Politics of Criminal Justice

3 hours; 3 credits
Policies, procedures, and institutions in criminal law administration. Operations of the criminal justice system and the political role of the system. Problem of the existence and continued growth of criminal behavior in all segments of American society; relation between a political system and the conduct of its citizens.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 23 Urban Life and Politics

3 hours; 3 credits
Introduction to the major approaches to the field of political science and to the controversies that surround this subject. Principal patterns of cultural, social, economic, and political life in urban settings. Interplay and impact of forces, events, behaviors, and practices that have shaped life in urban areas in the past and continue to do so in the present.
Prerequisite: two of the following courses: Core Studies 3, 4, and 9 , or their equivalents.

## 25 Urban Government and Politics

3 hours; 3 credits
Structure, activities, and problems of contemporary urban government. Changing nature of federal, state, regional, and local relationships. Nature of decision-making process in an urban political environment. New York metropolitan area.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 26.1 Constitutional Law

## 3 hours; 3 credits

Relation of current trends and conflicts in the Supreme Court to the clash of fundamental ideas and values in American society. Cases involving economic issues and policies. Such general subjects as judicial review, jurisdiction and procedure of the court, and judicial recruitment and the nature of the judicial process.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 26.2 Civil Rights and Civil Liberties

3 hours; 3 credits
Relation of current trends and conflicts in the Supreme Court to the clash of fundamental ideas and values in American society. Cases involving civil liberties including such issues as freedom of speech, press, religion, and criminal justice and race relations.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 28 Power in the United States

3 hours; 3 credits
Structure of power of American society and its relation to political ideas, processes, and events at home and abroad. Power in the framework of fundamental technological transformations and worldwide revolutionary tendencies. Viability of the American political system; how it changes. (Not open to students who have completed Political Science 75.3.) Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 31 Women and Politics in the United States

3 hours; 3 credits
Women and politics in the context of the United States of America. Gaining the right to vote; the Equal Rights Amendment; women as political leaders; racial and ethnic diversity of U.S. women; the "gender gap." Policy issues including the feminization of poverty and social welfare.
This course is the same as Women's Studies 39.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 33 The American Presidency

3 hours; 3 credits
Nature and functions of the modern American presidency. Such problems as the selection process and the various roles of the president in the formulation and execution of public policy. (Not open to students who have completed Political Science 35.)
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.
36 United States Congress and the Legislative Process 3 hours; 3 credits
Structure and functions of the American Congress and other legislative bodies and their roles in the formulation and execution of public policy. Their internal organization, bases of power, sources of conflict, processes of operation, and patterns of decision making. (Not open to students who have completed Political Science 35.)
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 37.1 American Political Parties

3 hours; 3 credits
Structures, function, organization, and leadership of American political parties and electoral behavior. (Not open to students who have completed Political Science 37.)
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 37.2 Interest Groups and Money in United States Politics

 3 hours; 3 creditsOrganization and operation of public and private interest groups and their relation to government and political parties. Analysis of urban, national, and transnational groups. Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 37.2W Interest Groups and Money in <br> United States Politics

## 4 hours; 3 credits

Organization and operation of public and private interest groups and their relation to government and political parties. Analysis of urban, national, and transnational groups. Writingintensive section.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7; English 2.

## 38 Racial and Ethnic Politics in the United States

 3 hours; 3 creditsComparative analysis of the politics of racial and ethnic groups in American urban areas. Problems of assimilation and alienation. Direct action and protest movements. Political experience of African Americans and other ethnic groups. Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 39 Political Opinion and Behavior

3 hours; 3 credits
Public opinion and political participation. Political socialization, attitude formation and change, political ideology, and voting behavior. Role of the mass media.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 75.2 Community Power and Politics

3 hours; 3 credits
Nature and distribution of power in American communities.
Power and political change. Discussion of community power literature.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 75.4 Politics of the U.S. Labor Movement

## 3 hours; 3 credits

Examines the root causes of organized labor's decline and the consequences of this decline on working and living conditions, and prospects for labor's revitalization. Analyzes the political economy of labor, labor's influence at the workplace in the representation of workers, labor leadership and democracy, and labor's political influence in politics. Explores community-labor coalition-building efforts with other actors.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 75.7 Politics of New York: Global City

3 hours; 3 credits
Current politics of globalization and its influence on the politics and economy of New York City. Examination of globalization on the political, legal, and regulatory decision-making processes of New York City.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 75.8 Politics and the Media

3 hours; 3 credits
Influence of the media on politics. Topics include the organization of the media, the news function, investigative journalism, campaign advertisements, ethical doctrines, First Amendment issues, and political and editorial policy. (Not open to students who have completed Political Science 78.7.) Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## International politics

## 41 Basic Factors in International Politics

## 3 hours; 3 credits

Identification and analysis of such major theories, approaches, and organizing concepts as power, sovereignty, and national interests. Patterns of action and interaction in the international system. Interstate conflict and management. Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 45.1 International Law

3 hours; 3 credits
Structure, problems, and perspectives of the existing international legal system. Attitudes of Western, communist, and developing countries. Such problems as legal and illegal uses of force, intervention in internal conflict, and nationalization of foreign property. Future of international legal order.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 45.2 International and Regional Organizations

3 hours; 3 credits
Policies, authorities, and problems of international and regional organizations. The United Nations, regional alliances, and trade blocs. Examination of their interactions with contemporary political movements, forces, and interests.
Analysis of their relationship with economic change, globalization, and the nation-state.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 46 United States in World Politics

3 hours; 3 credits
Changing role of the United States in world politics.
Objectives of national strategy. Effect of technology and social revolution on political, military, and economic components of foreign policy.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 76.3 International Politics of Developing Countries

## 3 hours; 3 credits

The Third World in international politics. Relations between the states of Africa and those of Asia and Latin America. (Not open to students who have completed Political Science 43.) Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 76.5 Globalization and International Political Movements

 3 hours; 3 creditsCross-national political and social movements. The changing roles of ideology, religion, culture, ethnicity, and identity in the contemporary world.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 76.6 Political Economy of International Relations

 3 hours; 3 creditsInteraction of economic and political factors in determining international behavior. Impact of economic and political development on the international structure of power. Foreign aid, trade, and investment as instruments of national power. Problems of resources in international politics. Economic and political integration in the international system. The multinational corporation as an international actor.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 76.7 Human Rights and World Politics

3 hours; 3 credits
Study of human rights problems and the international community's approaches to such problems. Examination of the history of human rights, the functioning of human rights organizations and agencies, the relationship between human rights and political systems, and the patterns of rights violations against different ethnic, racial, religious, gender, and other groups.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## Comparative politics

47.1 Comparative Political Systems: Europe 3 hours; 3 credits
Comparative study of political institutions, processes, and behavior in selected West European political systems. (Not open to students who have completed Political Science 11.) Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 47.5 The Soviet and Post-Soviet Political System

 3 hours; 3 creditsHistorical and comparative study of political institutions and processes in the former USSR and its successor states.
Marxist roots of Russian revolution. Causes and consequences of revolutionary degeneration and decline. Nature and contradictions of post-Soviet society.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 48 Politics of Developing Nations

3 hours; 3 credits
Theories of political development and modernization. Comparison of selected political systems in developing countries. Traditional structures, new social forces andelites, political institutions, and performance. African and Asian states. Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 49.1 Latin American Political Systems

3 hours; 3 credits
Political processes and government structures. Diverse capabilities for adaptive decision making and performance in Latin American political systems. (Not open to students who are enrolled in or have completed Political Science 42 or 49 .) Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 49.2 Political Systems of Africa

## 3 hours; 3 credits

Political developments in the African states. Patterns before and after independence. Development of nationalism. Political integration, institution building, one-party systems, role of the military, and protest movements. Problems of regional and African unity. This course is the same as Africana Studies 12.4. (Not open to students who have completed Africana Studies 2.4 or Afro-American Studies 41.)
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 49.3 Politics of the Middle East

3 hours; 3 credits
Comparative analysis of modernization and integration in the Middle East region. Conflict between traditional and radical elements. Issues of stability, social justice, development, and nationalism. Countries studied include the Arab states, Israel, Iran, and Turkey.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 49.4 Political Systems of East Asia

3 hours; 3 credits
Political institutions and processes in China, Japan, and Korea. Social structure, ideology, political leadership, and differing patterns of development.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 49.8 Caribbean Political Systems

3 hours; 3 credits
Comparative approach to the government and politics of the contemporary Caribbean. Major states in the Caribbean: Cuba, Haiti, Dominican Republic, the Commonwealth Caribbean; and selected members of other territories. The political economy of these societies and the growth of mass movements. Foreign policies of various Caribbean states. This course is the same as Africana Studies 17.4.
Prerequisite: one of the following: Core Studies 3; Political Science 1.51, 1.7; Africana Studies 5, 17, 17.3.

### 77.2 Protest and Revolution

3 hours; 3 credits
Comparative study of protest and revolution in industrialized and Third World countries. Political, economic, and social conditions that stimulate protest and revolution. Ideological and organizational characteristics of revolutionary movements.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 77.5 Communist Political Systems

3 hours; 3 credits
Comparative study of the political process in such selected communist countries as China and Cuba, and former communist countries of the Soviet Union and Eastern Europe. General characteristics of communist systems in comparison with noncommunist systems.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## Political theory and methodology

## 50 Ancient and Medieval Political Thought

3 hours; 3 credits
Introduction to Western political thought. Major political theorists from Plato to Machiavelli. The nature of political community, the relationship between divine and political regimes, the beginnings of the shift toward secularism in governing, and the use of ancient Greek works of politics in nineteenth- and twentieth-century U.S. debates about justice.

Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 52 Modern Political Thought

3 hours; 3 credits
Methods and problems of political theory. Works of Hobbes, Locke, Rousseau, Marx, Mill, Nietzsche, and other political theorists of the modern era in the West, beginning with the Reformation in the sixteenth century and ending at the close of the nineteenth century. Freedom, justice, power, authority, and the social contract examined in relation to classical liberal, democratic, utilitarian, and Marxist schools of political thought. Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 53 Contemporary Political Thought

3 hours; 3 credits
Examination of such ideologies as socialism, communism, fascism, and nationalism. Concepts of freedom, justice, power, domination, resistance, and equality. Other contemporary political theories include: feminist, antiracist, postcolonial, pluralist, democratic, and poststructuralist political theory.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 54 American Political Theory

3 hours; 3 credits
Recurring themes and perspectives that characterize the tradition of American political thinking. Issues for discussion and reading selections vary from term to term.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 55 Theory and Methodology in Political Science

 3 hours; 3 creditsVarious approaches to the study of politics considered from a critical perspective. Relationship between theory and method. Various methodological approaches and epistemological issues. Recommended only for majors. (Not open to students who have completed Political Science 15.)
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 56 Survey Research

3 hours; 3 credits
Fundamentals of survey methods. Consideration of research design, measurement problems, sampling, questionnaire construction, interviewing, and data collection.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 57 Statistics in Political Science

3 hours; 3 credits
Descriptive statistics. Introduction to probability theory and inferential statistics. Problems of sampling. Application of statistics to political science. (Not open to students who are enrolled in or have completed any of the following: Business 30.2, Economics 30.2, Sociology 19.1, 20, 20.1, Political Science 12.5, Psychology 40.1, 50, Mathematics 51.1.)

Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## 59 Politics through Literature

## 3 hours; 3 credits

Contribution of literary sources to the study of politics. Political concepts and problems include political obligation, freedom, authority, revolutionary violence, and technology. Application of political criteria rather than aesthetic criteria to works by such authors as Melville, Faulkner, Orwell, Camus, Morrison, Allende, Naipaul, and Marshall.
Prerequisite: Core Studies 3.

### 78.1 Problems in Modern Democracy

3 hours; 3 credits
Intensive examination of problems in the theory and practice of twentieth-century democracy, such as: the problems confronted by mass movements; democratic regimes and societies attempting democratization; and the effects of statist, bureaucratic, and authoritarian social formations on democratic practices.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 78.2 Radical Political Thought

3 hours; 3 credits
Radical political thought, classical and contemporary. Critique of such dominant radical themes as anarchism, the role of violence, the authority of the state, privilege, and libertarianism. Readings from such theorists as Bakunin, Rousseau, Marx, Veblen, Mao, and Marcuse.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 78.3 Gender and Political Theory

3 hours; 3 credits
Analysis of political concepts of identity, power, citizenship, race, nation, and class in relation to gender and sexuality. Examination of the way ideologies of gender are deployed within the political theory tradition. Sameness/difference debate, identifying the forms of gender-based domination and resistance, and antiracist approaches to feminism. This course is the same as Women's Studies 40.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 78.35 African Women and Feminism

3 hours; 3 credits
Women's power, activism, and inequality on the basis of gender in the African continent. Explorations of gender-based inequality and the way African women exercise formal power. African women scholars' and activists' theoretical and practical analyses of feminism and the consequences of such analyses on gender relations in the continent. Theoretical readings and case studies. Course may have a national, regional, or continental focus. This course is the same as Africana Studies 44.9 and Women's Studies 49.
Prerequisite: Core Studies 3 or Core Studies 9, or Political Science 1.51 or 1.7, or Africana Studies 0.12 , or Women's Studies 10.7 or 12, or permission of the chairperson.

### 78.5 Politics and Sexuality

3 hours; 3 credits
Examination of the theory and practice of lesbian, gay, bisexual, and transgender politics. Political analysis of the legal regulation of sexuality and gender, the emergence of modern civil rights movements of sexual minorities, and the discourses of liberation, assimilation, and destabilization deployed in those movements. (This course is the same as Women's Studies 41.)
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7 or permission of the chairperson.

### 78.6 Politics of Fear

3 hours; 3 credits
Examines the role of fear in politics with a focus on the relationships between fear and the state, civil society, the workplace, and other private spheres. Readings from political theory (e.g., Hobbes, Arendt, Foucault), literature (e.g., Brecht, Solzhenitsyn, Kafka), and history. Focus on case studies from the U.S., Latin America, the former Soviet Union, and Nazi Germany.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

### 78.71 Counterrevolution

## 3 hours; 3 credits

Origins and nature of counterrevolutionary thinking and politics. Focuses on counterrevolutionary hostility to progressive politics, whether liberal, democratic, or revolutionary. Examines the role of counterrevolutionary arguments in contemporary American politics.
Prerequisite: Core Studies 3 or Political Science 1.51 or 1.7.

## Special topics

60.1 Special Topics

3 hours; 3 credits
Topics vary from term to term and reflect special interests of students and faculty. Course description may be obtained in the department office before registration.
Prerequisite: Political Science 1.51 or 1.7.

## Seminars

Note: Preregistration for all seminars must take place in the department office.

### 79.11, 79.12 Seminar in American Politics

2 hours and independent work§; 3 credits
Intensive examination of aspects of the American political system. Topics are selected by the instructor and vary from term to term. Course description may be obtained in the department office before registration. Substantial research paper.
Prerequisite: senior standing or permission of the chairperson; and Political Science 1.51 or 1.7.

### 79.21 Seminar in International Politics

2 hours and independent work§; 3 credits
Intensive examination of aspects of international politics. Topics are selected by the instructor and vary from term to term. Course description may be obtained in the department office before registration. Substantial research paper.
Prerequisite: senior standing or permission of the chairperson; and Political Science 1.51 or 1.7.

### 79.31 Seminar in Comparative Politics

2 hours and independent work§; 3 credits
Intensive examination of aspects of comparative politics. Topics are selected by the instructor and vary from term to term. Course description may be obtained in the department office before registration. Substantial research paper.
Prerequisite: senior standing or permission of the chairperson; and Political Science 1.51 or 1.7.

### 79.41 Seminar in Political Theory and Methodology

2 hours and independent work§; 3 credits
Intensive examination of aspects of political theory and methodology. Topics are selected by the instructor and vary from term to term. Course description may be obtained in the department office before registration. Substantial research paper.
Prerequisite: senior standing or permission of the chairperson; and Political Science 1.51 or 1.7.

### 79.51 Seminar in Urban Politics

2 hours and independent work§; 3 credits
Intensive examination of aspects of urban politics. Topics are selected by the instructor and vary from term to term. Course description may be obtained in the department office before registration. Substantial research paper.
Prerequisite: senior standing or permission of the chairperson; and Political Science 1.51 or 1.7.

## Internship courses

### 20.11 New York State Legislature Internship I

4 hours lectures and conferences; 4 credits
Theoretical approaches to public policy development through operation of the state government in a working-learning experience in the state legislature. Course conducted in Albany, New York. Intensive orientation by government officials under direction of program faculty. Forums, readings, and papers on current issues. (Not open to students who have completed Political Science 20.1, 20.2, or 20.3.)
Prerequisite: Political Science 1.51 or 1.7 ; and permission of the chairperson.
Corequisite: Political Science 20.12.

### 20.12 New York State Legislature Internship II

30 hours fieldwork; 8 credits
In-depth experience in the dynamics of actual public policy implementation in state government through direct involvement in legislative process. Course conducted in Albany, New York, and requires a working-learning contract between the student and the legislative sponsor. Weekly 30 -hour internship in legislative office working with staff. Practice and development of interpersonal skills and career goals. On-site evaluation, written assignments, and reports. (Not open to students who have completed Political Science 20.1, 20.2, or 20.3.)

Prerequisite: Political Science 1.51 or 1.7 ; and permission of the chairperson.

### 75.5 Urban Fieldwork I

At least 9 hours fieldwork plus conference and independent work§; 3 credits
Students spend at least nine hours a week in an approved urban-related field assignment. Required paper.
Prerequisite: junior or senior standing or permission of the chairperson.

### 75.6 Urban Fieldwork II

At least 9 hours fieldwork plus conference and independent work§; 3 credits
Students spend at least nine hours a week in an approved urban-related field assignment. Required paper.
Prerequisite: junior or senior standing or permission of the chairperson; and Political Science 75.5.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83.1, 83.2 Independent Research I, II

Minimum of 9 hours of conference and independent work§; 3 credits
Independent research supervised by a faculty member. Approved topic. Fieldwork and library study. Research paper. Not intended primarily for department honors.
Prerequisite: completion of an approved program of advanced Political Science Department courses and permission of the instructor and the chairperson.

## Tutorial courses

91, 92 Tutorial I, II
2 hours; 2 credits
Course content determined jointly by tutor and student.
The following courses are inactive and will be offered only if there is sufficient demand:

## 32 Public Administration in the United States <br> 42 Foreign Policies of the Great Powers

49.5 Government and Politics of Israel
49.6 Government and Politics of Puerto Rico
75.9 Politics and the Environment
76.2 Security and Force in International Relations
78.4 Technology, Politics, and Work

## Psychology

Department office: 5315 James Hall
Telephone: 951-5947, 951-5601
Chairperson: R. Glen Hass
Deputy Chairperson, CLAS: David Owen
Deputy Chairperson, SGS: Alvin Snadowsky
Deputy Chairperson, Division of Graduate Studies:
Benzion Chanowitz
Professors: Abramov, Erdelyi, Hainline, Hass, Kuhlman, Lee, Lepore, Levine, Macmillan, Osman, Owen, Puchkoff, Reber, Romer, Sclafani, Snadowsky;
Associate Professors: Brannon, Chanowitz, Delamater, Grasso, McDonough, McMahan, Sapolsky, Weston; Assistant Professors: Halpert, Kozbelt, Kurylo, Robles-Rodriguez.

## B.A. and B.S. degree programs in psychology HEGIS code 2001

Department requirements (a minimum of 29-31 credits)
All of the following: a) and b) and c) and d) and e).
A) Psychology 1.1, 40.1, and 57.
B) One of the following: Psychology 10 or 20 or 30 or 30.2.
C) One of the following: Psychology 53.1 or 56.1 or 57.1 or 58.1 or 60 or 65.1.
D) Three additional advanced electives in psychology. No more than one of the following courses may be used to satisfy this requirement: Psychology 83.1, 83.2, 83.3, 83.4, 87.1, 87.2, 87.3, 87.4.
E) One additional course in psychology of at least three credits.

Advanced courses are any courses numbered 10 and above except those marked with an asterisk (*).

## Additional requirements for a B.S. degree

Candidates for a B.S. degree with a major in psychology must complete at least 60 credits in science and mathematics; 24 of these 60 credits must be completed in advanced courses in the Psychology Department. These 24 credits must be completed at Brooklyn College with a grade of C- or higher in each course. Specific course requirements for a B.S. degree are described above.

The following courses may be applied toward the 60 credits in science and mathematics:
A) All courses in the departments of biology, chemistry, computer and information science, geology, mathematics, physics, and psychology.
B) Courses marked with a dot ( $\cdot$ ) in the Department of Health and Nutrition Sciences.
C) Anthropology and Archaeology 2.4, 16, 24.1, 26.1, 26.2, 36, 85.3. Core Studies 5, 5.1, 5.2, 7.1, 7.2, 8.1, 8.2. Economics 30.2, 30.3, 31.1, 31.2. Philosophy 13, 33, 42. Physical Education 22.71, 22.75, 23, 30, 51. Sociology 77.1.

## Department recommendations

Prospective psychology majors should consult a department counselor as early as possible. Majors and prospective majors should consult department counselors before each registration to plan individual programs.
Psychology majors are strongly advised to complete the Psychology 57 requirement no later than the lower-senior term. For courses requiring permission of the chairperson as a prerequisite, permission should be obtained before registration.

Psychology concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)
The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in psychology must complete at least 30 credits in the Psychology Department with a grade of C - or higher in each course.

## Concentration requirements:

Psychology 1.1, 10, 20, 30, 22. At least 15 credits chosen from the following: Psychology 13.3, 13.41, 16, 23, 24, 24.5, $29,30.1,32.1$ or $32.2,34.1$ or 34.2, 40.1, 50.2, 53.1, 56.1, 57.1, 65.1, 70.

## Requirements for a minor in psychology

At least 12 credits of advanced electives in psychology with a grade of C - or higher in each course. A minimum of nine of these credits must be completed at Brooklyn College. Psychology minors are urged to consult with departmental counselors to plan an appropriate sequence of courses.

## Requirements for a minor in cognitive science

An interdisciplinary and interdepartmental minor, offered by the Department of Computer and Information Science, the Department of Philosophy, and the Department of Psychology, requiring 12 to 13 credits in advanced electives. All of the following: Philosophy 5, Computer and Information Science 1.5, Psychology 1.1, Psychology 57.1.
One from each of the following groups, a) and b):
a) Philosophy $12.3,26,27,28$, or 42 .
b) Computer and Information Science 32 or 32.1, or Philosophy 29, or Psychology 57.2.

## Recommendation for prospective graduate students

Prospective graduate students in psychology should develop reading comprehension in French, German, or Russian and acquire computer programming skills.

## Division of Graduate Studies

The Psychology Department offers a master of arts degree program in psychology that is the same as the first 30 credits of the CUNY doctoral degree program. For information, students should consult the department's deputy chairperson for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## Introductory-level courses <br> *0.1 Special Topics

3 hours; 3 credits each term
Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice but may not repeat topics. Students and faculty may suggest topics to the chairperson.

## *1.1 Introductory Psychology <br> 3 hours; 3 credits

An introduction to the major facts, principles, methods, and theories of psychology. Topics include the history of psychology, sensory and perceptual processes, learning and cognition, motivation and emotion, psychological development, clinical and abnormal psychology, and biological, social, and personality determinants of behavior. (Not open to students who have taken both Psychology 1 and 2.)

## *4 The American Urban Experience: Psychological Perspectives

3 hours; 3 credits
The influence of gender, ethnicity, race, and social class on manifestations of behavior, cognition, and emotional expression such as language, learning styles, intelligence, personal and group identities, conflicts, and peacemaking in the national urban experience. Social policy implications of the way that psychological research is performed and psychological theories are structured.
Prerequisite: two of the following courses: Core Studies 3, 4, and 9 , or their equivalents.

## *9.1 Fieldwork in Psychology

1 hour seminar, 6 hours fieldwork; 3 credits
Field-based experience in a specified broad area of psychology, complementing theory and research presented in classroom and laboratory-based courses. An initial involvement in some of the broad psychological issues in the specified area and the ways in which a wide variety of workers address these. Readings, journal keeping, and a written project summary required of students. (Students may receive credit for both Psychology 9.1 and 9.2, but only for projects in different broad areas.)
Prerequisite: Psychology 1 or 1.1 or 2, and permission of the instructor.

## Social psychology

*10 Social Psychology
3 hours; 3 credits
Basic concepts and research findings in social psychology. Areas covered include social perception, attitude organization and change, interpersonal processes, group structure and processes, intergroup relations, socialization. (Not open to students who have completed Psychology 31.)
Prerequisite: Psychology 1.1 or 2.

## 12 Introduction to Industrial and Organizational Psychology <br> 3 hours; 3 credits

Major areas of industrial psychology. Topics include personnel selection and placement; work motivation, attitudes, and morale; organizational structure and change; conflict resolution; communication and decision behavior; consumer behavior. (Not open to students who are enrolled in or have completed Psychology 12.1 or 12.2 except with permission of the chairperson.)
Prerequisite: Psychology 10 or 31.

### 12.7 Personnel Management

## 3 hours; 3 credits

Managerial labor policies. Factors affecting productive efficiency and morale of workers. Methods and policies of apprenticeship, recruitment, dismissal, criteria of employee selection, wage payment, and work standards. Problems of monotony and work schedules. Welfare policies. This course is the same as Business 40.3. (Not open to students who have completed Economics 40.3.)
Prerequisite: Economics 10.1 or Psychology 10.

### 13.3 Psychology of Prejudice

3 hours; 3 credits
Prejudice and discrimination from a social psychological perspective. Topics include normality of prejudgment, phenomena of group differences, psychological and sociocultural theories of prejudice and discrimination, effects of discrimination, analyses of current manifestations of prejudice, selected strategies for change.
Prerequisite: Psychology 10 or 31.

### 14.1 Small Groups

3 hours; 3 credits
Detailed survey of small-group interaction. Methods of study, leadership, problem solving, other aspects of group dynamics.
Prerequisite: Psychology 10 or 31.

## 16 Health Psychology

3 hours; 3 credits
Contributions of psychology to the promotion and maintenance of health; prevention and treatment of illness; causes and correlates of health, illness, and related dysfunctions. Evaluations of research about psychological contributions to health. (This course is the same as Health and Nutrition Sciences 30.)
Prerequisite: Psychology 1.1 and at least one of the following: Psychology 10, 30.2, or 65.1 . Students who have completed Health and Nutrition Sciences 6.1 may enroll with permission of the chairperson of the Department of Psychology.

## 19 Seminar in Social Psychology

2 hours and independent work§; 3 credits
Readings and evaluation of current research in selected areas of psychology. (Not open to students who have completed Psychology 79.1.)
Prerequisite: Psychology 10 and permission of the chairperson.

## Developmental psychology <br> *20 Introductory Child Psychology <br> 3 hours; 3 credits

Principal features of the psychological development of children. Lectures, discussions, class period observations. (Not open to students who are enrolled in or have completed Psychology 25 or Education 27.1.)
Prerequisite: Psychology 1.1 or 2.

## *20.1 Special Topics in Developmental Processes

 3 hours; 3 creditsTopics vary from term to term. Course description may be obtained in the department office before registration. Students may take Psychology 20.1 for credit twice, but may not repeat topics.
Prerequisite: Psychology 20 or 25 or Home Economics and Consumer Studies 40.

### 20.5 Psychology of Adolescence

3 hours; 3 credits
Principal features of the psychological development of adolescents. (Not open to students who have completed Education 27.2.)
Prerequisite: Psychology 20 or 25 or Home Economics and Consumer Studies 40.

### 20.6 Psychology of Aging

3 hours; 3 credits
Principal psychological and behavioral changes in the aging process.
Prerequisite: Psychology 20 or 25 or Home Economics and Consumer Studies 40.

## 22 Cognitive Development

3 hours; 3 credits
Theories and experimental evidence relating to development of cognitive processes in children. Language acquisition, perceptual development, symbolic thinking, memory, classification skills, interplay between social and cognitive processes. Independent project.
Prerequisite: Psychology 20 or 25 or Home Economics and Consumer Studies 40.

## 23 Social and Personality Development of Children

 3 hours; 3 creditsOrigins and processes in the development of social behavior and personality in the child.
Prerequisite: Psychology 20 or 25 or Home Economics and Consumer Studies 40.

## 24 Psychology of the Family

3 hours; 3 credits
The family as a psychosocial system; the family life cycle; functional and dysfunctional family interactions and their consequences. Critical review of models of family therapy. Review of empirical evidence and research techniques appropriate to the study of the family.
Prerequisite: one of the following: Psychology 20 or 25 or Home Economics and Consumer Studies 40 or Health and Nutrition Sciences 31; and Psychology 30.

### 24.5 Psychological and Developmental Disorders of Childhood <br> 3 hours; 3 credits

Introduction to the identification, origin, and treatment of psychological and developmental problems and disturbances of early childhood. Topics include developmental crises and neurological and emotional disorders. Focus on family interactions and understanding disability in cultural context. Prerequisite: Psychology 1.1 and either Psychology 20 or 30 or Education 34; or permission of the chairperson.

### 27.1 Field Experience in Child Psychology

1 hour lecture, 6 hours fieldwork; 3 credits
Fieldwork and observation of children in a variety of group settings. (Not open to students who have completed Psychology 27.)
Prerequisite: Psychology 20 and permission of the chairperson.

## 29 Intensive Fieldwork with a Seminar in

## Child Psychology

A total of 15 hours recitation, 60 hours supervised fieldwork, and 135 hours unsupervised fieldwork; 6 credits
Intensive training in work with emotionally disturbed children in a professional residential summer camp setting. Students spend one week in training and nine weeks working over eighty hours weekly with emotionally disturbed or learning disabled children ages seven to fourteen. Close professional supervision, frequent small group discussion, and individual consultation. Seminar topics include: causes, manifestations, diagnosis, treatment alternatives, cultural influences, and career counseling. This course requires
nine weeks in residence at Ramapo-Anchorage Camp in Rhinebeck, New York.
Prerequisite: Psychology 1.1 or 2 and three additional credits in psychology and permission of the instructor.

## Personality and behavior pathology

*30 Abnormal Psychology I
3 hours; 3 credits
Major forms of behavior pathology. Their sociobiologica origins and development and their relationship to personality. (Not open to students who have completed Psychology 28.)
Prerequisite: Psychology 1.1 or 2.

### 30.1 Abnormal Psychology I

3 hours; 3 credits
Intensive study of topics in behavior pathology. Contemporary theory and research. Such areas as models of mental illness, the role of the family in psychopathology, current approaches to etiology and treatment
Prerequisite: Psychology 28 or 30.

## *30.2 Introduction to Personality

 3 hours; 3 creditsFundamental approaches, concepts, research findings in the study of personality. Personality assessment; emotions, motivation, cognition, processes of personality change. (Not open to students who have completed Psychology 9.) Prerequisite: Psychology 1.1 or 2.

### 32.1 Fundamentals of Psychotherapy

3 hours; 3 credits
Critical examination of various psychotherapeutic approaches and study of the basic psychological processes involved. A critique of theory and method including individual, group, and family therapy. Role of insight in behavior change. Objectives of treatment. Rationale of such specific psychotherapeutic techniques as use of interpretation, role of insight in behavior change, role playing.
Prerequisite: Psychology 28 or 30.

### 32.2 The Counseling Process: Theory and Technique

 3 hours; 3 creditsInvestigation of the dynamics of the cooperative relationship between counselor and client; review of the literature on the counseling process; study and demonstration of the techniques of counseling; examination of critical issues in counseling.
Prerequisite: Psychology 30 and 30.2 and permission of the chairperson.

### 33.1 Field Experience in Psychopathology

2 hours lecture, 6 hours supervised fieldwork; 4 credits Application of behavior pathology theory in a clinic or hospital. Prerequisite: Psychology 28 or 30 ; and Psychology 30.1 or 32.1 ; and permission of the chairperson.

### 34.1 Psychological Study of Women

3 hours; 3 credits
Survey of theory and research. Sex roles and stereotypes.
Development of sex differences. Psychological consequences of socialization. Theories of female personality. Ways in which psychotherapists view women. Women's movement as a social psychological phenomenon. (Not open to students who have completed Psychology 8.)
Prerequisite: Psychology 1.1 or 2.

### 34.2 Psychology of Masculinity

3 hours; 3 credits
Socialization and acquisition of the male sex role, gender identity, and sex-role learning; norms and stereotypes of masculinity; physical and hormonal factors; effects of role on mental and physical health.
Prerequisite: Psychology 1.1 or 2 or Health and Nutrition Sciences 35 or Health Science 35.

## 35 Tests and Measurements

3 hours lecture, 4 hours laboratory; 5 credits
Introduction to principles and methods underlying construction and evaluation of psychological tests. Laboratory practice in administration and interpretation of selected tests. (Not open to students who have completed Psychology 52.5.)
Prerequisite: Psychology 28 or 30 ; and Psychology 40.1 or 50.

## 36 Theories of Personality

3 hours; 3 credits
Discussion and critical evaluation of major theories of personality. Related methods of assessment and research. (Not open to students who have completed Psychology 76.) Prerequisite: Psychology 9 or 30 or 30.2; and Psychology 40.1.

### 36.1 Psychoanalysis: Theory and Research

3 hours; 3 credits
Critical examination of the theoretical and empirical foundations of Freud's psychoanalysis. The unconscious, sex and aggression, psychological structure, the mechanisms of defense, "twilight phenomena" (dreams, fantasy, psychological errors, art, wit, symptoms), psychohistory therapy.
Prerequisite: Psychology 9 or 30 or 30.2.

## 37 Hypnosis and Related Phenomena

3 hours; 3 credits
The nature and mechanism of hypnosis and associated phenomena. Altered states of consciousness and related occurrences in daily life. Critical study in context of modern scientific psychology of behavioral, cognitive, and emotive experiences produced by hypnotic procedures. This is not a training course in the practice of hypnosis.
Prerequisite: Psychology 1 or 1.1 or 2.

## Statistics and mathematical psychology

40.1 Statistical Methods in Psychological Research

3 hours lecture, 2 hours laboratory; 4 credits
Basic descriptive and inferential statistics including the elements of experimental design. (Not open to students who are enrolled in or have completed any of the following: Business 30.2, Economics 30.2, Sociology 19.1, 20, 20.1, Political Science 12.5, 57, Psychology 50, Mathematics 51.1.) Prerequisite: Psychology 1 or 1.1 or 2.

## Learning, perceptual, and cognitive processes

*50 Mind, Brain, and Behavior
3 hours; 3 credits
An introductory level course that examines properties of the nervous system that underlie psychological processes. A review will be made of neural anatomy and physiology and the impact of neural chemistry and hormones. Topics include neural systems that mediate sensory and motor systems, learning, memory, emotions, and disorders.
Prerequisite: Psychology 1 or 1.1 or Biology 31 or 34 or Health and Nutrition Sciences 22.71 or Physical Education 22.71 .

### 50.2 Behavior Therapy

## 3 hours; 3 credits

A critical review of that approach to therapy that seeks to change dysfunctional behavior through the systematic application of experimentally derived principles. Topics include the nature of behavior therapy, relaxation and systematic desensitization, assertion training, modeling, contingency management, extinction procedures, aversive procedures, cognitive approaches, ethical considerations in the use of behavior therapy techniques.
Prerequisite: Psychology 1 or 1.1; and 32.1.

### 53.1 Learning

3 hours; 3 credits
Basic principles of animal and human learning as developed through the experimental method. Topics selected from: classical conditioning and instrumental learning; punishment and reward; avoidance and reward omission; extinction; generalization and discrimination; motivation of behavior; verbal learning and transfer; general theories of learning; short and long-term memory; and motivation. (Not open to students who have completed Psychology 72.1.)
Prerequisite: Psychology 1 or 1.1; and 40.1.

## 55 Parapsychology: A Critical Examination

 3 hours; 3 creditsCritical overview of parapsychology including ESP, clairvoyance, telekinesis, and other claims of the paranormal. Emphasis is on the scientific status of such claims and the manner in which they fit or fail to fit within existing scientific psychology.
Prerequisite: Psychology 1 or 1.1 ; and 40.1.

### 56.1 Perception

3 hours; 3 credits
Emphasizes seeing and hearing, how these senses provide us with, and limit our information about, the world, and how sensory messages are integrated into perceptions of real objects and events. Topics include sensory psychophysics, space-perception, movement, illusions, influence of emotional and motivational states, age-related changes, and effects of past experience and perceptual expectations. (Not open to students who have completed Psychology 73.1.)
Prerequisite: Psychology 1 or 1.1.

## 57 Experimental Psychology

2 hours lecture, 4 hours laboratory; 4 credits
Basic principles of experimental psychology and experimental methodology. A variety of specific content areas in psychology, including those within social psychology, learning, perception, and cognitive psychology. Laboratory replication of classic experiments from these content areas. (Not open to students who have completed any of the following pairs of courses: Psychology 18.1 and 18.2; Psychology 53.1 and 53.2; or Psychology 56.1 and 56.2.)
Prerequisite: Psychology 40.1.

### 57.1 Cognitive Psychology

3 hours; 3 credits
Psychology of memory, problem solving, decision making, language, imagery, and other cognitive processes. General overview of the field, including information-processing models, studies of thinking, the question of artificial intelligence, strategies for improving memory, and other similar areas.
Prerequisite: Psychology 1 or 1.1.

### 57.2 Philosophy and Artificial Intelligence

3 hours; 3 credits
Such contemporary issues in philosophy and psychology as the mind-machine analogy, the artificial intelligence model of the human mind, intentionality, representation, consciousness, concept formation, free will, behaviorism, mechanism. Discussion and evaluation of contemporary work in the field. This course is the same as Computer and Information Science 32.1 and as Philosophy 29.
Prerequisite: Core Studies 5 or 5.1 or a course in Computer and Information Science, and Core Studies 10 or a course in philosophy; or permission of the chairperson of the offering department.

### 58.1 Psychology of Language

3 hours; 3 credits
Multidisciplinary approach to the study of language. Contributions of linguists, anthropologists, clinicians, philosophers that have helped reshape how psychologists deal with language.
Prerequisite: Psychology 1 or 1.1.

## Biopsychological processes

60 Comparative Psychology
3 hours; 3 credits
Evolutionary study of animal and human behaviors. Emphasizes psychobiological determinants of behaviors in naturalistic settings. Topics include evolution of behavior, sociobiology, mating systems, aggression, territoriality and population control. (Not open to students who have completed Psychology 41.)
Prerequisite: Psychology 1 or 1.1.

### 60.1 Special Topics in Biopsychology

3 hours; 3 credits
Focus on one of the major areas of comparative or physiological psychology. Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice, but may not repeat topics.
Prerequisite: Psychology 1 or 1.1.

## 64 Human Neuropsychology

3 hours; 3 credits
Examines psychological deficits that result from brain damage, including head injury, stroke, and degenerative disease; includes assessment techniques and recovery mechanisms. Overview and experimental approaches to studying neuroanatomy and localization of function. Includes participation in the evaluation of a simulated neurological case.
Prerequisite: Psychology 1 or 1.1 or Biology 24.1 or 31 or 34 or Health and Nutrition Sciences 22.71 or Physical Education 22.71.

### 65.1 Introduction to Physiological Psychology

 3 hours; 3 creditsNeural and hormonal mechanisms underlying behavior. Sensory processes, motivation, emotion, sexual behavior, sleep, learning, and memory. (Not open to students who have completed Psychology 47 or 48. )
Prerequisite: Psychology 1 or 1.1.

## History, systems, and advanced general psychology

## 70 History of Psychology

## 3 hours; 3 credits

Historical development of contemporary psychology including origin of systematic approaches, structuralism, functionalism; behaviorism, Gestalt psychology, psychoanalysis; philosophy of science as applied to psychological theory. (Not open to students who have completed Psychology 63.)
Prerequisite: Psychology 1 and 2, or 1.1; and 9 credits in advanced psychology courses.

## Honors courses

Students with superior records and the recommendation of an instructor in the department may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term and may not receive credit for more than four honors courses.
83.1, 83.2, 83.3, 83.4 Independent Research I, II, III, IV Minimum of 9 hours conference and independent work§; 3 credits
Faculty-supervised independent research that includes data collection and analysis and/or theoretical work. Weekly conference. Final report must be submitted to the department. Prerequisite: All of the following: Psychology 40.1; six additional credits in advanced Psychology Department courses; Psychology 57, which may be included among the six credits or may be taken as a corequisite; permission of the chairperson.
Prerequisite or corequisite: Psychology 57.
87.1, 87.2, 87.3, 87.4 Fieldwork I, II, III, IV

Minimum of 9 hours conference and independent work§; 3 credits
Independent fieldwork with library research in an area of psychology, approved and supervised by a member of the faculty of the Department of Psychology. Weekly conference. Final report must be submitted to the department.
Prerequisite: A minimum of nine credits in advanced Psychology Department courses including 40.1; and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

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12.1 Psychological Issues in Organizational Theory
12.2 Organizational Diagnosis and Intervention
12.6 Human Factors and Technology
13.2 Interpersonal Perception
13.41 Environmental Psychology
13.5 Interpersonal Power, Conflict, and Strategies
14.2 Practicum in Group Processes
15.2 Field Experience in the Social Psychology of
    the Courtroom
20.9 Human Life Cycle
31.1 Special Topics in Personality and Psychopathology
34 Psychology of Individual Differences
34.5 Psychology of Feelings and Emotions
65.2 Drugs and Behavior
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# Puerto Rican and Latino Studies 

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Fax: 951-4183
Chairperson: Virginia Sánchez-Korrol
Deputy Chairperson, CLAS and SGS: Antonio Nadal
Deputy Chairperson, Division of Graduate Studies:
Antonio Nadal
Professors: Sánchez-Korrol, Stevens-Arroyo;
Associate Professors: Carrasquillo, Pérez y González; Lecturer: Nadal.

## Core curriculum

The Department of Puerto Rican and Latino Studies participates in the college's core curriculum through Core Studies 9

## B.A. degree program in Puerto Rican and Latino studies

 HEGIS code 0308Department requirements
Fulfillment of the college foreign language requirement in Spanish. Knowledge of Spanish as established in an interview with a faculty member of the Puerto Rican and Latino Studies Department. This interview should take place during the junior year.
One of the following: a) or b).
a) Puerto Rican and Latino Studies (27-30 credits)

Five of the following: Puerto Rican and Latino Studies 19, 30.1, 30.2, 55, 74, 77; Anthropology 68 or Puerto Rican and Latino Studies 20.
Two of the following: Puerto Rican and Latino Studies 23, 24, 32, 37, 37.1, 57.2, 78.
Two of the following: Puerto Rican and Latino Studies 14, 14.5, 15.5, 18, 35, 38.
b) Puerto Rican/Latino Studies and Business ( 36 credits) All of the following: Puerto Rican and Latino Studies 23, 24, 55, 74; Business 76.4.
Four of the following: Africana Studies 37.2 or Caribbean Studies 1.1; Puerto Rican and Latino Studies 19, 20 (same as Anthropology and Archaeology 68), 32, 37.1, 75, 78.
Three of the following: Business 50.1, 50.2, 50.7, 50.9.

## Department honors

To qualify for honors in Puerto Rican and Latino studies, a student must complete either Puerto Rican and Latino Studies 65 or 73 with a grade of B or higher and must have an academic index of 3.50 or higher in the major.

## Department recommendations

All Puerto Rican and Latino studies majors should consult the chairperson in planning the sequence of required courses.
For students selecting concentration a: 18 credits in courses in another department chosen in consultation with a department adviser.
For students selecting concentration b: 9 credits in businessoriented elective courses from any department of the college chosen in consultation with a department adviser.

## Requirements for a minor in Puerto Rican and Latino studies

A program of 12 credits in advanced electives in Puerto Rican and Latino studies, including one seminar in the 70s sequence, each completed with a grade of C or higher. Students should confer with a departmental adviser to plan an appropriate sequence of courses.

## B.A. degree program in adolescence education: social studies teacher HEGIS code 2201.01; SED program code 26754

See the "Social Studies" and "Education" sections in this Bulletin.

## Courses in Puerto Rican and Latino studies and

 elementary educationThe School of Education and the Puerto Rican and Latino Studies Department offer courses for majors in the areas of early childhood education, childhood education, and bilingual education. Students interested in teaching Spanish-speaking children may qualify for certification in bilingual education in Spanish by completing the sequence of courses approved and advised by counselors in the School of Education and the Puerto Rican and Latino Studies Department.

Puerto Rican and Latino studies concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in Puerto Rican and Latino studies must complete 30 credits in the Puerto Rican and Latino Studies Department with a grade of C or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

Four of the following courses: Puerto Rican and Latino Studies 19 or 20; 23, 24, 30.1, 30.2, 32.5. Three of the following courses: Puerto Rican and Latino Studies 32, 40, 74, 78. Two of the following courses: Puerto Rican and Latino Studies 14, 16, 18. One of the following courses: Puerto Rican and Latino Studies 35, 38, 77. (Puerto Rican and Latino Studies 38 is the same as Africana Studies 29 and Comparative Literature 38.3.)

## Puerto Rican and Latino studies concentration for majors

 in childhood education (grades 1-6) with an extension of the certificate for bilingual (Spanish/English) educationThe requirements for the teacher education program indicated above are described in the "Education" section of this Bulletin. Students who major in this program must complete 31 credits in the Puerto Rican and Latino Studies Department with a grade of $C$ or higher in each course. Students must meet with a department adviser to declare their intention to complete this sequence.

## Concentration requirements:

Puerto Rican and Latino Studies 41, 42, 43, 44, 45. One of the following courses: Puerto Rican and Latino Studies 14, 16, 18. One of the following courses: Puerto Rican and Latino Studies 23, 24, 40. Puerto Rican and Latino Studies 32 or 78. One of the following courses: Puerto Rican and Latino Studies 35, 38, 77. (Puerto Rican and Latino Studies 38 is the same as Africana Studies 29 and Comparative Literature 38.3.)

## Division of Graduate Studies

The Puerto Rican and Latino Studies Department offers graduate courses for students in other fields. For information, students should consult the department chairperson. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirements in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *1.1 Introduction to Puerto Rican and Latino Studies

 3 hours; 3 creditsSurvey of Puerto Rican and Latino studies. Pertinent themes in Puerto Rican and Latino history, culture, literature, contemporary society, and politics within the CaribbeanU.S.A. context. Impact of the United States's economic policies on the island and the causes of Puerto Rican and Latino migration to urban centers on the continent. Puerto Ricans and other Latinos in New York City.

## Culture and the arts

## 14 Puerto Rican Cultural Patterns

## 3 hours; 3 credits

Cultural antecedents and developmental process of present Puerto Rican culture. Taíno contributions, European and African elements, Puerto Rican folklore and cultural persistence. Perspectives on cultural issues related to colonialism, race, gender, and identity.

### 14.5 Taíno Roots of Contemporary Religion and Culture

 in Puerto Rico and the Caribbean3 hours; 3 credits
Religious artifacts and eco-cultural systems of the original inhabitants of Puerto Rico and Hispaniola, from neolithic times to European colonization. Taíno myths and the principal elements of religion. Indigenous influences in contemporary societies and as a theme of national identity. Women's roles and female iconography.
Prerequisite: Puerto Rican and Latino Studies 1.1 or 14 or Core Studies 9 or Caribbean Studies 1.1

### 15.5 Spiritism and African Religions in Puerto Rican and Other Spanish-speaking Caribbean Societies

3 hours; 3 credits
African heritage as a religious and cultural phenomenon in Puerto Rico. Contemporary Afro-Caribbean folk religions and cults, Espiritismo, Santería, and their effects on Puerto Ricans and other Latinos.
Prerequisite: Puerto Rican and Latino Studies 1.1 or 14 or Core Studies 9 or Caribbean Studies 1.1.

16 Artistic Expression and Symbolism of the Puerto Rican and Latino People
3 hours; 3 credits
Development of artistic expression and symbolism among Puerto Ricans and Latinos. Transformation of identity and folklore to contemporary artistic and media images.
Prerequisite: Puerto Rican and Latino Studies 1.1 or 14 or Core Studies 2.1.

## 18 Music of the Puerto Rican People

3 hours; 3 credits
Survey of folk, popular, classical forms of Puerto Rican music. Influence of Taíno, Spanish, and Afro-Caribbean cultures on these forms. Relationship between Puerto Rican music and folklore. Lectures supplemented with performances, slides, tapes, records.

## Latin America and transnational societies

## 19 Women in Puerto Rican and Latin American Societies

 3 hours; 3 creditsGender roles in different historical periods. Analysis of race, class, ethnicity, and traditional roles prescribed by society and religion. Creative and ethnographic works about women who challenged traditions, social and legal constraints. Current research, issues, and cultural affirmations of contemporary women in education, government, politics, the labor force, and the migration experience. Latinas in the U.S.
Prerequisite: Puerto Rican and Latino Studies 1.1 or Core Studies 3 or 9.

## 20 Latin America

## 3 hours; 3 credits

Pre- and post-Conquest peoples and cultures of Mesoamerica, South America, and the circum-Caribbean; development and decline of the Aztec, Maya, and Inca civilizations; contemporary life in the traditional folk village, Amazon rain forest, and Latin American city. This course is the same as Anthropology 68.
Prerequisite: Core Studies 3 or 9 or permission of the chairperson.

## 23 Borderlands and Homelands in the U.S.

## Mexican Experience

3 hours; 3 credits
Historical antecedents. War with Mexico and the Treaty of Guadalupe Hidalgo, 1848. Early immigration and labor. Effects of the Mexican Revolution and growth of U.S. communities. Depression era, segregation, and deportation. Development of social, civic, and political organization. Bracero programs, migrant workers. Chicano identity and civil rights movement. Artistic expression and its relation to social change.
Prerequisite: Core Studies 3 or 9 .

## 24 Exiles and Entrepreneurs: Cuban Experience in the U.S.

3 hours; 3 credits
Historical antecedents. Spanish-Cuban-American War and the Treaty of Paris, 1898. Early political, cultural, and economic influences. Flourishing of prerevolutionary Tampa, Key West, and New York communities. Major migratory phases following the Cuban Revolution, 1959. Contemporary U.S. communities and their relation to revolutionary Cuba. Political leadership, economic development, and relation to other Latinos. Artistic expression and the forging of a new identity. Entrepreneurship.
Prerequisite: Core Studies 3 or 9 .
28 History of Social Movements in Latin America 3 hours; 3 credits
This course will examine the changing nature of social movements in Latin America from the nineteenth century to the present. Topics include social movements concerning citizenship, religion, unions, feminism, torture, poverty, indigenous rights, and environmentalism. (This course is the same as History 51.7.)
Prerequisite: Puerto Rican and Latino Studies 19 or 20, or Core Studies 9 , or permission of the chairperson.

## History and literature

30.1 History of Puerto Rico to 1815

3 hours; 3 credits
From European contact to 1815. Original inhabitants of Puerto Rico and their encounter with Europeans. First centuries under Spanish rule. Impact of Spain and Africa on Puerto Rican history. Slavery. Primary sources. Critical analysis of class, property, and environment. Pre-enlightenment, the Enlightenment, and Latin American independence.

### 30.2 History of Puerto Rico since 1815

 3 hours; 3 creditsCédula de Gracias. Lares Rebellion of 1868. Politics and repression. Emergence of a Puerto Rican national consciousness reflected in political and social institutions. United States occupation and modification of colonial institutions. Organized labor and social movements. Operation Bootstrap, industrialization, and urbanization of the island under Commonwealth status. Migration and return migration since the 1960s.

## 32 Puerto Rican Communities in the United States: Settlement and Evolution

 3 hours; 3 creditsPuerto Rican migrants in the United States. Community development and representative institutions. Organizational structure, leadership, and Puerto Rican settlement patterns throughout the United States compared with New York. Historical similarities and differences of Puerto Ricans and other groups. Role in larger American society.

### 32.5 Institutions of Urban Life and the Latino Experience

 3 hours; 3 creditsMultidisciplinary perspective on the evolution of Hispanics/Latinos as an urbanized segment of the United States population. Cross-cultural understanding of the diversity among Spanish-speaking people within the urban context. The role of urban institutions in the conflicts between assimilation and cultural preservation, the dynamics of migration, immigration, settlement, and institutionalized participation in the social processes of United States urban life.
Prerequisite: two of the following courses: Core Studies 3, 4, and 9 , or their equivalents.

## 35 Survey of Puerto Rican Literature

## 3 hours; 3 credits

Reading and discussion of literature by renowned Puerto Rican authors writing in Spanish and English.
Prerequisite: Spanish 18 or permission of the chairperson.

### 37.1 Latinos in the Media

3 hours; 3 credits
The images of Latinos in the media. Similarities and differences in the alternative and commercial media. The role of Latinos as image makers. Issues such as immigration, identity, language, gender, and the clash of values between Latino and mainstream North American culture as explored in films, television programs, print media, and advertising.
Prerequisite: Puerto Rican and Latino Studies 1.1 or permission of the chairperson.

## 38 Caribbean Literature

3 hours; 3 credits
Black culture and writings in the Caribbean. Reflections on alienation and independence. Literary liberation movements, Negrism, Indigenism, and Negritude as the first step towards emancipation from a European cultural vision. Writers from the English-, French-, and Spanish-speaking countries will be examined. All readings will be in English. This course is the same as Africana Studies 29 and Comparative Literature 38.3. (Not open to students who have completed Puerto Rican Studies 54.)

## Bilingual (Spanish-English) studies

40 The Puerto Rican, Latino, and Caribbean Child in New York City

## 3 hours; 3 credits

Puerto Rican, Latino, and Caribbean children in contemporary society. Relation of school curricula to their historical background and cultural contributions. Development of identity; knowledge and appreciation of heritage. Examination, use, and evaluation of instructional materials. Concepts, information, and materials necessary for effective work with target population.

## 41 Bilingualism: The Puerto Rican, Caribbean, and Latino Child

3 hours recitation, 2 hours laboratory; 4 credits
Concepts and programs of bilingualism. Their importance and application in working with multiethnic populations. Selected field and laboratory work; study and evaluation of bilingual programs and materials.

## 42 Spanish Language Arts for the Bilingual Child

 3 hours recitation, 2 hours workshop; 4 credits Fundamental concepts of Puerto Rican and other regional language variations and creative literature for prospective bilingual professionals. Language arts applied to the bilingual child. Workshops on community and parental involvement. Assessment models. Course conducted in Spanish.Prerequisite: fluency and proficiency in Spanish demonstrated to the chairperson of the Puerto Rican and Latino Studies Department before registration.

## 43 English as a Second Language for the Language-Minority Child

3 hours recitation, 2 hours workshop; 4 credits
Role of English as a second language for Puerto Rican and other Spanish-speaking children in a bilingual program. Comparative analysis, understanding linguistic concepts, and their application. Workshops related to language patterns of bilingual children. Assessment models.
Prerequisite: Puerto Rican and Latino Studies 41.
44 Historical and Cultural Perspectives: Puerto Rico, Latin America, and the Caribbean
3 hours recitation, 2 hours laboratory; 4 credits History and culture of Puerto Rican, Latino, and other Latin American/Caribbean groups. Preparation of instructional materials and assessment models. Field experience.

## 45 Introduction to Spanish for Prospective

## Bilingual Professionals

3 hours; 3 credits
Varieties of the regional Spanish language in such features as syntax, usage, and pronunciation. Performance and diagnostic assessment.

## Contemporary society-issues and processes <br> 55 Economic Development of Puerto Rico and Migration under Capitalism <br> 3 hours; 3 credits

Colonial basis for the development of capitalism in Puerto Rico in the twentieth century. Key factors stimulating growth and dependency after 1948. Puerto Rican model of economic development. Caribbean migration and diffusion of Puerto Ricans in New York City and other urban areas. Integration of the economics of Puerto Rico and the United States and implications for future policymaking.

## 65 Community Organization and Service to the Puerto

 Rican/Latino Community3 hours lecture, 6 supervised field hours, and independent work§; 6 credits
Basic community organization theory and development of practical skills, including proposal writing, for service to the Puerto Rican/Latino community. Readings, lectures, and examination of case records. Motivation for self-help programs. Contact with internal operations of Puerto Rican/ Latino organizations and appraisal of their varied approaches and techniques. Supervised fieldwork with organizations that serve the Puerto Rican/Latino communities.
Prerequisite: Puerto Rican and Latino Studies 32 or 55, plus one of the following: 57.1,57.2, or 57.3; or permission of the chairperson.

## Seminars

## 70 Special Topics

3 hours; 3 credits
Topics vary from term to term. Course description may be obtained in the department office before registration. Topics may focus upon problems, social institutions, social processes, social organizations of Puerto Ricans in Puerto Rico and the United States or other Latinos in their countries of origin. Students may take this course and Puerto Rican Studies 70.2 at most twice, but may not repeat topics. Prerequisite: completion of an approved program of advanced Puerto Rican studies courses and permission of the chairperson.

## 71 Seminar in the Political, Social, and Economic Status of Puerto Rico <br> 3 hours; 3 credits

Political, social, and economic structures in Puerto Rico that shape the status issue. Analysis of congressional policies. United Nations debate on decolonization. Plebiscites and referenda. Effects of political status in social and economic terms. Role of Puerto Ricans in the U.S. (Not open to students who have taken Puerto Rican and Latino Studies 70.1.)
Prerequisite: Puerto Rican and Latino Studies 30.2 or 55 or permission of the chairperson.

## 73 Summer Seminar

3 hours lecture, 6 hours supervised fieldwork and independent study§; 6 credits
In cooperation with a university or other institution of higher education in Puerto Rico, the United States, the Spanish-speaking Caribbean, or Latin America, the department offers opportunities for advanced work in Puerto Rican or Latino studies. Field trips to places of cultural and historical significance. Lectures by scholars from Brooklyn College and the host country. Independent and/or group research. (Students may take the course for credit twice, with the permission of the chairperson, but may not repeat countries. Consult department for locale of a specific offering. Travel and accommodation fees required.)
Prerequisite: completion of an approved program of Puerto Rican and Latino studies courses and permission of the chairperson.

## 74 Emerging Realities and Alternatives for Puerto Ricans

 and Other Latinos in the United States3 hours; 3 credits
Demographic and political trends of Latinos in the United States and the impact on Puerto Ricans. Education, labor organizations, public services, economic development, political power, and future challenges to Latinos. Alternatives for Puerto Ricans in a Caribbean context and the impact of a change in political status of the island upon Puerto Ricans in the United States.
Prerequisite: Puerto Rican and Latino Studies 1.1 or 32 or 55 or a section of Core Studies 9 discussing Latin America or the Caribbean.

## 75 Research Seminar in Puerto Rican/Latino Studies

 3 hours; 3 creditsApplied research and methodology. Application of advanced course work in Puerto Rican/Latino studies to address community issues pertinent to Latinos. Field placements if appropriate. Research paper.
Prerequisite: completion of an approved program of advanced Puerto Rican and Latino studies courses and permission of the chairperson.

## 77 Puerto Rican and Latino Literature in the

United States
3 hours; 3 credits
Representative literature of Puerto Rican and Latino writers who lived or are living in what is today the United States. Study of chronicles, diaries, autobiographies, and testimonials. The diaspora experience and the cultural affirmation of identity as portrayed in the novel, short stories, drama, and poetry. Prerequisite: Puerto Rican and Latino Studies 1.1, or 3 credits in the department's literature sequence, or another literature course approved by the department chairperson.

## 78 Puerto Ricans and Dominicans: Comparative <br> Perspectives and Contemporary Issues

3 hours; 3 credits
Comparisons of the sociohistorical context of Puerto Ricans and Dominicans from their countries of origin to the United States. Migratory experiences of both groups. Contemporary issues including current demographic data, politics, health, family relations and roles, intermarriage, and identity. (Not open to students who completed Puerto Rican Studies 70.2 in the fall, 1992, or spring, 1994, semester.)
Prerequisite: Puerto Rican and Latino Studies 1.1 or 32 or Core Studies 9.

## Honors courses

88.1, 88.2 Independent Study I, II

Minimum of 9 hours conference and independent work§; 3 credits
Independent study supervised by a faculty member. Approved topic. Periodic conferences. Report.
Prerequisite: completion of an approved program of advanced Puerto Rican and Latino studies courses and permission of the instructor and the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 36.1 Puerto Rican Poetry from the Aguinaldo to the Present

### 36.2 Puerto Rican Narrative

37 Workshop in Puerto Rican and Latino Cinema, Drama, and Theater
56 Government and Politics of Puerto Rico
57.1 Impact of Social Service Systems on the Puerto Rican, African American, and Other Urban Population
57.2 Administration of Justice and the Puerto Rican/ Latino Community
57.3 Behavioral Patterns of Puerto Ricans and Latinos in the United States
58 The Elderly among Puerto Ricans and Other Latinos
72 Seminar in Nationalist Movements of Puerto Rico

## Religion: <br> Program of Studies in Religion

An interdisciplinary dual major
Program offices:
Religion in Society and Culture (RISC), 3231 Boylan Hall;
Sociology Department, 3612 James Hall
Telephones:
RISC, 951-3121;
Sociology, 951-5314, 951-5315, 951-5316
Directors: Egon Mayer, Sociology;
Anthony Stevens-Arroyo, Puerto Rican and
Latino Studies, RISC
Faculty: Acosta, English; Berger, History; Bayoumi, English; Carrasquillo, Puerto Rican and Latino Studies; Flatto, Judaic Studies; Gallagher, History; Gerardi, History (emeritus); Hansen, Classics; Hartmann, English (emeritus); Levy, Philosophy; Leiman, Judaic Studies; Mayer, Sociology; Meyer, History; Pérez y González, Puerto Rican and Latino Studies; Sharman, Anthropology and Archaeology; Stevens-Arroyo, Puerto Rican and Latino Studies; Verbit, Sociology; Wile, Modern Languages and Literatures; Wilson, Classics, and additional faculty from the departments of the college.

## B.A. degree program for studies in religion dual major HEGIS code 1510

Program requirements (21 credits plus a major in a department approved by the program director)
Students must complete 21 credits chosen from the required courses listed below, in addition to completing a primary major in a related field approved by the program director. A dual major may apply up to three credits from his or her primary major toward fulfilling the requirements of the Program of Studies in Religion.
Students must complete parts 1 through 5.

1. Two introductory courses ( 6 credits):

Studies in Religion 1.1
Studies in Religion 1.2.
2. One of the following courses in methodological approaches to religion ( 3 credits), plus any prerequisite of the course:
Anthropology 42
Philosophy 44
Sociology 76.
3. Two of the following courses in the thought, literature, or the arts of religious traditions ( 6 credits), plus any prerequisite of the courses; courses must be chosen from different religious traditions:

Art 11.5
Art 11.6
Classics 15 (This course is the same as Studies in
Religion 16.)
Classics 17
Comparative Literature 33.1
Comparative Literature 36.1
English 31.2
Hebrew 45.1
Judaic Studies 17
Judaic Studies 18.1 or 30
Judaic Studies 18.2 or 31
Judaic Studies 14
Judaic Studies 22 (This course is the same as
Studies in Religion 10.)
Judaic Studies 37 or 41

Philosophy 45
Puerto Rican and Latino Studies 14.5
Puerto Rican and Latino Studies 15.5.
Studies in Religion 10 (This course is the same as Judaic Studies 22.)
Studies in Religion 16 (This course is the same as Classics 15.)
4. One of the following courses in the history of religions
( 3 credits), plus any prerequisite of the course:
Africana Studies 23.1
American Studies 62 (This course is the same as
History 43.11.)
Classics 37
History 21.7
History 22
History 23.3
History 28.3
History 30.2 (This course is the same as
Studies in Religion 19.)
History 43.11 (This course is the same as
American Studies 62.)
Judaic Studies 12
Judaic Studies 13
Studies in Religion 19 (This course is the same as History 30.2.)
5. Seminar in studies in religion:

Studies in Religion 70.
Courses other than those listed, including Studies in Religion 20, may be credited toward requirements 3 and 4 with permission of the program director.
Related courses (partial list):
Anthropology 7.5
Chinese 28
Comparative Literature 6 or 42.1 .

## Requirements for a minor in the program of studies in religion

Fifteen credits from courses listed in the program's offerings, each completed with a grade of C or higher, including either Religion 1.1 or 1.2. Nine or more of these credits must be completed at Brooklyn College. Students should meet with a program director to plan a sequence of courses suited to their individual interests or career plans.

## Program recommendation

Majors should take the introductory courses at an early point in their programs. All major and minor students should meet with the program director to plan a sequence of courses suited to their individual career plans.

## Courses

The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

### 1.1 Religions of the West

3 hours; 3 credits
A consideration of Judaism, Christianity, and Islam in terms of their origins, major beliefs, and practices. Introduction to the concepts of myth, symbol, ritual, and salvation. Relationship of these religions to cultural changes, community life, and individual identity.

### 1.2 Religions of the East

3 hours; 3 credits
Development of Hinduism, Buddhism, Confucianism, and Taoism, with emphasis on origins, teachings, and role in culture. Unique features of Eastern spirituality through comparison with Western religious outlook. History of East-West religious dialogue, especially the influence of Eastern religions on Western thought.

## 10 Job and the Problem of Evil

3 hours; 3 credits
Intensive study of the Book of Job as the primary religious work dealing with suffering and evil. Opinions as to "why bad things happen to good people" will be considered in both ancient and modern works. (Not open to students who completed Studies in Religion 20 in either fall, 1987, or spring, 1989, or Judaic Studies 75.1 in spring, 1989.) This course is the same as Judaic Studies 22.
Prerequisite: Studies in Religion 1.1 or permission of the program director.

## 15 Science and Religion

3 hours; 3 credits
Similarities and differences in the methodologies, sources of knowledge, modes of thought and language employed by science and religion. Survey of traditional areas of conflict. Examination of attempts by scientists and theologians to bring about a commonality of views. (Not open to students who completed Studies in Religion 20 in fall, 1992, or spring, 1994.)

## 16 Greek and Roman Mythology

3 hours; 3 credits
Classical myths and modern theories of mythology. Readings in English translation from the ancient sources. (Not open to students who have completed Classics 6.) This course is the same as Classics 15.
Prerequisite: Studies in Religion 1.1 or 1.2, or permission of the program director.

## 18 Mysticism, Magic, and Ritual in Ancient China

 3 hours, 3 creditsThe history of Daoism, the indigenous religion of China, from ancient times to the fifth century C.E. The roots of Daoism in ancient Chinese shamanism. Early mystical practices such as meditation, spirit journeying, macrobiotic diet, sexual yoga. The classical philosophy of Laozi and Zhuangzi. The political Daoism of the late Warring States and Han. The Daoist rebellions of 184 C.E. Magic and ritual practices of the Daoist church. Medieval Chinese alchemy. This course is the same as History 53.5.
Prerequisite: Core Studies 4 or permission of chairperson.

## 19 Jesus and the Christian Tradition

3 hours; 3 credits
A cultural history of Christianity from the first century to the present; quest for the historical Jesus; images of Jesus in major eras of world history in scripture, theology, literature, art, and music; the place of Christian culture in the history of world civilization. This course is the same as History 30.2. (Not open to students who completed History 28.9B or Studies in Religion 20 in spring, 1990.)
Prerequisite: Studies in Religion 1.1 or Core Studies 4, or permission of the director of the Program of Studies in Religion and/or the chairperson of the Department of History.

## 20 Special Topics in Religion 3 hours; 3 credits

Topics vary from term to term. Course descriptions may be obtained from the program director before registration. Students may take this course for credit twice but may not repeat topics.
Prerequisite or corequisite: Studies in Religion 1.1 or 1.2 or permission of the program director.

## 70 Seminar in Studies in Religion

3 hours; 3 credits
Advanced study of a major theme, problem, or thinker in the field of religion. Topic is selected by the instructor. Course description may be obtained from the program director.

## 83.1, 83.2 Independent Studies I, II

Minimum of 9 hours conference and independent work§; 3 credits
Independent study supervised by a faculty member. Approved reading. Periodic conferences. Final examination or term paper.
Prerequisite: completion of a program approved by the director of the Program of Studies in Religion or related departments; and approval of the instructor.

## SEEK

Department office: 2208 Boylan Hall
Telephone: 951-5738, 951-5739
Chairperson: Martha J. Bell
Deputy Chairperson: Wendy Hall Maloney
Coordinators:
Wendy Hall Maloney, Reading
Jean Marquis, SGS and Writing
Professors: M. Bell, Francis, Kelly, Maloney;
Assistant Professor: Marquis;
Instructor: V. Bell;
Lecturers: Herrera, Karanja, Walters, Watson.
The SEEK Department provides academic support and counseling for students in the SEEK (Search for Education, Elevation, and Knowledge) Program. For further information about the SEEK Department, please see the index.

## Workshops

The Schedule of Classes published each term lists workshops offered.

## Counseling <br> 0.3 Counseling Workshop <br> 2 hours; no credit

Introduction and orientation to college and school policies and procedures. Special emphasis on developing clear understanding regarding the curriculum requirements. Students are instructed in the use of the library's resources, in development of study techniques, and in selection of a major. Placement must be approved by the SEEK Department.

### 0.4 Career Workshop

2 hours; no credit
Designed to introduce the student to the world of work, educational and career planning, sources of occupational and training information, and techniques of assessing the student's own vocational interests, abilities, and values. Students will study thoroughly at least four occupations relevant to their interests and complete an educational plan that is consistent with college requirements and their standard goals. Placement must be approved by the SEEK Department.

## Social Studies Teacher Program

An interdisciplinary major
Program office: 2303 James Hall
Telephone: 951-4807
School of Education social studies coordinator:

## Barbara Winslow

Interdepartmental social studies coordinator: Gastón Alonso, Political Science
Faculty: from the School of Education and the liberal arts departments offering majors in the social studies teacher program.

## B.A. degree program in adolescence education: social studies teacher <br> HEGIS code 2201.01; SED program code 26754

## Program requirements

Students who wish to pursue a bachelor of arts degree in adolescence education for social studies teacher must select a major in Africana studies, American studies, anthropology, economics, history, political science, Puerto Rican and Latino studies, or sociology. (See the appropriate departmental section in this Bulletin for the major requirements.) The program must include-either within the major or in addition to courses in the major-study in economics and government and at least 21 credits in the history and geography of the United States and the world.
Students must also complete the following pedagogical courses: Education 16, 34, 64.1, 69, 71.02, and 72.02. These courses are described in the "Education" section of this Bulletin.
These program requirements meet the revised teacher certification regulations adopted by the New York State Board of Regents in 2000 and replace the requirements that appeared in the 2000-2003 Bulletin for undergraduate programs. Completion of the social studies teacher program leads to the initial teaching certificate for grades 7 through 12; an optional extension is available for grades 5 and 6 . For more information, contact the social studies coordinator in the School of Education.

## Sociology

Department office: 3612 James Hall
Telephone: 951-5314, 951-5315, 951-5316
Chairperson: Egon Mayer
Deputy Chairperson, CLAS: Roberta Satow
Deputy Chairperson, SGS: Alex Vitale
Deputy Chairperson, Division of Graduate Studies:
Egon Mayer
Professors: Lenzer, Mayer, Satow, Silver, Verbit, Zukin; Associate Professors: Fishman, Shortell;
Assistant Professors: Daniel, Vitale.

## Core curriculum

The Department of Sociology participates in the college's core curriculum through Core Studies 3.

## B.A. degree program in sociology <br> HEGIS code 2208

Department requirements (32-37 credits)
All of the following: Sociology 5 or $7 ; 18,19$, and 90 . Sociology 90 is a capstone seminar to be taken in the senior year. Five additional courses from Sociology Department courses numbered 10 and higher. For the purposes of this requirement, Sociology 32.6 and 32.7 count as a single course.
Two courses numbered 10 and higher, plus any prerequisite of the courses, from the following departments: Departments of Anthropology and Archaeology, Economics, History, Political Science, Psychology. The two courses may not be taken in the same department.

## Requirements for a minor in sociology

At least 12 credits in sociology, in courses numbered 10 or higher, with a grade of C - or higher in each course. One seminar course numbered 90 or higher must be included. A minimum of nine of these credits must be completed at Brooklyn College. Sociology minors are urged to consult with departmental counselors to plan an appropriate sequence of courses.

## Requirements for an interdisciplinary minor in consumer behavior

All of the following:
Business 50.2; Business 50.7 or Television and Radio 17; Business 50.9; Sociology 61.4.
Two courses, one chosen from each of two of the following areas:
Area 1: Sociology 40.1, 43.1, 51.5.
Area 2: Business 31.5/Computer and Information Science 3.2, Business 76.4, 80.4.
Area 3: Psychology 10, 12.

## Requirements for an interdisciplinary minor in

 human resource development and management and diversity studiesAll of the following:
Business 40.3 or Psychology 12.7; Business 50.1 or Sociology 43.2 or 43.3 .
Four courses, two chosen from each of the following areas:
Area 1: Psychology 10; Sociology 28, 31.1, 40.1, 51.5, 61.4.
Area 2: Business 50.2, 50.4, 50.5, 50.9; Psychology 12.
Requirements for an interdisciplinary minor in human resource management and diversity studies
All of the following:
Business 40.3 or Psychology 12.7; Business 50.1 or Sociology 43.2 or 43.3 ; Sociology 51.5 and 61.4 .

Two courses, one from each of two of the following three areas:
Area 1: Africana Studies 41, 43.
Area 2: Judaic Studies 17; Women's Studies 12, 36.
Area 3: Puerto Rican and Latino Studies 14, 20, 23, 24, 78.

## Requirements for an interdisciplinary minor in

 criminal justice
## All of the following:

Political Science 21; Sociology 51.4, 91.4.
Two courses chosen from among the following:
Africana Studies 43, 43.2, 43.5.
Anthropology 35.
Philosophy 23, 43.
Political Science 22, 26.2, 45.1, 76.7.
Psychology 65.2
Puerto Rican and Latino Studies 57.2.
Sociology 51.1, 51.3, 51.41.
Each course must be completed with a grade of C+ or higher.

## Requirements for an interdisciplinary minor in law and society

Courses in sociology presented for this minor may not be counted toward the sociology major.
Twelve credits chosen from the courses of two or more departments as specified below. Each course must be completed with a grade of C or higher.
Africana Studies 43, 43.2; Anthropology and Archaeology 34, 35; Classics 34; Political Science 21, 22, 26.2, 45.1; Sociology 43.5, 51.4.
B.A. degree program in adolescence education: social studies teacher
HEGIS code 2201.01; SED program code 26754
See the "Social Studies" and "Education" sections in this Bulletin.

## Sociology concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section in this Bulletin. Students who major in either of these programs and elect a concentration in sociology must complete 30 credits in the Sociology Department with a grade of C or higher in each course. Students must meet with a Sociology Department adviser to declare their intention to complete this concentration. They should also meet with an adviser in the School of Education regarding the appropriate sequence of teacher education courses.
Concentration requirements:
Sociology 5 or 7 . One of the following courses: Sociology 40.1, 40.2,51.5. Two of the following courses: Sociology 26 or $26.4,26.3,27.1,27.2,28,51.4$. Two of the following courses: Sociology 18, 32.4, 40.3 or 40.4, 61.1, 61.4. Three of the following courses: Sociology 32.5, 43.1, 43.2 or 43.3 , $43.5,44,51.5$. One of the following courses: Sociology 90.3 , 90.4, 91.1, 91.2, 91.3, 92.1, 92.4 .

## Division of Graduate Studies

The Sociology Department offers a master of arts degree program in sociology. Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the department chairperson. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *5 Introduction to Sociology

3 hours; 3 credits
Survey of the concepts, methods, theories, and principles with which sociology interprets social behavior. Emphasis on the structure and problems of contemporary society.

## *7 Self and Society

3 hours; 3 credits
The shaping of individual identity and character over the life cycle by social processes and organizations. Social systems approach: theories of Cooley, Mead, Freud, Erikson, Blauner, Horney, Gilligan. Socialization, life cycle, transitions. Social dimensions of identity and personality. (Not open to students who have completed Sociology 31.2 or 50.1.)
Prerequisite: Core Studies 3.

## *9 Contemporary American Society

## 3 hours; 3 credits

The sociology of life in America today, and the social forces or processes which give contemporary American life its unique qualities. Discussion and readings will focus on social realities which affect everyone, such as the experience of working, social class, ethnicity, family life, and male-female relationships.

## 18 Social Theories

3 hours; 3 credits
Development and continuity of theoretical concepts and orientations in sociology; their intellectual and social backgrounds; their implications for social policy. Schools of thought and representative works. (Not open to students who have completed Sociology 72.)
Prerequisite: Sociology 5 or 7.

## 19 Principles of Sociological Research

3 hours; 3 credits
Basic concepts and principles of qualitative and quantitative methodology in sociology and social work. Scope and variety of analyses available in research design. Program evaluation. Analytical basis of research and thought in sociology and social work. Data analysis with statistical software. Introduction to social science literature search tools.
Prerequisite: Sociology 5 or 7 , or permission of the chairperson.

## 20 Practice of Sociological Research

3 hours lecture, 2 hours laboratory; 4 credits
Involvement in ongoing faculty research projects or the department's data archive. Presentation of quantitative and qualitative information. Introduction to the sociological research paper. Data analysis with statistical, spreadsheet, and presentation software.
Prerequisite: Sociology 19.

### 22.1 Special Topics

3 hours; 3 credits
Issues in social theory, social institutions, social and cultural processes, social organization, social policy. Topics vary from term to term. Course description may be obtained in the department office before registration. Students may not repeat topics completed in Sociology 60.1, 60.2, or 60.3.
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 or permission of the chairperson.

## Urban sociology and community studies <br> 26 Urban Sociology <br> 3 hours; 3 credits

Urban and rural communities. Impact of community, social context, ecology on institutions and people. Social structure of the suburbs. Sociological factors of planning in metropolitan areas. (Not open to students who are enrolled in or have completed Sociology 26.4.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 26.1 The Inner City

3 hours; 3 credits
Various approaches in studying the concentration of particular ethnic groups, and poverty in urban areas, and the relation between the inner city and the society around it. Topics include competition, stratification, and segregation in housing and work; community structure; reform of institutions and services. (Not open to students who have completed Sociology 11.1.)
Prerequisite: Core Studies 3 with a grade of B - or higher, or Sociology 5 or 7.

### 26.4 Urban Life and Culture

3 hours; 3 credits
Understanding universal phenomena of urbanization and urbanism through the use of the comparative method with special focus on ordinary community and neighborhood life in cities. Use of classical as well as contemporary theories and methods. Consideration of the similarities and differences of everyday life in ancient through modern cities in a wide variety of technological, economic, political, geographic, and cultural settings. (Not open to students who have completed Sociology 26.)
Prerequisite: two of the following courses: Core Studies 3, 4, and 9 , or their equivalents.

### 27.1 The Community

3 hours; 3 credits
Different meanings of the term "community," underlying assumptions in each, kinds of knowledge acquired through various studies. (Not open to students who have completed Sociology 24.)
Prerequisite: Core Studies 3 with a grade of B - or higher, or Sociology 5 or 7.

## 28 Sociology of the Environment

3 hours; 3 credits
How control over the natural environment affects the exercise of social power, the formation of group identity, and the built environment. Special emphasis on modern urban areas and multicultural issues. Nature and culture in social theory; nature and gender; urbanization, industrialization, and social inequality; social movements for environmental justice.
Prerequisite: one of the following: Core Studies 3, 4, 9, Environmental Studies 1; Sociology 5, 7.

## Social work

## 30 Introduction to Social Work

## 3 hours; 3 credits

Development of social work as a profession; interconnection of theory and practice; generic problem-solving tasks, relationships; code of ethics; fields of practice. (Not open to students who have completed Sociology 30.11.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 32.4 History of Social Welfare

3 hours; 3 credits
Explores the history of social welfare in the United States from the Elizabethan Poor Law to the present. Examines the social, economic, and political underpinnings of the changing definitions of need, responsibility for providing relief, and the right to services. (Not open to students who have completed Sociology 32.11.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 32.5 Current Issues in Social Welfare Policy

3 hours; 3 credits
Traces the evolution of a private trouble to a public issue and the attempts at resolving the issue by means of social policy initiatives. Follows social policy from the legislative stage through the creation of specific service programs. Compares the impact of the services on the lives of individuals with the original objective of the policy. Case studies from work, education, housing, child welfare, health, and mental health. (Not open to students who have completed Sociology 32.11.) Prerequisite: Sociology 32.4.
32.6, 32.7 Social Work Fieldwork I, II

3 hours lecture, 7 hours fieldwork; 5 credits
Students are placed in a social service agency and work directly with clients under supervision; learn generalist practices within different social systems. Field notes, readings, process recordings, and conferences are required. Credit for Sociology 32.6 is received only on completion of Sociology 32.7. Students must register in 32.6 in the fall term and in 32.7 in the spring term. (Sociology 32.6 is not open to students who have completed Sociology 39.11. Sociology 32.7 is not open to students who have completed Sociology 39.12.)
Prerequisite or Corequisite of 32.6: Sociology 30.
Prerequisite of 32.7: Sociology 32.6.

## Social institutions

40.1 The Family

3 hours; 3 credits
Examination of the structure and function of the family and its relationship with such other institutions of the society as religion, the economy, and the political system; family as a unit of interaction. Family types will be compared: the traditional family, the dual-career family, and the single-parent household; alternatives to the family will also be discussed. (Not open to students who have completed Sociology 21.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7, or permission of the chairperson.

### 40.2 Sociology of Children

## 3 hours; 3 credits

Sociological analysis of children and childhood. Historical and cross-cultural differences in attitudes toward children. Socialization processes, the family, peer cultures, education, mass media, children as consumers. Such social problems as social inequality and poverty; divorce, adoption, and foster
care; racial discrimination; differential schooling; children at risk.
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 40.3 Sociology of Generations

## 3 hours; 3 credits

Aging process in industrial and advanced industrial societies. Process of generational discontinuity, its management and consequences. Youth as a source of innovation. Problems of old age in modern society. (Not open to students who have completed Sociology 59.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 40.4 Midlife and After: Aging in America

 3 hours; 3 creditsAging in industrial and preindustrial societies. Age discrimination and the "new aging." Aging as a stage in the life cycle. The changing American family and the aging parent. Leisure, retirement, and social networks. Constraints and adaptation in the later years. Aging: the challenge to individuals and society. (Not open to students who have completed Sociology 22.1, Topic: "Beyond the Youth Culture: Aging in America.")
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7, or permission of the chairperson.

### 43.1 Social Class

3 hours; 3 credits
Formation of social classes. Leading theories of class. Critical examinations of studies of class. Relation of social class to personality development. (Not open to students who have completed Sociology 74.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 43.2 Sociology of Work and Economic Systems

3 hours; 3 credits
Sociological factors in industrial and economic organization. Historical and contemporary ideologies of work and work management. Relationships between economic and social organization in traditional and modern societies. (Not open to students who have completed Sociology 23.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 43.3 Sociology of Occupations

3 hours; 3 credits
Analysis of American occupational structure. Stratification of occupations in the labor market. The power of professions. Individual vocation and career choice. Descriptive studies of occupations. Recent changes in occupational opportunities for college and high school graduates.
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 43.5 Sociology of Law

## 3 hours; 3 credits

Function of law in society. Relationships between social values, conduct, law. Comparison of legal institutions in primitive and modern societies. Laws in the context of family and occupational structure of the United States. Consideration of extent to which legal change can affect established patterns of social behavior. (Not open to students who have completed Sociology 34.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

## 44 Political Sociology

3 hours; 3 credits
Sociological analysis of mass movements. Social structure of political parties. Secret societies and underground movements. Social ideologists in relation to political and economic structure. Utopias and social myths as dynamic concepts. Socialism, anarchism, communism, fascism, nationalism, Pan-Slavism, Pan-Germanism, democracy. (Not open to students who have completed Sociology 75.) Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

## Social issues

### 51.1 Social Problems

3 hours; 3 credits
Problems generated by conflicting demands within the social structure of American society. Discussions and readings about social problems related to crime, work, urban life, race, ethnicity, and business organizations. (Not open to students who have completed Sociology 14.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 51.3 Deviant Behavior

## 3 hours; 3 credits

Sociological theories of deviant behavior including social causation, labeling, stigmatization. Sexual deviance, suicide, alcoholism, drug abuse, juvenile delinquency, counterculture. (Not open to students who have completed Sociology 33.1 or 39.)
Prerequisite: Core Studies 3 with a grade of B - or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 51.4 Criminology

3 hours; 3 credits
Nature and cause of crime; its relationship to social structure. The criminal in society. Approaches to the study of crime and its treatment and prevention. (Not open to students who have completed Sociology 33.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 51.41 Blacks in the American Criminal Justice System

 3 hours; 3 creditsExploration of the relationship between African Americans and the criminal justice system. Sociological theory and methods of collecting and understanding information. Assessment of the political, social, and economic institutions of American society as they frame race, crime, and punishment. Ways that the American criminal justice system has operated to both maintain and ameliorate a racially oppressive society. This course is the same as Africana Studies 43.2.

### 51.5 Female and Male: The Sociology of Gender

 3 hours; 3 creditsRelationships between men and women in America today. Cultural consequences of biological differences. Sexual stereotypes in mass media. Legal position and education of women in comparison with men. Different work opportunities and the problems of combining work and family. Role of minority group women. Movement toward sexual equality. (Not open to students who have completed Sociology 21.6 or 21.7.) Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

## 53 The Social Consequences of Computers

3 hours; 3 credits
Social impact of computers on various groups, subcultures, and institutions. Effect of computer toys on children. Video games, computers in classrooms, "hackers," the world of professional programmers, computers in the workplace, robots, and expert systems. Political and military impact of computers. Issues of privacy and ethics. This course is the same as Computer and Information Science 5.4.
Prerequisite: Core Studies 5 or 5.1, or Computer and Information Science 1.10 or 1.20 or 1.5 ; and Core Studies 3 or Sociology 5.

## 56 Medical Sociology

## 3 hours; 3 credits

Introduction to the social organization of such modern medical institutions as hospitals, clinics, rehabilitation agencies. Social roles of health professionals and their clients. Client-professional relationship in different types of practice. Impact of illness on the patient's life. Problems of medical care in America today.
Prerequisite: Core Studies 3 with a grade of B - or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 56.1 Sociology of Mental IIIness

3 hours; 3 credits
Analysis of mental illness through various sociological perspectives including symbolic interactionalism, labeling theory, and the sociology of knowledge. Organizations and professions in the field of mental health. The community mental health movement, its original goals, and present problems. Treatment ideologies of community mental health centers: those developed to work with people in lower economic brackets and with minorities; those that reflect the stratification of therapists and patients.
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7, and Psychology 30.

## Social change and social conflict

### 61.1 Social Change

3 hours; 3 credits
Continuity and change in society. Changing concept of social change. Theories of social change. Factors and determinants of social change. Problems of planning, inducing, controlling social change. (Not open to students who have completed Sociology 73.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 61.4 Peoples of the United States

## 3 hours; 3 credits

Ethnic and racial makeup of the United States. Regional differences. Characteristic features of dominant and minority cultures. Problems of minority groups; their adjustment to the dominant culture. Concept of cultural pluralism. (Not open to students who have completed Sociology 13.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7.

### 61.5 Collective Behavior

3 hours; 3 credits
Noninstitutionalized forms of group behavior. Social contagion and unrest, crises, disasters. Dynamics of crowds, publics, fads and fashions, social movements, mass society. Consequences of collective behavior for social change and stability. (Not open to students who have completed Sociology 38.)
Prerequisite: Core Studies 3 with a grade of B - or higher, or Sociology 5 or 7 , or permission of the chairperson.

### 61.6 Social Movements

## 3 hours; 3 credits

Study of collective action motivated by political goals. Basic structures of social movements in the U.S. and internationally. Role of leadership, tactics, strategy, resource moibilization, cultural frames, opportunity structures, cycles of protest and reform, interaction with the media, globalization and international diffusion.
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

## Sociology of ideas and religion

76 Sociology of Religion
3 hours; 3 credits
Religion as human behavior, and as a social institution: patterns of belief, ritual, and experience. The organization of religion and its connection to religious ideology. The relationship of religion to secularization, alienation, and other aspects of the contemporary condition. Religion and family, politics, and social class. The changing role of religion in modern society.
Prerequisite: Core Studies 3 with a grade of B - or higher, or Sociology 5 or 7, or permission of the chairperson.

### 77.2 Mass Communications and Mass Media

3 hours; 3 credits
The role of mass media in modern society. The importance of propaganda, public relations, and public opinion; the effects of advertising on everyday life, and the origins of consumer culture; the consequences of violence in TV and film; the reasons for news distortions in print and broadcast journalism. (Not open to students who have completed Sociology 52.)
Prerequisite: Core Studies 3 with a grade of B- or higher, or Sociology 5 or 7 , or permission of the chairperson.

## 78 Arguing in Cyberspace: Sociology of Contentious Discourses <br> 3 hours; 3 credits

Sociological study of polarizing discourses in cyberspace. Belief systems, values, and ideology. emphasis on moral rhetoric in public discourse. Public speech and political participation. Identity formation and social movements. Examination of contemporary examples of hate speech and marginal political views.
Prerequisite: Sociology 19.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83.1, 83.2 Independent Research I, II

Minimum of 9 hours conference and independent work§; 3 credits each term
Independent research supervised by a faculty member. Approved topic. Periodic conferences. Research paper. Not primarily for department honors.
Prerequisite of 83.1: completion of an approved program of advanced Sociology Department courses and permission of the instructor and the chairperson.
Prerequisite of 83.2: Sociology 83.1.

## 84.3, 84.4 Seminar I, II

Minimum 9 hours conference and independent work§; 3 credits each term
Topics vary from term to term. Course description may be obtained in the department office before registration. Topics may include social structure; sociology of professions, work, occupations; sociology of education; sociology of religion; sociology of the military; the community; public welfare; Black people in the United States; collective dynamics; current issues in sociology. Written report or final examination.
Prerequisite of 84.3: completion of an approved program of advanced Sociology Department courses and permission of the chairperson.
Prerequisite of 84.4: Sociology 84.3.

## 87.1, 87.2 Fieldwork I, II

Minimum of 9 hours conference and independent work§; 3 credits each term
Supervised collection, analysis, evaluation of field data.
Final report.
Prerequisite: Sociology 5 or 7; and 18 and 19; and permission of the chairperson.

## Seminars

## 90 Senior Seminar

3 hours and independent work§; 4 credits
Capstone seminar for majors. Topics will vary each semester.
Course description may be obtained in the Sociology Department office prior to registration. Final paper involves empirical research and is written in the style of an academic journal article.
Prerequisite: Sociology 18 and 19 with a combined grade point average of 2.50 or higher in the two; senior status.

## 90.1, 90.2 Seminar in Sociological Theory

2 hours and independent work§; 3 credits each term
Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18.

### 90.3 Seminar in Social Change and Conflict

2 hours and independent work§; 3 credits
Selected topics in social change and conflict. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 61.1 or 61.3 or 61.4 or 61.5 , or permission of the chairperson.

### 90.4 Seminar in Social Issues and Institutions

2 hours and independent work§; 3 credits
Selected topics in social issues and institutions. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics. (Students may not repeat topics completed in Sociology 95.1.)
Prerequisite: Sociology 18 or 19 or 43.1 or 43.2 or 43.3 or 43.5 or 44 or 51.1, or permission of the chairperson.

### 91.1 Seminar in Family Studies

2 hours and independent work§; 3 credits
Selected topics in family studies. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics. Prerequisite: Sociology 18 or 19 or 40.1 , or permission of the chairperson.

### 91.2 Seminar in Gender Studies

2 hours and independent work§; 3 credits
Selected topics in gender studies. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 51.5, or permission of the chairperson.

### 91.3 Seminar in Aging and the Life Cycle

2 hours and independent work§; 3 credits
Selected topics in aging and the life cycle. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 40.3 or 40.4 , or permission of the chairperson.

### 91.4 Seminar in Criminology

2 hours and independent work§; 3 credits
Selected topics in criminology. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 51.4 , or permission of the chairperson.

### 91.5 Seminar in Deviant Behavior

2 hours and independent work§; 3 credits
Selected topics in deviant behavior. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics. Prerequisite: Sociology 18 or 19 or 51.3 , or permission of the chairperson.

### 92.1 Seminar in Community Studies

2 hours and independent work§; 3 credits
Selected topics in community studies. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics. Students may not repeat topics completed in Sociology 93.1 or 93.2.
Prerequisite: Sociology 18 or 19 or 27.1, or permission of the chairperson.

### 92.2 Seminar in the Sociology of Brooklyn

2 hours and independent work§; 3 credits Selected topics in the sociology of Brooklyn designed to use the borough's multiple social worlds as a sociological laboratory. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics. Students may not repeat topics completed in Sociology 93.1 or 93.2.
Prerequisite: Sociology 18 or 19 or 26 or 26.1 or 27.1, or permission of the chairperson.

### 92.3 Seminar in the Sociology of Medicine

2 hours and independent work§; 3 credits
Selected topics in the sociology of medicine. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 56 or 56.1, or permission of the chairperson.

### 92.4 Seminar in Work and Occupations

2 hours and independent work§; 3 credits
Selected topics in work and occupations. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 43.2 or 43.3 , or permission of the chairperson.
92.5 Seminar in Mass Media and Popular Culture 2 hours and independent work§; 3 credits
Selected topics in mass media and popular culture. Topics vary from term to term. Course description may be obtained in the department office before registration. Substantial paper. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Sociology 18 or 19 or 77.2 , or permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:
8 The Sociology of New York City
19.1 Sociological Statistics
19.3, 19.4 Internship in Applied Sociology
26.3 Third World Urbanization
27.2 Sociology of the American Jewish Community
30.1 Sociolinguistics
31.1 Social Interaction
31.11 Human Behavior and the Social Environment I
31.12 Human Behavior and the Social Environment II
32.51 Fieldwork Seminar I
32.52 Fieldwork Seminar II
34.11 Strategies for Organizational Change
35.11 Community Organization and Development
36.11 Social Work with At-Risk Populations
38.11 Social Work Practice I
38.12 Social Work Practice II: Theoretical Paradigms
38.13 Social Work Practice III: Groups
77.1 Sociology of Science

## Speech Communication Arts and Sciences

Department office: 3439 Boylan Hall
Telephone: 951-5225
Chairperson: Timothy Gura
Deputy Chairperson, CLAS and SGS: Shumíng Lu Deputy Chairperson, Division of Graduate Studies: Gail B. Gurland
Professors: Chapey, Cherry, Gura, Gurland, Rubinstein, Silman;
Associate Professor: Emmer;
Assistant Professors: Haas, Longtin, Lu, Marton, Nielsen, Schaeffer.
The Department of Speech Communication Arts and Sciences offers two degree programs: speech, with concentrations in public communication or oral interpretation; and speech-language pathology, audiology, speech and hearing science. The department also offers a minor in speech for students majoring in other areas and a concentration of courses creditable toward programs in teacher education.

## The curriculum

The following list specifies the areas and the courses in each area of the Department of Speech Communication Arts and Sciences curriculum.
Oral interpretation: Speech 1.4, 14.1, 14.2, 14.3, 14.4, 14.5, 24.3, 24.5, 44, 70, 71, 72, 73, 75, 83, 84, 85.

Public communication: Speech 4, 5, 7, 8, 9, 18, 18.5, 19.1, $21,22,23,29,33,33.4,70,71,72,73,75,84,85$.
Speech and hearing science: Speech $13,17.8,17.9,70,71$, 72, 73, 75, 83, 84, 85.
Speech-pathology audiology: Speech 12, 28.1, 28.2, 31, 38.1, $38.3,70,71,72,73,75,83,84,85$.
Speech 3 and 3.2 are fundamentals courses. Speech 10 and 11 are general courses.

## B.A. degree programs in speech

## Department requirements

Speech majors must meet with an adviser before the lowersophomore term. The CLAS department counselor assigns area advisers for CLAS students. SGS students meet with the SGS counselor.
Students may not offer more than six credits for a baccalaureate degree from Speech $70,71,72$, and 73.
The Speech Core consists of the following items, 1 through 4.

1) Speech 8 or 9 or 18.5 or 23 .
2) Speech 13 or 31 .
3) Speech 14.1 or 14.2 or 14.4 .
4) Speech 75 .

Majors must complete the course requirements in one of the following areas: A, or B (I), or B (II).

## A. B.A. degree program in speech-language pathology,

 audiology, speech and hearing science HEGIS code 1220Department requirements (39-41 credits)
Items 1, 3, and 4 of the Speech Core.
All of the following: Speech 13; 17.8 or both 17.4
and 17.6; 17.9, 28.1, 28.2, 31, 38.1, 38.3.
The Speech Communication Arts and Sciences Department Screening Committee may assign students to any of the following: Speech $0.1,3,3.2,10,10.1$.

## B. B.A. degree program in speech HEGIS code 1506

I. Public communication (30 credits)

Items 2, 3, and 4 of the Speech Core.
Speech 4 or 5 or 33.4 or Televison and Radio 6.5.
Speech 7 and either 8 or 9 .
Speech 18 or 18.5, and 19.1.
Speech 23 or 33.
The Speech Communication Arts and Sciences Department Screening Committee may assign students to any of the following: Speech $0.1,3,3.2,10,10.1$.
II. Oral interpretation ( 24 credits)

Items 1, 2, and 4 of the Speech Core.
Fifteen credits chosen from the following: Speech 14.2, 14.3, 14.4, 24.3, 24.5, 44.

The Speech Communication Arts and Sciences Department Screening Committee may assign students to any of the following: Speech $0.1,3,3.2,10,10.1$.

## Accreditation

The American Speech-Language-Hearing Association accepts program A as fulfilling the requirement for undergraduate training.

## Department recommendation

Students should consult the Speech Counseling Guide, which describes each major in detail and may be obtained in the department office.

## Requirements for an optional minor in speech

At least 12 credits in advanced electives in the Speech Communication Arts and Sciences Department with a grade of $C$ or higher. Speech minors are advised to consult with department counselors for recommendations.

## Department honors

To be eligible for department honors, a student must have a grade point average of 3.50 or higher, complete 30 credits in the Speech Communication Arts and Sciences Department, receive a grade of $B$ or higher in Speech 83 or 84 or 85 , and have the recommendation of the Speech Communication Arts and Sciences Department and the Faculty Council Committee on Honors, Citations, and Awards.

## Division of Graduate Studies

The Speech Communication Arts and Sciences Department offers the following degree programs: master of arts in speech, master of science in speech-language pathology, master of science in audiology. The department participates with the School of Education in the following degree programs: master of arts for speech teacher ( $\mathrm{K}-12$ ), master of science in education in the education of the speech and hearing handicapped. Some courses may be creditable toward the CUNY doctoral degree. The programs in speech-language pathology and audiology have been certified by the Education Training Board of the American Speech-Language-Hearing Association.
For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *0.1 Clinic

1 hour; no credit
Remedial, clinical, noncredit work. Individual consultations or carefully selected small groups. This course is usually assigned in the freshman year.
Prerequisite: assignment on the basis of the speech screening interview or a diagnostic interview in the Speech and Hearing Center.

## *1.4 Performing Core Literature

1 hour recitation; 1 credit
Oral interpretation of literature studied in Core Studies 1 and Core Studies 6. (Not open to students who have completed Speech 14.1.)
Corequisite: Core Studies 1 or 6.

## *3 Techniques in Speech Communication

3 hours; 3 credits
Attention to developing speaking skills appropriate to the demands of modern life. Exercise in forms of communication and in voice and diction based on the student's experience.
(Not open to students who are enrolled in or have completed Speech and Theater 2.3 or Speech 3.1 or 3.2. Not open to students who have completed more than five credits in speech.)
Prerequisite: assignment on the basis of the speech screening interview.

## *3.2 Techniques in Speech Communication

## 5 hours; 3 credits

Attention to developing speaking skills appropriate to the demands of modern life. Designed for students with foreign accents. Exercise in forms of communication and in voice and diction. (Not open to students who are enrolled in or have completed Speech and Theater 2.3 or Speech 3 or 3.1. Not open to students who have completed more than five credits in speech.)
Prerequisite: assignment on the basis of the speech screening interview.

## 5 Modern Communication Theories

3 hours; 3 credits
Survey of basic concepts in modern communication: intrapersonal, interpersonal, nonverbal, small group, intercultural, and mass communication.

## 7 Public Speaking

3 hours; 3 credits
Rhetorical principles. Practice in the technique of speech construction and delivery. Manuscript and extemporaneous delivery of several types of speeches.
Prerequisite: completion of course assigned at speech screening interview.

## 8 Fundamentals of Interpersonal Communication

 3 hours; 3 creditsDevelopment of rhetorical competence and awareness of communication strategies in one-to-one settings through readings, lectures, class exercises.
Prerequisite: completion of course assigned at speech screening interview.

## 9 Evaluative Listening for Oral Communication

3 hours; 3 credits
Introduction to theories of listening. Practice in identifying and improving listening skills.
Prerequisite or corequisite: completion of course assigned at speech screening interview.

## 10 Professional Speech

3 hours; 2 credits
Attention to general effectiveness in communication with emphasis on manner of speaking, voice, and diction. Exercises and projects in speaking and reading. For native speakers of American English. (Not open to students who are enrolled in or have completed Speech 10.1. Not open to students who have completed more than five credits in speech.)
Prerequisite: completion of course assigned at speech screening interview.

### 10.1 Professional Speech for Speakers of English as a Second Language

3 hours; 2 credits
Attention to general effectiveness in communication with emphasis on manner of speaking, voice, and diction. Exercises and projects in speaking and reading. For speakers of English as a second language. (Not open to students who are enrolled in or have completed Speech 10. Not open to students who have completed more than five credits in speech.)
Prerequisite: completion of course assigned at speech screening interview.

## *12 Survey of Speech, Language, and Hearing Disorders

 3 hours; 3 creditsSurvey of speech, language, and hearing disorders. Study of the impact of communication disorders on development in order to enable the nonspecialist to work effectively with these children. Consideration of a range of problems, including neurological and physiological disabilities; application to children from culturally and linguistically diverse backgrounds.

## 13 Phonetics

3 hours; 3 credits
Introduction to the science of English sounds and to theories of derivation of present American linguistic usages. Phonetical applications to matters of speech correction and improvement. (Not open to lower freshmen.)
Prerequisite: completion of course assigned at speech screening interview.

### 14.1 Oral Interpretation: Prose

## 3 hours; 3 credits

Fundamental principles of the study of literature through performance. Emphasis on prose forms. (Not open to students who have completed Speech 14.)
Prerequisite: completion of course assigned at speech screening interview.

### 14.2 Oral Interpretation: Poetry

3 hours; 3 credits
Application of basic oral interpretation skills to the analysis and performance of poetry. (Not open to students who have completed Speech 24.)
Prerequisite: Completion of course assigned at speech screening interview.

### 14.4 The Performance of Children's Literature

 3 hours; 3 creditsSpecific performance elements in reading to and with children. (Not open to students who are enrolled in or have completed Speech 14.5.)
Prerequisite: Completion of course assigned at speech screening interview.

### 14.5 The Oral Interpretation of Children's Literature

 3 hours; 3 creditsAn investigation of traditional and contemporary children's literature from various cultures. (Not open to students who are enrolled in or have completed Speech 14.4.)
Prerequisite: completion of course assigned at speech screening interview.

### 17.8 Speech-Language and Hearing Science: Anatomy and Physiology

4 hours; 4 credits
An overview of the speech-language and hearing mechanisms; their anatomical relationships and physiological processes. (Not open to students who have completed both Speech 17.4 and 17.6.)
Prerequisite: Completion of course assigned at speech screening interview.

### 17.9 Speech-Language and Hearing Science: Acoustics

 4 hours; 4 creditsIntroduction to acoustical and mechanical analysis of the speech mechanisms. Applications to research and practice in speech pathology, speech perception, experimental phonetics, audiology, auditory rehabilitation, and psychoacoustics. Experience with relevant instrumentation. (Not open to students who have taken Speech and Theater 17.1 or Speech 17.5 or 17.7.)

Prerequisite: Speech 13.

## 18 Group Discussion of Social Problems

## 3 hours; 3 credits

Nature and operation of discussion groups. Use of evidence, reasoning, reflective thinking, group interrelations, leadership, and decision making.
Prerequisite: completion of course assigned at speech screening interview.

### 18.5 Intercultural Communication: Speech Community

 Perspectives3 hours; 3 credits
Description and analysis of differences in speech patterns, codes, norms, and meanings as they affect intercultural communication between individuals of different cultural and ethnic backgrounds. Improvement of skills for effective communication in intercultural contacts. (Not open to students who completed Speech 60 in the Spring 1998 or Fall 1998 semester.)
Prerequisite: completion of course assigned at speech screening interview, or permission of the chairperson.

### 19.1 Argumentation

3 hours; 3 credits
Principles and practice of convincing by means of logical proof. Logical analysis, identification of issues, briefing, and types of evidence.
Prerequisite: Speech 7 or permission of the chairperson.

## *22 Parliamentary Procedure

1 hour; 1 credit
Study and practice in the rules of parliamentary procedure.
Prerequisite: sophomore or junior or senior standing.

## 23 Interpersonal Communication for Business and Professions

3 hours; 3 credits
Analysis and application of speech communication skills to the workplace for the purpose of increasing entry-level and career-related competencies. (Not open to freshmen or to students who have completed Speech 60, fall, 1981, or spring, 1982.)
Prerequisite: open to students who have completed a minimum of 61 college credits and have completed the course assigned at the speech screening interview.

### 28.1 Audiology I

3 hours lecture, 2 hours laboratory; 4 credits
Disorders of hearing, measurement of hearing through pure tone and speech audiometry, and interpretation of audiometric test results. (Not open to students who have completed Speech and Theater 27.3.)
Prerequisite: all of the following: Speech 13, 17.4 or 17.8, 17.5 or 17.9, 31. These courses must be completed with an average of $B$ or higher and with no grade lower than $C$.

### 28.2 Audiology II

3 hours lecture, 4 hours laboratory; 5 credits
Auditory rehabilitation for children and adults; implications for early intervention; application to community and educational settings.
Prerequisite: Speech 13, 17.8, 17.9, 31, and 28.1 with an average of B or higher and with no grade lower than C .

## 31 Development of Normal Hearing, Speech, and Language

3 hours; 3 credits
Normal hearing, speech, and language development and its relationship to motor, perceptual, cognitive, emotional, and social development. Implications for literacy development.
Prerequisite: Speech 13.

### 38.1 Speech-Language Pathology I: Disorders

3 hours lecture; 2 hours laboratory; 4 credits
Etiology and symptomatology of disorders of language, speech, and voice. Implications for literacy development and linguistic and cultural diversity.
Prerequisite: all of the following: Speech 13; 17.6 or 17.8; 17.5 or 17.9; 31. These courses must be completed with an average of B or higher and with no grade lower than C .

### 38.3 Speech-Language Pathology III: Rehabilitation

3 hours lecture, 4 hours laboratory; 4 credits
Clinical theory and practice in the rehabilitation of persons with language, speech, and voice disorders. Consideration of linguistic and cultural diversity. Application to educational settings. Case demonstrations and supervised clinical practicum.
Prerequisite: Speech 13, 17.8, 17.9, 31, and 38.1 with an average of $B$ or higher and with no grade lower than $C$.

## 44 Special Topics in Oral Interpretation

3 hours; 3 credits each term
Analysis and performance of literature in various modes and genres. Such topics as chamber theater and the oral interpretation of individual literary styles, nonfiction, and folk literature. Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Speech 24.3 or permission of the chairperson.

## 60 Special Topics

3 hours; 3 credits each term
Topics vary from term to term. Courses description may be obtained from the department office before registration. Students may take this course for credit twice but may not repeat topics.
Prerequisite: Speech 3 or 7 or 18 or permission of the chairperson.

## 70 Speech Laboratory

Minimum of 45 hours satisfactory participation;
1 credit each term
Satisfactory participation in projects and activities not included as part of the work of a specific course in any area of the Department of Speech. Students may take this course for credit four times, but may not offer more than six credits toward a baccalaureate degree from Speech 70, 71, 72, and 73. Students should consult the department office about the special registration procedures required for this course.

## 71 Independent Study

3 hours independent work§ and conferences; 1 credit
Directed research of a topic approved by the instructor, under the supervision of the instructor. Substantial final project; oral presentation, performance, research paper, or a combination of these forms. May be repeated for credit, but students may not offer more than six credits toward a baccalaureate degree from Speech 70, 71, 72, and 73.
Prerequisite: five or more credits in Department of Speech Communication Arts and Sciences courses and permission of the chairperson.

## 72 Independent Study

6 hours independent work§ and conferences; 2 credits
Directed research of a topic approved by the instructor, under the supervision of the instructor. Substantial final project; oral presentation, performance, research paper, or a combination of these forms. May be repeated for credit, but students may not offer more than six credits toward a baccalaureate degree from Speech 70, 71, 72, and 73.
Prerequisite: five or more credits in Department of Speech Communication Arts and Sciences courses and permission of the chairperson.

## 73 Independent Study

9 hours independent work§ and conferences; 3 credits
Directed research of a topic approved by the instructor, under the supervision of the instructor. Substantial final project; oral presentation, performance, research paper, or a combination of these forms. May be repeated for credit, but students may not offer more than six credits toward a baccalaureate degree from Speech 70, 71, 72, and 73.
Prerequisite: five or more credits in Department of Speech
Communication Arts and Sciences courses and permission of the chairperson.

## 75 Senior Seminar: Current Issues in Speech Communication

 3 hours; 3 creditsContemporary concerns and principles in speech communication as they interact across the discipline. Practical case studies.
Prerequisite: open to seniors and upper juniors who have completed Speech 7 or 8 or 9 or 23, 13, 14.1, and 31; or permission of the chairperson.

## 75W Senior Seminar: Current Issues in Speech Communication

4 hours; 3 credits
Contemporary concerns and principles in speech communication as they interact across the discipline. Practical case studies. Writing-intensive section.
Prerequisite: open to seniors and upper juniors who have completed Speech 7 or 8 or 9 or 23, 13, 14.1, and 31; or permission of the chairperson; English 2.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83 Independent Research

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Research or fieldwork in one of the areas of speech supervised by a faculty member. Periodic conferences. Final report or paper.
Prerequisite: an average grade of B or higher in a program, approved by the chairperson, of advanced Speech Communication Arts and Sciences Department courses and permission of the instructor and the chairperson.
Prerequisite for students in the speech pathology/audiologyspeech and hearing science area: Speech 31 or 38.3.

## 84 Seminar

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Readings in speech. Course description may be obtained in the department office before registration. Final examination.
Prerequisite: an average grade of B or higher in a program, approved by the chairperson, of advanced Speech
Communication Arts and Sciences Department courses and permission of the chairperson.
Prerequisite for students in the speech pathology/audiologyspeech and hearing science area: Speech 31 or 38.3.

## 85 Workshop

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Creation of an acceptable piece of work in one of the areas of speech.
Prerequisite: an average grade of B or higher in a program, approved by the chairperson, of advanced Speech Communication Arts and Sciences Department courses and permission of the instructor or chairperson.
Prerequisite for students in the speech pathology/audiologyspeech and hearing science area: Speech 31 or 38.3.

The following courses are inactive and will be offered only if there is sufficient demand:
4 Masterpieces of Persuasion
11 The Speaking Voice
14.3 Oral Interpretation: Drama

21 Speeches for Special Occasions
24.3 Readers Theater
24.5 Interpretation of Classic Literature

29 Social Control through Persuasive Speech
33 Organizational Communication
33.4 Studies in Public Address

## Television and Radio

Department office: 304 Whitehead Hall
Telephone: 951-5555
Chairperson: Hal Himmelstein
Deputy Chairperson, Division of Graduate Studies:
Katherine G. Fry
Coordinator, Broadcast Journalism Program:
Adrian J. Meppen
Professors: Dessart, Himmelstein, Rodman;
Associate Professors: Fry, Lewis, MacLelland, Meppen; Assistant Professors: Jannone, Patkanian, Sosa, Spinelli, Wasser.
B.A. degree program in television and radio

HEGIS code 0603
Department requirements ( 30 credits)
All of the following: Television and Radio 6.5, 16, 16.5, 20, 30.5.
Two of the following: Television and Radio 24.1 or 25.1 or 26.1 or 27.1.

One of the following: Speech 14.1 or 14.2 or 18.5 or 23.
Six additional credits in Television and Radio Department courses numbered 16.6 and higher.
Students may not offer more than six credits for a baccalaureate degree from Television and Radio 70, 75, 76, 77 , and 78.
Television and radio majors may offer a maximum of 40 credits in television and radio courses, excluding Television and Radio 70, 75, 76, 77, 78, 83, 84, and 85, toward their degree.
B.S. degree program in broadcast journalism HEGIS code 0605

## Program requirements (45 credits)

Television and Radio 6.5, 26.8, 28, and 29.
Two of the following production courses: Television and Radio 24.1, 25.1, 26.1, 27.1.

English 18.17.
An additional 21 credits of advanced course work are required in any department or area other than Television and Radio and the Journalism Program of the English Department, with the courses approved by the program director.

## Program recommendation

Additional elective courses are offered in the Department of English. Consult the department chairperson or the program coordinator for guidance in course selection.

Requirements for a minor in television and radio (for film majors)
A major in the Film Department; Television and Radio 6.5; and a program of 12 credits in advanced courses in television and radio, each completed with a grade of C or higher, including both a) and b):
a) Television and Radio 16 and 26.1. (For this minor, the prerequisite of Television and Radio 20 for Television and Radio 26.1 is waived.)
b) Two courses from the following: Television and Radio 17, $26.15,26.2,26.4,26.5,26.8,30.5$, or 50.

## Requirements for a minor in television and radio (for theater majors)

A major in the Theater Department; and all of the following courses, each completed with a grade of C or higher: Television and Radio 6.5, 16, 20, 25.1, 26.1, and one other advanced elective. (For this minor, the prerequisite of Television and Radio 16.5 for Television and Radio 25.1 and 26.1 is waived.)

## Division of Graduate Studies

The Television and Radio Department offers a master of fine arts degree program in television production and a master of science in television and radio. For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

*Courses marked with an asterisk (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this department.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

### 6.5 Introduction to Mass Media

3 hours; 3 credits
Survey of the history, industry practices, and controversies involved in the media of mass communication. Mainstream mass media of books, newspapers, magazines, film, radio, recordings, television, and the Internet. Analysis of news, entertainment, advertising, and public strategies, as well as media impact, legal issues, and ethics.

## 16 Television and Radio Writing

3 hours; 3 credits
Basic communication skills required of the writer in television and radio. Techniques of writing news, documentary, comedy, drama, and advertising for these media.
Prerequisite: Television and Radio 6.5.

### 16.5 Industry, Institutions, and Audiences in Television and Radio

3 hours; 3 credits
Development of broadcast systems from radio through the Internet. Technological and aesthetic innovations, socioeconomic forces, government, private industry, advertisers, creative producers, and audiences from a historical perspective. U.S. and global perspectives.
Prerequisite: Television and Radio 6.5.

## 17 Television and Radio Advertising

3 hours; 3 credits
Examination of persuasive strategies that use the major mass media. Advertising and the relationship of market, copy, and media variables. Analytical and practical exercises implement theory. This course is the same as Business 50.7.
Prerequisite: Television and Radio 6.5 or Business 50.2 or permission of the chairperson.

### 18.1 Television Genres

3 hours; 3 credits
Studies in genre types and production techniques from aesthetic, sociocultural, historical, and economic perspectives. Narrative structure, character and social group stereotyping, and popular appeal of archetypal patterns. Each term focuses on an individual genre chosen from: action/adventure, dramatic, serial, situation comedy, news and documentary, television commercial, etc. Students may take this course for credit twice, but may not repeat topics. (Not open to students who have completed Television and Radio 18 or 73.2.)
Prerequisite: Television and Radio 16 and 16.5.

### 18.2 Alternative Television

3 hours; 3 credits
Audiovisual creations of independent television producers in the genres of artist's video, video verite, direct video documentary, multimedia performance, and community video. Distribution sites, including public access cable channels, Internet Web sites, gallery and museum exhibitions, and public installations. Characteristics distinguishing alternative television from "mainstream" television.
Prerequisite: Television and Radio 16 and 16.5.

## 19 Public Relations

3 hours; 3 credits
This course will focus on the comunications tools in the electronic media used by public relations professionals to fulfill their objectives. Students will develop a fundamental knowledge of the many publics an organization must deal with, the ethics of public relations, problems in public relations, writing news releases, effective publicity techniques, and crisis management.
Prerequisite: Television and Radio 6.5 or Business 50.2 or permission of the chairperson.

## 20 Sight/Sound/Motion: Basic Production Theories and Techniques <br> 3 hours; 3 credits

Application of basic production theories and techniques; relationship between the tools and language of sight, sound, and motion and the theories that have evolved around them. Practice in the use of tools with a view to strengthening the basis for aesthetic judgment on matters of aural/visual/kinetic communication. (Not open to students who are enrolled in or have completed Television and Radio 16.6 or 26.1.)

## Prerequisite: Television and Radio 6.5

## 22 Mass Communication Research

3 hours; 3 credits
Qualitative and quantitative methods in mass communication research. Ratings, content analysis, survey, and experimental studies. The use of statistics, computer data analysis, and report writing. (Not open to students who have completed Television and Radio 73 in spring, 1986, or spring, 1987.)
Prerequisite: Television and Radio 16.5 and Core Studies 5 or 5.1 and 5.2 , or the equivalent.

## 23 Ethical Issues in the Electronic Mass Media

3 hours; 3 credits
Analysis and discussion of ethical issues related to television and radio. Case histories and role playing provide value judgments concerning entertainment, information, and advertising functions of mass media. This course is the same as Philosophy 15.4. (Not open to students who have completed Philosophy 24.1.).
Prerequisite: Television and Radio 6.5, and Philosophy 6 or Core Studies 10.

### 24.1 Elements of Multimedia Design and Production

1 hour lecture, 4 hours laboratory; 3 credits
Multimedia design for the Web, CD-ROM, and emerging electronic delivery systems. Integration of audio, video, text, and graphic elements for best aesthetic effect. Interface design and navigational considerations of interactive content.
Prerequisite: Television and Radio 16.5 and 20; or English 18.17 and permission of the chairperson.

Prerequisite or corequisite: Television and Radio 16 or 28.

### 25.1 Introduction to Radio Production

1 hour lecture, 4 hours laboratory; 3 credits
Radio and audio aesthetics and production. Laboratory practice in conceiving, scripting, developing, and producing a variety of radio programs using field and studio equipment including emerging digital technology.
Prerequisite: Television and Radio 16.5 and 20;
or English 18.17 and permission of the chairperson.
Prerequisite or corequisite: Television and Radio 16 or 28.

### 25.2 Advanced Radio Production

1 hour lecture, 4 hours laboratory; 3 credits
Individual and group production of short- and long-form radio projects such as: promotional spots, features, magazines, documentaries, series, and radio drama. Project conception, development, management, and implementation. Contact with radio professionals.
Prerequisite: Television and Radio 25.1 or Music 26.1 or Film 48 or permission of the chairperson.

### 25.3 Radio Culture

## 3 hours; 3 credits

Historical survey of radio technology, program production and format, and conceptions of listenership. Development of radio programming around the world with a focus on English-speaking radio. Established radio forms and radio experimentation, theories of the social/political/cultural role of radio, and hypotheses on radio's future.
Prerequisite: Television and Radio 6.5.
Prerequisite or corequisite: Television and Radio 16.5.

### 26.1 Elements of Television Studio Production

1 hour lecture, 4 hours laboratory; 3 credits
Aspects of television studio operation that contribute to the aesthetics of production. Laboratory practice with cameras, microphones, sound effects, properties, lighting instruments and control, audio console, and switcher-fader.
Prerequisite: Television and Radio 16.5 and 20, or English 18.17 and permission of the chairperson. Prerequisite or corequisite: Television and Radio 16 or 28.

### 26.4 Electronic Delivery Systems

3 hours; 3 credits
Emerging electronic delivery systems. Social, educational, and cultural implications. Programming and marketing considerations.
Prerequisite: Television and Radio 16.5 or permission of the chairperson.

### 26.5 Public Television

## 3 hours; 3 credits

Television as an educational medium. Public and instructional programming.
Prerequisite: Television and Radio 16.5.

### 26.8 Television and Radio Journalism

3 hours; 3 credits
Survey of operations, functions, policies, and problems of television and radio public affairs and news. Responsibilities and roles in relation to freedom of information and the public's right to know.
Prerequisite: Television and Radio 6.5 or English 18.17 and permission of the Broadcast Journalism Program coordinator.

### 26.15 Television and Radio Program Development and Scheduling

3 hours; 3 credits
Integration of the skills and background information required in planning successful programs.
Prerequisite: a grade of B or higher in Television and Radio 25.1, 26.1, 27.1, or permission of the chairperson.

### 26.25 Production Management

3 hours; 3 credits
The business and management side of the program producer's function. Personnel management; program budgeting; rights and clearances; relations with unions, agents, and licensing organizations.
Prerequisite: a grade of B- or higher in Television and Radio 24.1 or 25.1 or 26.1 or 27.1 or permission of the chairperson.

### 27.1 Elements of Television Field Production

1 hour lecture, 4 hours laboratory; 3 credits
Aspects of production of television segments and programs in nonstudio locations. Selection and use of portable cameras, recorders, lighting, and sound equipment. Aesthetic considerations necessary for effective post-production editing. Comparison of requirements for recording scripted and spontaneous events. Producer's role in creating and distributing such programs. Collaborative production of finished material suitable for telecasting.
Prerequisite: Television and Radio 16.5 and 20; or English 18.17 and permission of the chairperson.

Prerequisite or corequisite: Television and Radio 16 or 28.

### 27.2 Advanced Television Field Production: Documentary

 4 hours; 3 creditsIntensive production work in video documentaries. Production subjects focus on the diverse people of Brooklyn and issues facing the borough or its neighborhoods. Production teams, each of which will complete a short documentary project. Lectures on research, development, preproduction planning, scheduling, location and studio production, and postproduction. This course is the same as Film 49. (Not open to students who have taken Film 49.)
Prerequisite: Television and Radio 27.1 or 29 or permission of the chairperson.

## 28 Television and Radio Newswriting

## 3 hours; 3 credits

Adaptation of various sources of news material to television and radio writing and delivery style. Forms for television and radio newswriting. Television and radio news equipment. Relationships between members of the television and radio news team.
Prerequisite: Television and Radio 6.5.

## 29 Summer Broadcast News Institute

3 hours lecture, 6 hours laboratory; 6 credits
Summer session
Introduction to on-air journalism producing, production, and delivery of news programs and messages. Functioning as a member of a broadcast news producing, performance, and production team. Laboratory and field practice in writing and producing for news broadcasts. Methods of reporting and editing script. Aspects of in-studio and field television production. (Not open to students who have completed Television and Radio 26.81, 26.82, and 26.83.)
Prerequisite: Television and Radio 16.5, or English 18.7, or permission of the director of the Broadcast Journalism program.

### 30.5 Television and Radio Criticism

## 3 hours; 3 credits

Survey of television and radio criticism. Influence of the medium and of individual programs on American society.
Prerequisite: Television and Radio 24.1 or 25.1 or 26.1, or 27.1; or permission of the chairperson.

### 36.1 Advanced Television Comedy Scriptwriting

## 3 hours; 3 credits

Scriptwriting for television comedy programming. Developing scripts based on research, character analyses, plot analysis, and story treatments. Course will feature comedy scripts. (Not open to students who have completed Television and Radio 73, Special Topics: Advanced Television Writing: Comedy.) Prerequisite: Television and Radio 16 with a grade of B or better.

### 36.2 Advanced Television Dramatic Scriptwriting

 3 hours; 3 credits Scriptwriting for television dramatic programming. Developing scripts based on research, character analyses, plot analysis, and story treatments. Course will feature dramatic scripts. (Not open to students who have completed Television and Radio 73, Special Topics: Advanced Television Writing: Drama.) Prerequisite: Television and Radio 16 with a grade of $B$ or better.
### 36.3 Advanced Television Documentary Scriptwriting

 3 hours; 3 creditsScriptwriting for television documentaries. Developing scripts based on research and story structure.
Prerequisite: Television and Radio 16 with a grade of $B$ or better.

## 50 Dramatic Analysis for Media Production

2 hours lecture, 2 hours television laboratory; 3 credits A workshop combining literary and technical skills. Analysis of four plays of different types (realistic, nonrealistic, absurdist, Shakespearean). Scenes prepared for television. Students interpret, "crew for," shoot, edit, and evaluate the scenes taped using skilled actors. This course is the same as English 50.
Prerequisite: a course in dramatic literature or Television and Radio 25.1 or 26.1 or 27.1 .

## *70 Television and Radio Laboratory

Minimum of 45 hours of satisfactory participation; 1 credit Satisfactory participation in projects and activities not included in specific course work in any area of the Department of Television and Radio. Students may take this for credit four times. Students should consult the department office about the special registration procedures required for this course. Final grade is given as "credit" on satisfactory completion of required work. Students may not offer more than six credits
toward a baccalaureate degree from Television and Radio 70, 75, 76, 77, and 78.
Prerequisite: 12 credits in Television and Radio courses or permission of the chairperson.

## 73 Special Topics

3 hours; 3 credits
Topics vary from term to term. Course description may be obtained in the department office before registration. Students may take courses numbered Television and Radio 71 through 74 for a total of eight credits, but may not repeat topics.
Prerequisite: Television and Radio 16.5 and permission of the chairperson.

## *75 Television and Radio Colloquium

1 hour lecture and recitation; 1 credit
Critical review of current topics in the broadcast industry. Guest lectures by professionals. Students may not offer more than six credits toward a baccalaureate degree from Television and Radio 70, 75, 76, 77, and 78. (Not open to students who have completed Television and Radio 76, 77, or 78.)
Prerequisite: 12 credits in television and radio courses and permission of the chairperson.

## *76 Television and Radio Internship

1 hour lecture, minimum 7 hours unsupervised fieldwork; 2 credits
Field experience in a professional telecommunications facility. Administrative, production, or technical duties as assigned by a cooperating facility. Preparation and presentation of a critical report of the experience. May be taken for credit twice, but students may not offer more than six credits toward a baccalaureate degree from Television and Radio 70, 75, 76, 77, and 78.
Prerequisite: senior class standing, 12 credits in television and radio courses, and permission of the chairperson.

## *77 Television and Radio Internship

1 hour lecture, minimum of 14 hours unsupervised fieldwork; 3 credits
In-depth field experience in a professional telecommunications facility. Administrative, production, or technical duties as assigned by the cooperating facility. Preparation and presentation of critical report of the experience. May be taken for credit twice, but students may not offer more than six credits toward a baccalaureate degree from Television and Radio 70, 75, 76, 77, and 78.
Prerequisite: senior class standing, 12 credits in television and radio courses, and permission of the chairperson.
*78 Fieldwork in Media Programming and Marketing 20 hours fieldwork, 1 hour conference; 6 credits Supervised fieldwork at a participating organization in the development of programming and advertising for broadcast, cable, or related distribution systems. Application of theoretical principles to actual programming and advertising projects. Individual and group conferences with field supervisor(s). Individual and group conferences with instructor. Field notes, readings, and term paper required. (No degree credit for students who have completed Television and Radio 76 or 77 .)
Prerequisite: Television and Radio 17 and 26.15; or permission of the chairperson.

## 79 Independent Projects

Minimum 9 hours independent work and conferences; 3 credits
Directed television, radio, or multimedia project approved and supervised by an instructor. Substantial final project such as television, radio, or multimedia production; broadcast-related research paper; live broadcast; or a combination of these forms. May be taken for credit twice.
Prerequisite: Television and Radio 16.5 and 20; or English 18.17; or permission of the chairperson.

## Honors courses

Students with superior records (a grade point average greater than 3.0) and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 83 Independent Research

Minimum of nine hours independent work§ and conference or class meetings; 3 credits
Research or fieldwork in television and radio supervised by a faculty member. Approved topic. Final report or paper.
Prerequisite: Television and Radio 6.5, 16, 16.5, 20, 25.1 or 26.1 or $27.1,30.5$ and a scholastic index of 3.0 or higher; and an index of 3.25 or higher in all courses taken in the department; and sponsorship by a member of the department faculty; and permission of the chairperson.

## 84 Seminar

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Readings in television and radio. Examination.
Prerequisite: Television and Radio 6.5, 16, 16.5, 20, 25.1 or 26.1 or 27.1, 30.5 and a scholastic index of 3.0 or higher; and an index of 3.25 or higher in all courses taken in the department; and sponsorship by a member of the department faculty; and permission of the chairperson.

## 85 Workshop

Minimum of 9 hours independent work§ and conferences or class meetings; 3 credits
Creation of an acceptable piece of work in television or radio. Limited facilities may preclude use of college equipment. Prerequisite: Television and Radio 6.5, 16, 16.5, 20, 25.1 or 26.1 or 27.16, 30.5 and a scholastic index of 3.0 or higher; and an index of 3.25 or higher in all courses taken in the department; and sponsorship by a member of the department faculty; and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:
26.2 Television Production and Direction
26.16 Television and Radio Sales and Distribution

## Theater

Department office: 317 Whitehead Hall
Telephone: 951-5666, 951-5667, 951-5668
Chairperson: Samuel L. Leiter
Deputy Chairperson, CLAS and SGS: Rose Bonczek
Deputy Chairperson, Division of Graduate Studies:
Tobie Stein
Professors: Bullard, Cunningham, Leiter, Scheffler, Stein;
Associate Professors: Kearney; Assistant Professors: Bonczek, Byam, McNulty, Sutherland-Cohen, Vivier.
The Department of Theater offers undergraduate degree programs leading to the B.F.A. and B.A. degrees in theater. Courses in the B.F.A. and B.A. degree programs encompass all aspects of theater: stage, costume, and scenic design; writing, acting, and directing; history of the theater; theater management. Several major department productions and workshop performances are presented each term.
Theater Department productions include plays from the standard repertory, new scripts, and performances that evolve through ensemble work of playwright, actor, and director. Recent plays have included Tennessee Williams's The Glass Menagerie, Arlene Hutton's As It Is in Heaven, Federico Garcia Lorca's Blood Wedding, Tim Blake Nelson's Eye of God, Kenneth Lonergan's This Is Our Youth, Line Knutzon's First You're Born, and Sophocles' Philoctetes.

## Admission to the degree programs in theater

B.A. A counseling interview is required by the department when the student applies for admission to the college. Entrance into the acting program is by audition when the student completes Theater 2 Introduction to Acting. Entrance into the design and technical program is by interview when the student completes Theater 3 Introduction to Theater Production. Students should indicate their intention to major in theater on their application for admission to the college.
B.F.A. In the area of acting, an audition is required. Design/technical candidates must bring to the interview any pertinent materials that will facilitate the committee's assessment of their abilities.

## Department crew requirements

Theater degrees and certain theater courses have crew requirements. A student must register for one of the Production Practica, Theater 4.1, 4.2, 4.3, 4.4, 4.5, and 4.6, for each course marked with the symbol ( + ) for which the student registers. However, no student shall be required to register for more than two Production Practica in one semester, and theater majors who have completed six crew assignments, credit-bearing or not, need not register for further courses from this list.

## B.A. degree program in theater <br> HEGIS code 1007

Department requirements (57 credits)
Students must earn a grade of C - or higher in each theater course numbered 10 or above that is applied toward the fulfillment of department requirements.
All of the following: Theater 1 or 1.1 or 1.2; 4.1, 4.2, 4.3, 4.4, $4.5,4.6,20.1,21.3,21.4,22.2,22.5,23.2,26.1,40.1,40.2,50$.
(Students with no previous experience may need to complete Theater 3 before registering for more advanced technical courses. See course prerequisites.)
Two acting courses, or one acting course and Speech 14.3. Two of the following: Theater 40.3, 41.1, 41.3, 41.4. (One of the following may substitute for one of the above: Classics 31, Comparative Literature 16.2, 16.3, 16.4, English 10.1, $30.5,30.7,31.4,41.1$.)
Two to six additional credits in Theater Department courses to total a minimum of fifty-seven credits.

## B.F.A. degree program in theater <br> HEGIS code 1007

The B.F.A. degree program has two areas of specialization acting, and design and technical production (which includes scenic, lighting, and costume design). Students must complete one of the following areas with a grade of C - or higher in each theater course numbered 10 or above that is applied toward the fulfillment of department requirements.

## Department requirements (61-68 credits)

A) Acting (61 credits)

All of the following: Theater 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 11.1, $11.2,11.3,11.4,11.5,11.6,13.1,13.2,13.3,13.4,13.5,13.6$, 13.8, 35, 40.1, 40.2. (Students entering the program who have no transferable credits in Theater must pass a department examination on general theater knowledge. Students who fail to pass this examination must register for Theater 1 in their first semester of the program.)
One of the following combinations: Theater 21.3 and 21.4; Theater 3 and 20.1.
One of the following: Theater 36.1, 36.2, 36.3, 36.4, 36.5, 36.6.

Six additional credits in Theater Department courses.
B) Design and Technical Production (66-68 credits)

All of the following: Theater 1 or 1.1 or 1.2, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 20.1, 21.3, 21.4, 22.2, 22.5, 23.2, 26.1, 40.1, 40.2.
(Students with no previous experience may need to complete Theater 3 before registering for more advanced technical courses. See course prerequisites.)
One acting course or Speech 14.4.
Two of the following: Theater 40.3, 41.1, 41.3, 41.4. (One of the following may substitute for one of the above: Classics 31, Comparative Literature 16.2, 16.3, 16.4, English 10.1, $30.5,30.7,31.4,41.1$.)
Twenty-one additional credits from the following: Theater 20.2, 20.4, 20.7, 21.2, 21.5, 21.7, 22.3, 22.6, 23.1, 23.3, 23.4, 23.5, 27.1, 27.2, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 83, 84, 85, Art 25.11, 25.12, 26.11, 26.12, 26.21, 26.22.

## Concentration in theater for majors in the following

 programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in theater must complete at least 33 credits as follows with a grade of C or higher in each course. Students must meet with a Theater Department adviser to declare their intention to complete this concentration. They should also meet with an adviser in the School of Education regarding the appropriate sequence of teacher education courses.

## Concentration requirements:

Theater 1, 2, 3, 4.1, 4.2, 10.1, 10.2, 40.1, 40.2.
One of the following courses: Theater 40.3, 41.3, 41.4; English 16.3, 16.4, 30.5, 31.4, 41.1, 50.2; Africana Studies 24.7, 24.8; Anthropology 44.

One of the following courses: Speech 14.1, 14.2, 14.3, 14.4, 14.5; Theater 60. (Students may take Theater 60 if it has not been taken as a paired course with Education 37.)
One of the following combinations: Theater 4.3 and 20.1; or Theater 12.1 and one of the following courses: Theater 40.3, 41.3, 41.4; English 16.3, 16.4, 30.5, 31.4, 41.1, 50.2; Africana Studies 24.7, 24.8; Anthropology 44. (Anthropology 44 may be taken only if not used to satisfy the requirement above.)

## Requirements for a minor in theater

Theater 1, 2, 3, 4.1, 4.2, and 4.3; and twelve additional credits of advanced courses in theater, each approved by the department and completed with a grade of $C$ or higher.

## Requirements for a minor in theater production

 (for television and radio majors)A major in television and radio; Theater 3, 4.1, 4.2, and 4.3; and all of the following courses, each completed with a grade of $C$ or higher: Theater 20.1, 22.2, and two other technical courses approved by the department.

## Requirements for a minor in acting <br> (for television and radio majors)

A major in television and radio; Theater 2, 4.1, 4.2, and 4.3; and 12 credits chosen from the following courses, each completed with a grade of C or higher: Theater 10.1, 10.2, both 11.1 and 13.1 , both 11.2 and $13.2,12.5,12.6,12.7$, 12.8, 36.2

## Division of Graduate Studies

The Theater Department offers a master of arts degree program in theater and a master of fine arts degree program in theater. Some courses may be creditable toward the CUNY doctoral degree. For information, students should consult the department's deputy for graduate studies. A Graduate Bulletin may be obtained in the Office of Admissions.

## Courses

§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor.
+The symbol (+) denotes a department crew requirement.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 1 Introduction to Theater Arts

## 3 hours; 3 credits

Study of the nature and history of the theatrical event. Selected periods and styles of production. Contributions of the playwright, actor, director, designer, architect, critic, and producer. Attendance at departmental productions. (Not open to students who have completed Theater 1.1 or 1.2.)

## 2 Introduction to Acting

3 hours; 3 credits
Introduction to the craft of acting. Exercises designed to introduce the student-actor to the language of the theater, to a method of working, and to an understanding of his or her responsibilities as an actor.

## +3 Introduction to Theater Production

3 hours; 3 credits
Methods of production, physical theater layout, and practical experience in productions.
Corequisite: see section "Department crew requirements" above.

## 4.1, 4.2, 4.3, 4.4, 4.5, 4.6

Production Practicum I, II, III, IV, V, VI
5 hours per week; 1 credit
Shop or running crew as assigned by the department. Students attend an orientation and one seminar during the term, keep a journal of the work done as it relates to the production, and submit an evaluation. Students may not register for more than two of these courses in any semester. Nonmajors may register for no more than two of these courses without registering for a three-credit theater course. Prerequisite: permission of the chairperson.

## +10.1 Acting Workshop I

3 hours; 3 credits
Further study in the craft of acting. Continuation of the exercises and methods introduced in Theater 2.
Prerequisite: Theater 2 or audition; and permission of the chairperson.
Corequisite: see section "Department crew requirements" above.

## +10.2 Acting Workshop II

3 hours; 3 credits
Continuation of Theater 10.1. May be taken twice for credit.
Prerequisite: Theater 10.1 and permission of the chairperson. Corequisite: see section "Department crew requirements" above.

### 11.1 Acting I: Fundamentals

3 hours; 3 credits
Physical, ensemble, and text-based exercises to integrate the actor's instrument with the processes of mind through experiential learning.
Prerequisite: audition; and permission of the chairperson. Corequisite: Theater 13.1.

### 11.2 Acting II: Introduction to Scene Study

3 hours; 3 credits
Introduction to scene study. Basic approaches to preparing a role through text analysis and performance of scenes.
Prerequisite: Theater 11.1 and 13.1; or audition; and permission of the chairperson.
Corequisite: Theater 13.2.

### 11.3 Acting III: Contemporary Realism

## 3 hours; 3 credits

Application of basic acting techniques to the preparation and performance of scenes from realistic plays.
Prerequisite: Theater 11.2 and 13.2; or audition; and permission of the chairperson.
Corequisite: Theater 13.3.

### 11.4 Acting IV: Classics of Modern Realism

3 hours; 3 credits
Application of acting techniques to the performances of such classics of modern realism as those of Ibsen, Chekhov, and O'Neill.
Prerequisite: Theater 11.3 and 13.3; or audition; and permission of the chairperson.
Corequisite: Theater 13.4.

### 11.5 Acting V: Contemporary Nonrealism

 3 hours; 3 creditsIntroduction to style and form, with emphasis on the actor's understanding of the form of the text and its expression on the stage. Application of techniques required by such modern and postmodern plays as those of Brecht, Beckett, and Shepard.
Prerequisite: Theater 11.4 and 13.4; or audition; and permission of the chairperson.
Corequisite: Theater 13.5.

### 11.6 Acting VI: Advanced Acting Workshop

3 hours; 3 credits
Application of acting techniques essential to performing specialized genres. Each semester will focus on one such genre as Shakespearean theater, musical theater, or new plays.
Prerequisite: Theater 11.5 and 13.5; or audition; and permission of the chairperson.
Corequisite: Theater 13.6.

### 12.1 Acting for the Camera

3 hours; 3 credits
Trains the advanced actor in the specialized demands of working for the camera; performance of selected scenes on video tape. Differences between stage and film techniques. Prerequisite: three courses in acting or the equivalent, and audition; and permission of the chairperson.

### 12.5 Acting Practicum I

2 hours workshop; 1 credit
Students work a minimum of two projects in rehearsal and performance for theater directing students' course work or for film or television projects. Supervised by faculty members.
Prerequisite: Theater 10.1 or B.F.A. acting status, and permission of the chairperson.
12.6 Acting Practicum II

2 hours workshop; 1 credit
Continuation of Theater 12.5
Prerequisite: Theater 12.5.
12.7 Acting Practicum III

2 hours workshop; 1 credit
Continuation of Theater 12.6
Prerequisite: Theater 12.6.

### 12.8 Acting Practicum IV

2 hours workshop; 1 credit
Continuation of Theater 12.7.
Prerequisite: Theater 12.7.

### 13.1 Dynamics I

4 hours; 2 credits
Study of the actor's stage movement and voice production.
Work related directly to work being done in acting classes.
Prerequisite: acceptance into Theater 11.1 and permission of the chairperson.
Corequisite: Theater 11.1.

### 13.2 Dynamics II

4 hours; 2 credits
Continuation of Theater 13.1.
Prerequisite: Theater 11.1 and 13.1, or audition; and permission of the chairperson.
Corequisite: Theater 11.2.

### 13.3 Dynamics III

4 hours; 2 credits
Continuation of Theater 13.2.
Prerequisite: Theater 11.2 and 13.2; or audition; and permission of the chairperson.
Corequisite: Theater 11.3.

### 13.4 Dynamics IV

4 hours; 2 credits
Continuation of Theater 13.3.
Prerequisite: Theater 11.3 and 13.3, or audition; and permission of the chairperson.
Corequisite: Theater 11.4.

### 13.5 Dynamics V

4 hours; 2 credits
Continuation of Theater 13.4.
Prerequisite: Theater 11.4 and 13.4, or audition; and permission of the chairperson
Corequisite: Theater 11.5.

### 13.6 Dynamics VI

4 hours; 2 credits
Continuation of Theater 13.5.
Prerequisite: Theater 11.5 and 13.5, or audition; and permission of the chairperson.
Corequisite: Theater 11.6.

### 13.8 Dialects for the Actor

3 hours; 3 credits
Application of skills learned in Speech 13 (special section for actors) applied to classical texts and accents from the British Isles, Europe, and the Caribbean. (Not open to students who completed Theater 46 in spring, 1995.)
Prerequisite: Speech 13 (special section for actors); and permission of the chairperson.

### 13.9 Dynamics VII

4 hours; 2 credits
Study of the actor's stage movement and/or voice production. Work related directly to work being done in acting classes.
Prerequisite: Theater 13.2 or audition; and permission of the chairperson.

### 13.10 Dynamics VIII

4 hours; 2 credits
Study of the actor's stage movement and voice production. Work related directly to work being done in acting classes.
Prerequisite: Theater 13.4 or audition; and permission of the chairperson.

## +20.1 Stagecraft I

## 3 hours; 3 credits

Materials and techniques involved in mounting scene designs for the stage.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general theater knowledge, and 3 or interview; and permission of the chairperson.
Corequisite: see section "Department crew requirements" above.

### 20.4 Property Construction

3 hours; 3 credits
Study of equipment, methods, and professional practices in the execution of stage and personal properties.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general theater knowledge; 20.1; and permission of the chairperson.

## +20.7 Scene Painting

3 hours; 3 credits
Equipment, materials, and professional procedures involved in painting for the stage.
Prerequisite: Theater 20.1 and permission of the chairperson. Corequisite: see section "Department crew requirements" above.

## +21.3 Costume Construction for the Stage

## 3 hours; 3 credits

Theory and practice of constructing the stage costume for educational, community, and professional theater. Application of these theories and practices to current college productions. Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general theater knowledge, and permission of the chairperson.
Corequisite: see section "Department crew requirements" above.

## +21.4 Costume Design for the Stage I

3 hours; 3 credits
Study of contemporary and period costume design to acquaint the student with stage costuming. Application of study through design projects and work on productions.
Prerequisite: Theater 21.3 and permission of the chairperson. Corequisite: see section "Department crew requirements" above.

## +22.2 Scenographic Techniques

3 hours; 3 credits
Study and execution of all necessary technical drawings used in preparation of theater scenery and lighting.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general theater knowledge, and 3 or interview; 20.1; and permission of the chairperson.
Corequisite: see section "Department crew requirements" above.

## +22.5 Scene Design I

3 hours; 3 credits
Aesthetic and functional elements of designing for the stage. Development of a setting through sketches, color plates, working drawings, and models.
Prerequisite: Theater 22.2 and permission of the chairperson. Corequisite:see section "Department crew requirements" above.

### 22.6 Scenic Design II

3 hours; 3 credits
Concentration on scenic design, problems of interpretation, style, and staging.
Prerequisite: Theater 22.5 and permission of the chairperson.

## +23.2 Lighting Design I

3 hours; 3 credits
Design of stage lighting. Application and principles of light, color, illumination, and electricity.
Prerequisite: Theater 22.2 and permission of the chairperson. Corequisite: see section "Department crew requirements" above.

## +25.8 Stage Makeup

2 hours lecture, and an average of 2 hours laboratory; 3 credits
Basic study of all aspects of stage makeup.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general theater knowledge, and permission of the chairperson.
Corequisite: see section "Department crew requirements" above.

## +26.1 Stage Management

## 3 hours; 3 credits

Professional procedures and practices involved in organization, rehearsal and technical preparation, and performance of theater, opera, and dance productions.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general theater knowledge; Theater 3; and permission of the chairperson.
Corequisite: see section "Department crew requirements" above.

### 26.2 Stage Management 2

3 hours; 3 credits
An examination of the stage manager's responsibilities as communicator, leader, and organizer for the production team. Prerequisite: Theater 26.1 with a grade of $B$ or higher.

### 30.1 Directing I

## 3 hours; 3 credits

Investigation of the fundamental techniques in bringing a text and an acting group into performance. Working with the actor and the environment.
Prerequisite: Theater 40.1 or 40.2, and both Core Studies 2.1 and 2.2, and permission of the chairperson.

### 30.2 Directing II

3 hours; 3 credits
Selection, casting, rehearsal, and production in class of a contemporary play.
Prerequisite: Theater 30.1 and permission of the chairperson.

## 35 Senior Rehearsal and Performance

Minimum of 45 hours participation; 1 credit
Under faculty supervision students will study and evaluate their working procedures and development in a selected role throughout the rehearsal and performance period by means of a journal, which serves as the basis for student evaluation. This course may be used to satisfy the senior performance requirement for B.F.A. majors.
Prerequisite: senior B.F.A. status in acting and permission of the chairperson.

## 36 Theater Workshop

4 hours; 3 credits
Writing and production of original scripts. Writing and production problems formulated, analyzed, and tested on the stage. Unified study of writing, acting, and directing. Students registered in Theater 36 assume responsibility for the direction of at least one production. Offered jointly by the Department of English and the Department of Theater. This course is the same as English 20.
Prerequisite: Theater 30.1 or English 17.1.

## 36.1, 36.2, 36.3, 36.4, 36.5, 36.6

Theater Laboratory I, II, III, IV, V, VI
6 hours; 3 credits each
Supervised special project or laboratory work in one aspect of theater production culminating in a performance or term paper.
Prerequisite: permission of the chairperson.

### 40.1 History of Western Theater I

## 3 hours; 3 credits

Theater history in the West from Periclean Greece to Jacobean England. Major periods of theater activity investigated with special emphasis on theater architecture, methods of production, audiences, traditions, documents, allied arts, and the social milieu.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general knowledge; Core Studies 1 and 6; and permission of the chairperson.

### 40.2 History of Western Theater II

## 3 hours; 3 credits

Continuation of Theater 40.1. Theater history in the West from neoclassic France to the rise of realism.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general knowledge; Core Studies 1 and 6; and permission of the chairperson.

### 40.3 Theater of the Twentieth Century <br> 3 hours; 3 credits

Twentieth-century theater from the work of Appia and Craig to the contemporary theater, including off-Broadway and off-off-Broadway. Innovative theater practitioners in acting, directing, and design.
Prerequisite: Theater 1 or 1.1 or 1.2 or student must pass the department examination on general knowledge; and permission of the chairperson.

### 41.1 History of the Theater in the United States

 3 hours; 3 creditsThe growth and development of theater in colonial North America and the United States from the eighteenth century to the present. Critical examination of native dramatic literature and the history of its performance.
Prerequisite: Theater 40.1 and 40.2 , and permission of the chairperson.

### 41.3 Theater in Asia

## 3 hours; 3 credits

Survey of the major theatrical traditions of East and Southeast Asia. Classical types. Production methods, performance styles, audiences, and social milieu.
Prerequisite: Core Studies 9.

### 41.4 Black Theater

3 hours; 3 credits
Lectures, studies, and workshops in Black theater. Liaison with professional and community theater. This course is the same as Africana Studies 24.5.

## 45 Special Topics in Theater

3 hours; 3 credits
Topics vary from term to term. Course descriptions may be obtained in the department office before registration. Students may take this course twice, but may not repeat topics.
Prerequisite: permission of the chairperson.

## 50 Theater Management

3 hours; 3 credits
Theater management, including problems of financing, promoting, labor relations, unions, and programming for educational, community, and professional theater.
Prerequisite: Theater 1 or 1.1 or student must pass the department examination on general knowledge; and permission of the chairperson.

## 60 Performance Techniques for the Classroom Teacher

 3 hours; 3 creditsCreative drama techniques to develop the prospective teacher's ability to become an effective communicator and to explore dramatic and creative methods of presentation.
Prerequisite: Core Studies 1 and 6.

## Honors courses

Students with superior records and the recommendation of a department faculty member may apply to the chairperson for permission to register for courses described below. Students may not register for more than six credits in honors courses in the department in one term.

## 70 Theater Laboratory

Minimum of 45 hours satisfactory participation each term; 1 credit each term

Satisfactory participation in projects and activities not included as part of the work of a specific course in any area of the Department of Theater. Students may take this course for credit four times. Students should consult the department office about the special registration procedures required for this course.

## 83 Independent Research

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Research or fieldwork in one of the divisions of theater supervised by a faculty member. Final report or paper.
Prerequisite: completion of an approved program of advanced courses in theater with an average grade of $B$ or higher, and permission of the chairperson.

## 84 Seminar

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Readings in theater. Examination.
Prerequisite: completion of an approved program of advanced courses in theater with an average grade of $B$ or higher, and permission of the chairperson.

## 85 Workshop

Minimum of 9 hours independent work§ and conference or class meetings; 3 credits
Creation of an acceptable piece of work in one of the several fields of theater.
Prerequisite: completion of an approved program of advanced courses in theater with an average grade of $B$ or higher, and permission of the chairperson.

The following courses are inactive and will be offered only if there is sufficient demand:

### 10.11 Acting in Musical Theater

### 20.2 Stagecraft II

21.5 Costume Design for the Stage II
21.7 Costume Design Workshop
22.3 Scene Rendering
23.3 Lighting Design II
23.5 Lighting Design Workshop
27.1 Sound Recording
27.2 Sound Recording Workshop

46 Special Topics in Dynamics

## Women's Studies Program

An interdisciplinary major
Program office: 227 Ingersoll Hall Extension
Telephone: 951-5476, 951-5777
Coordinator's office: 2303 James Hall
Telephone: 951-4807
Coordinator: Barbara Winslow, Education
Faculty: Winslow, Education; and additional faculty from the departments of the college.

## B.A. degree program in women's studies HEGIS code 4903

Program requirements (30 credits)
Students must complete parts 1 through 4 with a grade of C or higher in each course:

1. Women's Studies 12. Students who have taken only 10.7 or 10.8 must also take 12.
2. Four of the following:

Women's Studies 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, $42,43,44,45,46,47,48,49,51,58,59,81.1,82$. (Note: Women's Studies 33 is not open to students who completed Women's Studies 58 or English 50.41 in fall, 1993, or spring, 1994.)
3. Four of the following:

Students who have completed Women's Studies 10.7 or 10.8 need only complete three courses under this section of the program requirements.
Africana Studies 27 (This course is the same as English 64.4 and Women's Studies 46.)
Africana Studies 44.6. (This course is the same as Women's Studies 44.)
Africana Studies 44.9. (This course is the same as Political Science 78.35 and Women's Studies 49.)
Anthropology 31.
Art 15.60.
Comparative Literature 46.
Economics 40.4 .
Economics 40.5 .
English 11.1, only the section "Creative Writing from a Feminist Perspective."
English 50.4
English 50.41 (This course is the same as Women's Studies 33.)
English 64.4 (This course is the same as Africana Studies 27 and Women's Studies 46.)
Film 22. (This course is the same as Women's Studies 48.)
Health and Nutrition Sciences 34 (This course is the same as Women's Studies 35.)
Health and Nutrition Sciences 35.
History 27.8 (This course is the same as Women's Studies 42.)
History 30.3 (This course is the same as Women's Studies 51.)
History 43.14 (This course is the same as Women's Studies 43.)
Judaic Studies 17.
Philosophy 6.
Philosophy 15.2 (This course is the same as Women's Studies 47.)
Political Science 31 (This course is the same as Women's Studies 39.)
Political Science 78.3 (This course is the same as Women's Studies 40.)
Political Science 78.35 (This course is the same as Africana Studies 44.9 and Women's Studies 49.)

Political Science 78.5 (This course is the same as Women's Studies 41.)
Psychology 34.1.
Puerto Rican Studies 19.
Sociology 51.5.
Any of the following that are not used to satisfy part 2, above: Women's Studies 32, 33, 34, 35, 36, 37, 38, 39, 40, $41,42,43,44,45,46,47,48,49,51,58,59,81.1,82$.
4. Women's Studies 83.

Other advanced electives and special topics courses relevant to the study of women may be substituted with the permission of the program coordinator. The list of available courses may be obtained each semester in the program office.

## Women's studies concentration for majors in the following programs: early childhood education teacher (birth-grade 2); childhood education teacher (grades 1-6)

The requirements for the teacher education programs indicated above are described in the "Education" section of this Bulletin. Students who major in either of these programs and who elect a concentration in women's studies must complete at least 30 credits in the Program in Women's Studies with a grade of $C$ or higher in each course. Students must meet with the Women's Studies Program coordinator to declare their intention to complete this concentration. They should also meet with an adviser in the School of Education regarding the appropriate sequence of teacher education courses.

## Concentration requirements:

Women's Studies 10.7 and 10.8. Seven courses chosen from the following: Women's Studies 32, 33, 35, 36, 38, 39, 41, 42, 43, 44, 81.1. Women's Studies 83.

## Requirements for a minor in women's studies

A program of 12 credits in advanced electives in the Women's Studies Program with a grade of $C$ or higher in each course.

## Program recommendation

Students should consult a program counselor for help in planning a course of study.

## Courses

The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## 12 Introduction to Women's Studies: Sex, Gender, and Power <br> 3 hours; 3 credits

An interdisciplinary introduction to the study of women. From the first and second waves of feminism to grrl power's cyberactivism and empowerment through femininity. Material and social constructions of sex and gender. Power and dynamics, which drive and structure women's lives. Expressions and representations of women's experiences. (Not open to students who have completed both Women's Studies 10.7 and 10.8.)

## 33 Contemporary U.S. Women Writers: Diverse Cultural Perspectives

3 hours; 3 credits
Literature of selected contemporary Native American, African American, Latina, Asian American, and other women writers, analyzed from the perspective of feminist literary theories. A comparative course focusing on the literature of two or more groups. This course is the same as English 50.41. (Not open to students who completed Women's Studies 58 or

English 50.4 in fall, 1993, or spring, 1994.)
Prerequisite: one of the following: Women's Studies 10.8 or 12, Core Studies 6, English 1.

## 35 Women and the Medical System:

## A Feminist Perspective

3 hours; 3 credits
Modern medical systems and women's place as medical workers and consumers of medical services. History of women healers and health workers. Influences of race, class, ethnicity, and sexual orientation on illness and treatment of women. Politics of contraception, sterilization, abortion, and childbirth. Self-help care movement. This course is the same as Health and Nutrition Sciences 34.
Prerequisite: Women's Studies 10.7 or 10.8 or 12; Health and Nutrition Sciences 6.1; or permission of the coordinator.

## 36 Political Economy of Women in United States Society: Sex, Power, and Money

## 3 hours; 3 credits

Economic and political analysis of women's power in United States society. Women as paid workers in the formal economic structure and as unpaid workers in the parallel home economy. Social class, gender, and race in the allocation of economic and political power. Formal and informal challenges to the legal and political system. (Not open to students who completed Women's Studies 59 during the fall, 1981 semester.)
Prerequisite: Women's Studies 10.7 or 10.8 or 12; or permission of the coordinator.

## 36W Sex, Power, Money: Political Economy of Women in the United States

4 hours; 3 credits
Economic and political analysis of women's power in the United States society. Women as paid workers in the formal economic structure and as unpaid workers in the parallel home economy. Social class, gender, and race in the allocation of economic and political power. Formal and informal challenges to the legal and political system. Writingintensive section.
Prerequisites: Women's Studies 10.8 or 10.7 or 12; or permission of the coordinator; English 2.

## 39 Women and Politics in the United States

3 hours; 3 credits
Women and politics in the context of the United States of America. Gaining the right to vote; the Equal Rights Amendment; women as political leaders; racial and ethnic diversity of U.S. women; the "gender gap." Policy issues including the feminization of poverty and social welfare. This course is the same as Political Science 31.
Prerequisite: Women's Studies 10.7 or 12; or permission of the coordinator.

## 40 Gender and Political Theory

3 hours; 3 credits
Analysis of political concepts of identity, power, citizenship, race, nation and class in relation to gender and sexuality. Examination of the way ideologies of gender are deployed within the political theory tradition. Sameness/difference debate, identifying the forms of gender-based domination and resistance, and antiracist approaches to feminism. This course is the same as Political Science 78.3.
Prerequisite: Women's Studies 10.7 or 12 or permission of the coordinator.

## 41 Politics and Sexuality

3 hours; 3 credits
Examination of the theory and practice of lesbian, gay, bisexual, and transgender politics. Political analysis of the legal regulation of sexuality and gender, the emergence of modern civil rights movements of sexual minorities, and the discourses of liberation, assimilation, and destabilization deployed in those movements. This course is the same as Political Science 78.5.
Prerequisite: Women's Studies 10.7 or 12 or permission of the coordinator.

## 42 Women in Modern Europe

3 hours; 3 credits
History of women in Europe from the Industrial and French Revolutions to the present. Change in and interaction of women's economic, social, and political roles, and relationship of these to contemporary concepts of women's nature. This course is the same as History 27.8.
Prerequisite: Core Studies 4 or permission of the coordinator.

## 43 Daughters of the Promised Land: Women in American History

3 hours; 3 credits
The history of women in the United States, with emphasis on the last two centuries. Gender intersections with race, class, and ethnicity in the areas of work, personal relationships, and control over reproduction. Women in organizations of labor, religion, and politics, including the feminist movements. Changing images of women. (Not open to students who have completed History 43.9 topic: Daughters of the Promised Land: Women in American History.) This course is the same as History 43.14.
Prerequisite: Core Studies 4 or permission of the coordinator.

## 44 The Black Woman in America

3 hours; 3 credits
Interpretation and critical evaluation of the history, role, and image of the Black woman in America; emphasis on the burdens of racism, sexism, the economy, the Black "matriarch," health care, feminism and womanism, and contemporary issues. This course is the same as Africana Studies 44.6.
Prerequisite: one of the following: Africana Studies 0.2 or 27, Core Studies 3 or 9, Women's Studies 10.7 or 12.

## 45 Gender and the Information Age

## 3 hours; 3 credits

An interdisciplinary study of gender in cyberculture, science, and technology. The evolutions of gender and feminist theories as well as activism will be considered in terms of rapid advances in technology and sciences information. This course does not require prior knowledge of technoscience.
Prerequisite: Women's Studies 10.7 or 10.8 or 12.

## 46 Black Women's Fiction

3 hours; 3 credits
Identity of the modern Black woman novelist as seen in the works and lives of African American women novelists. Some cross-cultural comparisons with African and Caribbean women novelists. Readings of selected essays in Black feminist criticism. A research paper is required. This course is the same as Africana Studies 27 and English 64.4.
Prerequisite: one of the following: Africana Studies 24, 24.1, 24.2, 44.6; English 1, 1.2, 1.7; Core Studies 1; Women's Studies 10.7, 12, 33.

## 47 Philosophy and Feminism

3 hours; 3 credits
Philosophical feminism. Critical examination of current issues in feminist scholarship. Issues of discrimination, equality, and difference; women in relation to science, epistemology, and political and moral philosophy. This course is the same as Philosophy 15.2.
Prerequisite: Core Studies 10, or one philosophy course, or one women's studies course, or permission of the director.

## 48 Women in Film

3 hours; 3 credits
The various images of women in film from the beginning to the present. Readings and discussions of myths, fears, and fantasies that have led to the production of such images. The star system and its relationship to women performers. Screenings include films made by and about women. This course is the same as Film 22.
Prerequisite: Film 1 or permission of the chairperson.

## 49 African Women and Feminism

3 hours; 3 credits
Women's power, activism, and inequality on the basis of gender in the African continent. Explorations of gender-based inequality and the way African women exercise formal power. African women scholars' and activists' theoretical and practical analyses of feminism and the consequences of such analyses on gender relations in the continent. Theoretical readings and case studies. Course may have a national, regional, or continental focus. This course is the same as Political Science 78.35 and Africana Studies 44.9.
Prerequisite: Core Studies 3 or Core Studies 9, or Political Science 1.51 or 1.7, or Africana Studies 0.12 , or Women's Studies 10.7 or 12, or permission of the instructor.

## 51 History of Feminism

3 hours; 3 credits
Definitions of feminism; feminists in the Renaissance and early modern Europe; feminist demands arising from the French Revolution; early radical feminism in the United States, France, and the Germanies; liberal and Marxist feminism; women's movements from the 1850s to World War I in the West; the development of women's movements outside of Europe and America; imperialism, feminism, and national independence; the "second wave": women's liberation movements since 1968. This course is the same as History 30.3.
Prerequisite: Core Studies 4 or permission of the coordinator.

## 58 Special Topics in Humanities

## 3 hours; 3 credits

Selected topics in the humanities examined from the perspective of the study of women. Topics vary from term to term. Course description may be obtained in the program office before registration. Students may take Women's Studies 58 or 59 for credit twice, or 58 and 59 for credit once each, but may not repeat topics.
Prerequisite: Women's Studies 10.8 or 12 or Humanities 10.7.

## 59 Special Topics in Social Science

3 hours; 3 credits
Selected topics in the social sciences examined from the perspective of the study of women. Topics vary from term to term. Course description may be obtained in the program office before registration. Students may take Women's Studies 59 or 58 for credit twice, or 58 and 59 for credit once each, but may not repeat topics.
Prerequisite: Women's Studies 10.8 or 12 or Social Science Interdisciplinary Studies 10.7.

### 81.1 Interdisciplinary Project

Minimum of 9 hours conference and independent work; 3 credits
Independent or group project approved by a faculty committee. The project must involve more than one department in the college. Achievement evaluated by the participating faculty. Students may repeat the course once, but may not repeat topics.
Prerequisite: junior or senior standing; and Women's Studies 10.7 or 12 or Social Science Interdisciplinary Studies 10.7; and Women's Studies 10.8 or Humanities 10.7; and three electives from those listed under program requirements; and permission of the coordinator and at least one sponsoring faculty member.

## 82 Community Internship in Women's Studies

42 hours fieldwork; 1 credit
Community service experience working at a site approved by the program, linked with enrollment in one of the following courses:
Women's Studies 10.7 Women in the Social Sciences
Women's Studies 10.8 Women in the Arts
Women's Studies 32 Women's Traditional Arts
Women's Studies 33 Contemporary U.S. Women Writers
Women's Studies 34 Women's Choices
Women's Studies 35
Women's Studies 36
Women and the Medical System Political Economy of Women in United States Society
Women's Studies 37
Women's Studies 38
Women's Studies 58
Women's Studies 59

Women in the Cities
Special Topics in Humanities Special Topics in Social Science

Completion of at least one written assignment and 42 hours of community fieldwork to be evaluated by the instructor of the three-credit Women's Studies course to which this internship is attached.
Prerequisite: permission of the instructor of the three-credit Women's Studies course to which this internship is attached. Corequisite: enrollment in one of the following courses:
Women's Studies 10.7, 10.8, 32, 33, 34, 35, 36, 37, 38, 58, 59.

## 83 Senior Seminar

3 hours; 3 credits
Advanced seminar to study interdisciplinary theory and methodology applied to a selected theme. Colloquia and research and/or fieldwork. Senior thesis written individually or collectively. A student completing the course with distinction is recommended for honors. (Not open to students who have completed Humanities 83.1 or Social Science Interdisciplinary Studies 83.1.)
Prerequisite: Women's Studies 10.7 or 12 or Social Science Interdisciplinary Studies 10.7; or Women's Studies 10.8 or Humanities 10.7; and at least two courses in women's studies approved by the coordinator.

The following courses are inactive and will be offered only if there is sufficient demand:

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32 Women's Traditional Arts: Creation in the Arts,
    Crafts, and Music
34 Women's Choices: The Lesbian Experience
37 Women and Reproductive Rights
38 Women in the Cities
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## Adult Degree Programs

## Small College Program

Office: 1411 Boylan Hall
Telephone: 951-5525
Director: Marilyn Pedalino
Small College is a full-time or part-time degree-bearing program. Students may major in economics or accounting; business, management, and finance; education; English; sociology; psychology; computer and information science; health and nutrition sciences (B.A.); mathematics; philosophy (option 2); or political science.
The program offers its own courses in English (1.7 and 2.7) that fulfill Brooklyn College requirements for English Composition 1 and 2. Students must be screened for speech proficiency, and must satisfy the Brooklyn College language requirement and the requirements of their major department.

## Courses

§Independent work means not less than three additional hours of conferences, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

### 1.7 English Composition

2 hours recitation, 4 hours lecture, conference, and independent work§; 6 credits
Intensive study of the fundamentals of punctuation and grammar. Drill and practice in writing based on experience and reading of essays and stories. Introduction to expository development and the functions of rhetoric. Introduction to research. Themes and conferences. (Not open to students who are enrolled in or have completed Core Studies 1.5, 4.5, or 6.5 with a grade of C or higher. Not open to students who are enrolled in or have completed English 1 or 1.2 or 2.) Prerequisite: enrollment in the Small College Program.

### 2.7 Introduction to Literature

1 hour recitation, 4 hours lecture, conference, and independent work§; 5 credits
English and American fiction, drama, and poetry. Continued emphasis on writing clear expository prose. At least four papers. (Not open to students who are enrolled in or have completed Core Studies 1.5, 4.5 , or 6.5 with a grade of C or higher. Not open to students who are enrolled in or have completed English 2 or 2.4 or 3.4 or 4.4.)
Prerequisite: English 1.7.

# Special Baccalaureate Degree Program for Adults 

Office: 1411 Boylan Hall
Telephone: 951-5262

## Director: Marilyn Pedalino

Completion of the three, year-long, intensive seminars of the Special Baccalaureate Degree Program, including Communication/Humanities 10.3, 10.4, Social Science 10.3, 10.4 , and Science $10.3,10.4,10.5,10.6$, satisfies the core studies requirement of Brooklyn College. Students who fulfill the above requirement are exempt from Core Studies 1 through 10. Students enrolled in the Special Baccalaureate Degree Program who complete Communications and Humanities Seminar 10.3 and 10.4 are exempt from speech screening.

## Seminars

*Seminars marked (*) are not counted toward the requirement of no fewer than 18 credits in advanced courses for majors in this program.
§Independent work means not less than three additional hours each week of conference, research, independent reading, and writing as assigned by the instructor. The student's grade is determined in part by the successful completion of this independent work.
The Schedule of Classes published each term lists courses offered. Not all courses are offered each term.

## *Special Baccalaureate Communication

## Seminar for Adults 10.3, 10.4

Two terms. 1 hour recitation, 3 hours lecture, conference, and independent work§; 4 credits
Principles and practice of reading, writing, listening, and speaking. Communication skills studied in connection with papers and reports prepared in the adult seminars in humanities, social science, and science. Orientation to college study, written and oral communication, and detailed analysis of principles of effective reading and listening. Conducted in conjunction with Humanities 10.3, 10.4, Social Science 10.3, 10.4, and Science 10.3, 10.4, 10.5, 10.6. Students may take each course for credit once.
Prerequisite: enrollment in the Special Baccalaureate Degree Program for Adults.
*Special Baccalaureate Humanities 10.3, 10.4
An Integrated Study of the Arts and Literature
Two terms. 1 hour recitation, 7 hours lecture, conference, and independent work§; 8 credits
Examples of painting, sculpture, architecture, music, and literature are used to illustrate the following topics: the quality of individuality, the role of emotion, the idea in the humanities, the pleasures of order, aesthetic logic, the sense of evolution, symbolism, self-extension, vision, and the sense of history.
Prerequisite: enrollment in the Special Baccalaureate Degree Program for Adults.

## Special Baccalaureate Humanities 10.5, 10.6 Studies in the Arts of America

Two terms. 4 hours and independent work§; 4 credits Intensive study of American arts as they express the values of American culture. Four credits may be counted toward the requirement of no fewer than 18 credits in advanced courses in one of the following departments: Departments of Art, Classics, Comparative Literature, Speech, Theater, Television and Radio. Students may take each course for credit once.
Prerequisite: Special Baccalaureate Communication 10.4, Special Baccalaureate Humanities 10.4, Special Baccalaureate Social Science 10.4, Special Baccalaureate Science 10.6, and nine credits in advanced courses in art, classics, comparative literature, English, modern languages and literatures, music, philosophy, speech, theater, or television and radio.
Prerequisite: enrollment in the Special Baccalaureate Degree Program for Adults.

## *Special Baccalaureate Social Science <br> \section*{Seminar for Adults 10.3, 10.4}

Two terms. 1 hour recitation, 7 hours lecture, conference, and independent work§; 8 credits
Functional, historically oriented analysis of social phenomena. Basis for understanding social phenomena past and present and the cultural roots of their values. Introduction to social science. Nature of personality. Nature of society. Contemporary American society. Nature of socialization in the United States. The individual in society. Critical issues.
Prerequisite: enrollment in the Special Baccalaureate Degree Program for Adults.

## Special Baccalaureate Social Science

Studies in Social Science Investigations 10.6
4 hours and independent work§; 4 credits
Intensive study of scholarly approaches to the individual's basic problems in the social science disciplines. Four credits may be counted toward the requirement of no fewer than 18 credits in advanced courses in one of the following departments: Departments of Anthropology, History, Political Science, Sociology.
Prerequisite: Special Baccalaureate Social Science 10.4, Special Baccalaureate Communication 10.4, Special Baccalaureate Humanities 10.4, Special Baccalaureate Science 10.6, and nine credits in advanced courses in the sciences.

## *Special Baccalaureate Science

Seminar for Adults 10.3-10.4, 10.5-10.6
Two terms. Five hours of combined lecture, recitation, workshop and laboratory work and 9 hours of individual supervised study each week; 6 credits
Content, methodology, and interplay of the natural sciences. Interaction of the natural sciences, mathematics, and philosophy. Mathematical concepts and techniques. Physical and chemical properties of matter. History and structure of the earth. Motion, forces, and energy. Atomic structure and chemical properties. Carbon compounds. Structure and functions of living organisms. The human body. Inheritance and evolution. History of organic development.
Prerequisite: enrollment in the Special Baccalaureate Degree Program for Adults.

# Instruction-Related Departments 

Library<br>Office: Brooklyn College Library<br>Telephone: 951-5336<br>Chairperson: Barbra Higginbotham Deputy Chairperson: William M. Gargan<br>Professors: Cucchiara, Gargan, Higginbotham, Vaughn, Wild; Associate Professors: Cramer, Deutch, Evans; Iskenderian, Raphael, Weintraub;<br>Assistant Professors: Bowdoin, Corpus, Regalado, Yu;<br>Instructor: Berger.<br>The Brooklyn College Library provides the professional services necessary for the acquisition and organization of recorded knowledge and for making it available for use by students and faculty in the teaching and research programs of the college. A further service is individual and group instruction by the professional staff in the effective use of the library's resources.<br>Additional information about the library is in the chapter "Academic Resources and College Facilities" in this Bulletin. Together, the Department of the Library and the Department of History offer a minor in archival studies and community documentation.

## Requirements for a minor in archival studies and community documentation

Fifteen credits
History 69.1 and 69.2.
One course from a department other than the student's major chosen from the following: Africana Studies 41, American Studies 61, Anthropology and Archaeology 2.21 or 37, Art 15.2, History 43.16, 44, or 44.1, Judaic Studies 48.5, Music 3, Political Science 25 or 38 or 75.2, Psychology 10, Puerto Rican and Latino Studies 32.5, Sociology 26.
History 78.1 and 78.2.

## Office of the Registrar

Office: 1118 Boylan Hall
Telephone: 951-5468
Registrar: Joan Antonicelli
Associate Registrars: Johana. Rivera.
Assistant Registrars: Agha, Balogh, Hamilton, Hegner, M. Rivera, Schneider.

The Office of the Registrar prepares the Schedule of Classes, registers students, maintains academic records, evaluates transfer credits, determines eligibility for graduation, certifies attendance, and issues transcripts.

# Student Rights and College Rules 

## Equal opportunity policy

It is the policy of the Board of Trustees of The City University of New York and of Brooklyn College to provide, for all persons, equal educational and employment opportunities in a working and learning environment in which students and employees are able to realize their full potential as productive members of the college community. To this end, it is the college's policy that its educational and employment programs will be administered without regard to race, color, national or ethnic origin, religion, gender, gender identity, sexual orientation, age, alienage or citizenship, disability or veteran status, or other factors irrelevant to productive participation in the programs of the college. Further, in keeping with local, state, and federal mandates and recognizing the many benefits that accrue from a community of diverse experience and cultural heritage, the college pledges to act affirmatively in providing employment opportunities for qualified women, racial and ethnic minorities, Vietnam-era veterans, and individuals with disabilities. All Brooklyn College employeesadministrators, members of the faculty, and staff-and students are expected to cooperate fully in meeting these legal and ethical mandates.

Inquiries or complaint-related matters pursuant to any of the equal opportunity laws, including Executive Order 11246, Title VII of the Civil Rights Act, the Rehabilitation Act of 1973, the Vietnam Era Veterans' Readjustment Act of 1974, the Americans with Disabilities Act, Title IX of the Education Amendments, and others, may be addressed to the Office of Affirmative Action, Compliance, and Diversity, 2147 Boylan Hall (telephone: 951-4128). Students with disabilities may wish, in the first instance, to contact the coordinator of the Services for Students with Disabilities (SFSWD) Program, 1303 James Hall (telephone: 951-5363).

## Policy against sexual harassment

The policy of the City University of New York is to promote a cooperative work and academic environment in which there is mutual respect among students, faculty, and staff. Harassment on the basis of gender is inconsistent with this objective and contrary to the university's policy of equal employment and educational opportunity. It is a violation of this policy for any member of the university community to engage in sexual harassment or for any member of the university
community to take action against an individual for reporting sexual harassment. The university's policy against sexual harassment is carried out by Brooklyn College through the Sexual Harassment Advisory Panel and the Sexual Harassment Education Committee, which consist of students and members of the faculty, administration, and staff. There are both formal and informal procedures for dealing with complaints or concerns of sexual harassment. An individual may contact any member of the panel for an informal, confidential conversation.

A complete statement of the university's sexual harassment policy and procedures and the names of members of the Sexual Harassment Advisory Panel may be obtained in the Brooklyn College Library (first floor), the Office of the Dean of Undergraduate Studies, the Office of the Dean for Student Life, the Office of Affirmative Action, Compliance, and Diversity, or from Assistant Professor Miriam Deutch, coordinator of the Sexual Harassment Advisory Panel, 421 Library (telephone: 951-5221).

## Policy on academic integrity

Academic dishonesty of any type, including cheating and plagiarism, is unacceptable at Brooklyn College. Cheating is any misrepresentation in academic work. Plagiarism is the representation of another person's work, words, or ideas as your own. Students should consult the Brooklyn College Student Handbook for a fuller, more specific discussion of related academic integrity standards. Faculty members are encouraged to discuss with students the application of these standards to work in each course. Academic dishonesty is punishable by failure of the "test, examination, term paper, or other assignment on which cheating occurred" (Faculty Council, May 18, 1954). In addition, disciplinary proceedings in cases of academic dishonesty may result in penalties of admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion, complaint to civil authorities, or ejection. (Adopted by Policy Council, May 8, 1991.)

## Sale of term papers

Title I, Article 5, Section 213-b of the New York State Education Law provides in pertinent part that: "No person shall, for financial consideration, or the promise of financial consideration, prepare, offer to prepare, cause to be prepared, sell or offer for sale to any person any written material which the seller knows, is informed, or has reason to believe is intended for submission as a dissertation, thesis, term paper, essay, report, or other written assignment by a student in a university, college, academy, school, or other educational institution to such institution or to a course, seminar, or degree program held by such institution."

## Nonattendance because of religious beliefs

Title I, Article 5, Section 224-a of the New York State Education Law provides that:

"1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he [or she] is unable, because of his [or her] religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.
"2. Any student in an institution of higher education who is unable, because of his [or her] religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.
"3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his [or her] religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he [or she] may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.
"4. If classes, examinations, study or work requirements are held on Friday after four o'clock post meridian or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.
" 5 . In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his [or her] availing himself [or herself] of the provisions of this section.
" 6 . Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his [or her] rights under this section."

## Nondiscrimination for students with disabilities

It is the policy of the City University of New York to comply with Section 504 of the Rehabilitation Act of 1973 as amended, the Americans with Disabilities Act (ADA) of 1990 as amended, state legislation (Executive Law 296), local law, and applicable regulations promulgated pursuant to these laws to prohibit the exclusion of qualified students with disabilities, solely by reason of their disability, from participation in college programs or activities. Brooklyn College, as a unit of the City University, does not and will not discriminate against qualified students with disabilities in access to its programs and/or services. Disability, for purposes of this policy, is defined to mean a "physical or mental impairment that substantially limits one or more major life activities," such as walking, seeing, hearing, speaking, breathing, or learning, for example.

Brooklyn College will operate its programs and activities so that these programs and activities, when viewed in their entirety, will provide meaningful accessibility to qualified students with disabilities in order to maximize the student's opportunity to meet the challenges of higher education. Pursuant to this policy, the college will (1) provide individual academic adjustments and auxiliary educational aids and (2) make structural modifications of existing facilities if no other feasible way exists to make a program or activity accessible, as long as no individual academic adjustment, auxiliary educational aid, or structural modification would (1) fundamentally alter the nature of the program or activity or (2) result in an undue financial burden to the college.

Regulations that would have the effect of limiting the participation of students with disabilities in the educational program, such as a general rule that would prohibit the use of tape recorders or braillers in the classroom or dog guides in campus buildings, are prohibited.

Students who need individual accommodations in order to participate more fully in college programs or services pursuant to this policy should direct their needs to the Services for Students with Disabilities (SFSWD) Program, 1303 James Hall (telephone: 951-5363). The SFSWD Program serves as the primary program for assisting students with disabilities to integrate successfully into the Brooklyn College community and for making determinations of what will constitute appropriate academic adjustments.

In addition, through the SFSWD Program, students have access to the Frank and Mamie Goldstein

Resource Center, a special resource center with such assistive technology as voice recognition, voicesynthesized document and screen reading, and screen and document magnification for use on an individual or group basis. Similar equipment is also available at the Brooklyn College Library, the Atrium Computer Lab (1306 Plaza Building), and the Topfer Library Café.

If a requested academic adjustment cannot be implemented or if a student believes that she or he is being discriminated against on the basis of a handicap or disability, the student should contact the coordinator of the Services for Students with Disabilities Program. Students may also consult with the Office of Affirmative Action, Compliance, and Diversity (AACD), 2147 Boylan Hall (telephone: 951-4128), which will, as appropriate, refer the matter to SFSWD, attempt to resolve the dispute among the parties, or accept a formal complaint in accordance with applicable procedures. A complete statement of the college's policy and procedures may be obtained from the offices of SFSWD or AACD.

## Access to student records

Rights of access. Pursuant to the Family Educational Rights and Privacy Act of 1974 and the Board of Trustees of The City University of New York Student Records Access Policy of April 1979, Brooklyn College students have "the right to inspect and review any and all official records, files, and data directly related" to them and to deny access by others without written consent of the student except under limited and specified circumstances. This right pertains to any present or former student but not to candidates for admission.

Procedures. A student who wishes to inspect and review his or her educational records may make the request to the Student Records Access Officer of the college or to the person in charge of the office who is the official custodian of the record in question, but a request pertaining to records in the custody of a teacher or counselor should be made directly to that teacher or counselor. Requests made to the Student Records Access Officer in the Office of the Registrar must be made by completing a request form. Requests for records in other locations may be oral or written. Requests will be granted or denied within fifteen days of receipt of the request.

If the request is granted, the student will be notified of the time and place where records may be inspected. If the request is denied or not responded to within fifteen days, the student may appeal. Additional information regarding the appeal procedure will be provided to the student if a request is denied.

A student may request an amendment of education records that the student believes are inaccurate or misleading. In this case, the student should write to the college official who is responsible for the record, clearly identify the part of the record that is in question, and specify why it is inaccurate or misleading. If the college decides not to amend the record, the student will be notified of the decision and advised of his or her right to a hearing. When the student is notified, additional information will be provided regarding the hearing procedures.

Directory information (name, address, telephone listing, date and place of birth, major field of study, class, year or date of expected graduation, participation in officially recognized activities and sports, height and weight of members of athletic teams, dates of attendance, degrees and awards received, and the most recent educational agency or institution attended by the student) may be released to persons having a legitimate interest in this information.

A student may require that any or all of the information set forth above may not be released without the student's prior written consent if the student completes a form that is available in the Office of the Registrar. A student's education records, other than directory information stated above, shall be released without the student's consent only to university officials-including trustees, college officials, faculty, and staff-with a legitimate educational interest. Upon request, the college may disclose education records without consent to officials of another school in which a student seeks or intends to enroll.

Brooklyn College's policies and procedures are the means by which policies of the Board of Trustees of The City University of New York are implemented. The complete texts of the revised Board of Higher Education policy as adopted April 23, 1979, and the Family Educational Rights and Privacy Act of 1974, as amended, are available for review in the Office of the Registrar, 1118 Boylan Hall.

## Policy on withholding student records. In

 accordance with a resolution adopted by the Board of Trustees of The City University of New York on April 23, 1979, and amended on March 25, 1985, it was resolved that:"Students who are delinquent and/or in default in any of their financial accounts with the college, the University, or an appropriate State or Federal agency for which the University acts as either a disbursing or certifying agent, and students who have not completed exit interviews, as required by the National Direct Defense Student Loan (now Perkins Loan) Program
and the Nursing Student Loan Program, are not to be permitted to complete a registration, or issued a copy of their grades, a financial aid transcript, a transcript of academic record, certificate or degree, nor are they to receive funds under the Federal campus-based student assistance programs or the Pell (Basic) Grant Program unless the designated officer, in exceptional hardship cases and consistent with Federal and State regulations, waives in writing the application of this regulation."

## Grievance procedures

Grievance procedures for specific college rules and regulations differ depending on the nature of the complaint. Any student who has a grievance against another member of the college community may receive help with processing an informal complaint or in filing a petition of complaint in the Office of the Dean for Student Life, 2113 Boylan Hall.

## Rules and regulations for the maintenance of public order pursuant to Article 129A of the Education Law

Adopted by the Board of Higher Education June 23, 1969, and November 23, 1970, these rules and regulations were amended October 27, 1980; May 22, 1989; and June 25, 1990, by the Board of Trustees of The City University of New York.
"The tradition of the University as a sanctuary of academic freedom and center of informed discussion is an honored one, to be guarded vigilantly. The basic significance of that sanctuary lies in the protection of intellectual freedoms: the rights of professors to teach, of scholars to engage in the advancement of knowledge, of students to learn and to express their views, free from external pressures or interference. These freedoms can flourish only in an atmosphere of mutual respect, civility, and trust among teachers and students, only when members of the University community are willing to accept self-restraint and reciprocity as the condition upon which they share in its intellectual autonomy.
"Academic freedom and the sanctuary of the University campus extend to all who share these aims and responsibilities. They cannot be invoked by those who would subordinate intellectual freedom to political ends or who violate the norms of conduct established to protect that freedom. Against such offenders the University has the right, and indeed the obligation, to defend itself. We accordingly announce the following rules and regulations to be in effect at each of our colleges, which are to be administered in accordance with the requirements of due process as provided in the Bylaws of the Board of Higher Education.
"With respect to enforcement of these rules and regulations, we note that the Bylaws of the Board of Higher Education provide that: The President. The president, with respect to his [or her] educational unit, shall:
"'a. Have the affirmative responsibility of conserving and enhancing the educational standards of the college and schools under his [or her] jurisdiction;
" 'b. Be the advisor and executive agent of the Board and of his [or her] respective College Committee and as such shall have the immediate supervision with full discretionary power in carrying into effect the bylaws, resolutions and policies of the Board, the lawful resolutions of any of its committees, and the policies, programs and lawful resolutions of the several faculties;
" 'c. Exercise general superintendence over the concerns, officers, employees, and students of his [or her] educational unit. . .

## "I. Rules

"1. A member of the academic community shall not intentionally obstruct and/or forcibly prevent others from the exercise of their rights. Nor shall he [or she] interfere with the institution's educational processes or facilities, or the rights of those who wish to avail themselves of any of the institution's instructional, personal, administrative, recreational, and community services.
" 2 . Individuals are liable for failure to comply with lawful directions issued by representatives of the University/college when they are acting in their official capacities. Members of the academic community are required to show their identification cards when requested to do so by an official of the college.
"3. Unauthorized occupancy of University/college facilities or blocking access to or from such areas is prohibited. Permission from appropriate college authorities must be obtained for removal, relocation, and use of University/college equipment and/or supplies.
"4. Theft from or damage to University/college premises or property, or theft of or damage to property of any person on University/college premises is prohibited.
" 5 . Each member of the academic community or an invited guest has the right to advocate his [or her] position without having to fear abuse, physical, verbal, or otherwise, from others supporting conflicting points of view. Members of the academic community and other persons on the college grounds shall not use language or take actions reasonably likely to provoke or encourage physical violence by demonstrators, those demonstrated against, or spectators.
"6. Action may be taken against any and all persons who have no legitimate reason for their presence on any campus within the University/college, or whose presence on any such campus obstructs and/or forcibly prevents others from the exercise of their rights or interferes with the institution's educational processes or facilities, or the rights of those who wish to avail themselves of any of the institution's instructional, personal, administrative, recreational, and community services.
"7. Disorderly or indecent conduct on University/ college-owned or -controlled property is prohibited.
" 8 . No individual shall have in his [or her] possession a rifle, shotgun, or firearm or knowingly have in his [or her] possession any other dangerous instrument or material that can be used to inflict bodily harm on an individual or damage upon a building or the grounds of the University/college without the written authorization of such educational institution. Nor shall any individual have in his [or her] possession any other instrument or material which can be used and is intended to inflict bodily harm on an individual or damage upon a building or the grounds of the University/college.
" 9 . Any action or situation which recklessly or intentionally endangers mental or physical health or involves the forced consumption of liquor or drugs for the purpose of initiation into or affiliation with any organization is prohibited.
"10. The unlawful manufacture, distribution, dispensation, possession, or use of illegal drugs or other controlled substances by University students or employees on University premises or as part of any University/college activities is prohibited. Employees of the University must also notify the College Personnel Director of any criminal drug statute conviction for a violation occurring in the workplace not later than five (5) days after such conviction.
"11. The unlawful possession, use, or distribution of alcohol by students or employees on University/college premises or as part of any University/college activities is prohibited.

## "II. Penalties

"1. Any student engaging in any manner in conduct prohibited under substantive Rules $1-11$ shall be subject to the following range of sanctions as hereafter defined in the attached Appendix: admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion, ejection, and/or arrest by the civil authorities.
"2. Any tenured or non-tenured faculty member, or other member of the instructional staff, or member of the classified staff engaging in any manner in conduct prohibited under substantive Rules 1-11 shall be subject to the following range of penalties: warning, censure, restitution, fine not exceeding those permitted by law or by the Bylaws of The City University of New York or suspension with/without pay pending a hearing before an appropriate college authority, dismissal after a hearing, ejection, and/or arrest by the civil authorities, and, for engaging in any manner in conduct prohibited under substantive rule 10, may, in the alternative, be required to participate satisfactorily in an appropriately licensed drug treatment or rehabilitation program.
"A tenured or non-tenured faculty member or other member of the instructional staff or member of the classified staff charged with engaging in any manner in conduct prohibited under substantive Rules $1-11$ shall be entitled to be treated in accordance with applicable provisions of the Education Law, or the Civil Service Law, or the applicable collective bargaining agreement, or the Bylaws or written policies of The City University of New York.
"3. Any visitor, licensee, or invitee engaging in any manner in conduct prohibited under substantive Rules 1-11 shall be subject to ejection and/or arrest by the civil authorities.
"4. Any organization which authorizes the conduct prohibited under substantive Rules $1-11$ shall have its permission to operate on campus rescinded.
"Penalties 1-4 shall be in addition to any other penalty provided by law or The City University.

## "Appendix

"Sanctions defined:
"A. Admonition. An oral statement to the offender that he [or she] has violated University rules.
"B. Warning. Notice to the offender, orally or in writing, that continuation or repetition of the wrongful conduct, within a period of time stated in the warning, may be cause for more severe disciplinary action.
"C. Censure. Written reprimand for violation of specified regulation, including the possibility of more severe disciplinary sanction in the event of conviction for the violation of any University regulation within a period stated in the letter of reprimand.
"D. Disciplinary Probation. Exclusion from participation in privileges or extracurricular University activities as set forth in the notice of disciplinary probation for a specified period of time.
"E. Restitution. Reimbursement for damage to or misappropriation of property. Reimbursement may take the form of appropriate service to repair or otherwise compensate for damages.
"F. Suspension. Exclusion from classes and other privileges or activities as set forth in the notice of suspension for a definite period of time.
"G. Expulsion. Termination of student status for an indefinite period. The conditions of readmission, if any is permitted, shall be stated in the order of expulsion.
"H. Complaint to civil authorities.
"I. Ejection.
"Resolved, That a copy of these rules and regulations be filed with the Regents of the State of New York and with the Commissioner of Education.
"Resolved, That these rules and regulations be incorporated in each college bulletin."

## Statement of policy on the presence of illegal substances on campus

## Revised 1996

The use, sale, or transfer of illegal substances will not be tolerated at Brooklyn College. Unlawful possession or sale of drugs is a crime, subject, upon criminal conviction, to prison sentences of up to life imprisonment. No member of the academic community who may be liable for criminal prosecution and conviction may receive special consideration due to his or her status within the college. The campus is not a sanctuary, and should members of the college community violate criminal laws on illicit use, sale, or transfer of drugs, whether on or off campus, they must accept the full legal consequences for their actions.

The police and other law enforcement agencies are required to investigate violations of the law wherever these may occur. Search warrants may be obtained and undercover agents placed on this campus without college approval or knowledge.

Apart from the issue of criminal illegality, the presence of illegal drugs on campus constitutes a disruptive situation within the college community. Muggings and thefts, for example, are reported to increase proportionately in association with drug traffic. An individual who becomes involved with illegal drugs establishes evidence that he or she is in at least indirect contact with an explicitly criminal element. These contacts invite intrusions into the college community by informers to law enforcement agencies and others, thereby undermining the trust and free flow of ideas implicit to the college community.

The college has the authority to prevent disruptive situations that may detract from its educational purposes. Pursuant to that authority, the college hereby serves notice that it will undertake disciplinary proceedings against any member of the academic community who uses, sells, or transfers illegal drugs on campus.

## Policy

I. The use, sale, or transfer of illegal substances on campus is disruptive and a violation of campus policy. Infractions of this policy will be enforced as follows:
A. Students accused of violating this policy will be subject to discipline with procedural due process outlined in Article XV of the Bylaws of the Board of Trustees.
B. Faculty members accused of violating this policy will be subject to discipline with procedural due process outlined in Article VII of the Bylaws of the Board of Trustees.
College disciplinary proceedings are not criminal proceedings, nor are they intended to replace the function of criminal proceedings. The primary concern of the college is to provide and maintain those conditions that enhance the educational process. Any member of the college community who is found to have violated this Brooklyn College Statement of Policy is subject to the following penalties prescribed in the Bylaws of the Board of Trustees:
a. Admonition,
b. Warning,
c. Censure,
d. Disciplinary Probation,
e. Restitution,
f. Suspension,
g. Expulsion,
h. Complaint to Civil Authorities, and
i. Ejection.
II. The college recognizes the personal difficulties and complexities that are associated with drug and alcohol use. Members of the college community in need of assistance are invited and encouraged to use the confidential therapeutic and counseling services that are available. Professional substanceabuse counselors together with trained students have proved of great assistance over the past years in drug and alcohol rehabilitation. An appointment for these services may be obtained by calling the Personal Counseling and Career Services Center, 1303 James Hall (telephone: 951-5363).
III.A. Persons who are not members of the college community who use illegal substances on campus will be taken to the Department of Campus and Community Safety Services for appropriate action. This could include notifying their schools, parents, other officials on campus, and the police.
B. Any person making a sale of illegal substances on campus will be subject to arrest.

## Student immunization requirement

New York State Law requires all students to submit documentation proving immunity to measles, mumps, and rubella. Information on procedure for proving immunity is in the section "Admission" in this Bulletin.

## Smoking regulations

The following resolution on smoking policy was adopted on September 29, 1994, by the Board of Trustees of The City University of New York:
"Smoking is prohibited inside all facilities owned, leased, or operated by the City University of New York, effective January 1, 1995."

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| Benito Ortolani Theater | Stanley Salthe Biology |
| Alan Ostrom English | Harry Saltzman Music |
| Robert G. Owens Education | Maria E. Sanchez Puerto Rican and Latino Studies |
| Willie Page Africana Studies | Surendra Saxena Geology |
| Nicholas Papayanis History | Alden R. Sayres Physics |
| Bruce Park English | Don Scarborough Psychology |
| Fan Parker Modern Languages | Neil Schaeffer English |
| Charles Parkhurst Speech | Susan Schaeffer English |
| Kantilal C. Patel Chemistry | Israel Schepansky Judaic Studies |
| Herbert Perluck English | Richard A. Schere Education |
| Henry G. Phillipps Art | Lillian Schlissel English |
| Bernard Pollack Health and Nutrition Sciences | Nathan Schmukler Economics |
| Orest Popovych Chemistry | Louis Schoffman Modern Languages |
| Bruce G. Porter English | Frederick L. Schuster Biology |
| Shaista Rahman Educational Services | Melvin M. Scult Judaic Studies |


| Bernard Seidenberg Psychology |
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| Betty-Carol Sellen Library |
| Melvin Selsky Biology |
| Emile H. Serposs Music |
| Robert G. Shadick Education |
| Victor W. Shapiro Education |
| Jacob G. Sharefkin Chemistry |
| John A. Shimer Geology |
| Edward Shoenthal Economics |
| Joseph I. Shulim History |
| Abraham Shumsky Education |
| Arthur Simon Modern Languages and Literatures |
| Beth J. Singer Philosophy |
| George Skorinko Physics |
| Helene Sloan Health and Nutrition Sciences |
| Joseph M. Smith Physical Education |
| Robert Smith Education |
| Hobart A. Spalding History |
| Peter Spielberg English |
| Claire Sprague English |
| Elmer Sprague Philosophy |
| Ursula Springer Education |
| Margaret M. Starkey English |
| Bernard Starr Education |
| Leon S. Stein Library |
| Pat Sterbenz Computer and Information Science |
| Solomon Stone Student Affairs and Services |
| Sylvia Stone Art |
| Herbert Stroup Sociology |
| Philippa Strum Political Science |
| Edward Sturm Geology |
| Elvira Tarr Education |
| Paul Taylor Philosophy |
| Albert Terris Art |
| Carroll C. Trail Physics |

Jack Traub Economics
Carol L. Tretkoff Computer and Information Science
Robert Tripp Chemistry
Sherman Van Solkema Music
Kia K. Wang Geology
Margaret Waters Education
Solomon Weinstock Psychology
Herbert Weiss Political Science
Norman Weissberg Psychology
Katherine West Economics
Arthur Weston Physical Education
Charles Whipple Student Affairs and Services
Grace A. Wieder Chemistry
George Wiepert Student Affairs and Services
Robert C. Williams Television and Radio
Mary Wiseman Philosophy
Carl Withner Biology
Howard B. Wolman Classics
Elizabeth K. Worley Biology
Madeline Yourman Library
Henry Yuska Chemistry
Helen G. Zagona Modern Languages and Literatures
Peter Zaneteas Classics
Herman Zieger Chemistry

## Distinguished Professors

Lennart Anderson Art
Michael Cunningham English
Jack Flam Art
Gerald M. Friedman Geology
Samuel L. Leiter Theater
Rohit Parikh Computer and Information Science
Fred H. Pollak Physics
Theodore Raphan Computer and Information Science
Anthony Sclafani Psychology
Carl M. Shakin Physics
Broeklundian ProfessorsBonnie Sour Anderson History, 2001-2006David Berger History, 2003-2008
Edwin G. Burrows History, 2001-2006
Lesley Davenport Chemistry, 2003-2008
Frederick P. Gardiner Mathematics, 2003-2008
Clement Mbom Modern Languages and Literatures,2003-2008
Arthur Reber Psychology, 2003-2008
Viraht Sahni Physics, 2001-2006Sharon Zukin Sociology, 2003-2008
Matthew J. Fantaci Professor in Modern Languages and LiteraturesWilliam Sherzer Modern Languages and Literatures,2002-05
Sylvia Fine Professor in Musical Theater
Vacant
Donald I. Fine Professor in Creative Writing
Mac Wellman English
Murray Koppelman Professor
Hector A. Carrasquillo Puerto Rican and Latino Studies,2003-05
Rochelle Cherry Speech Communication Arts and Sciences,2003-04
Yedidyah Langsam Computer and Information Science,2004-06
Donald Kramer Visiting Professor in the Humanities
Vacant
Jacque Edward Levy Professor in Analytical Chemistry
Levy-Kosminsky Professor in Physical ChemistryIra Levine 2003-04
Daniel M. Lyons Visiting Professor in American History
Vacant
George and Beatrice Schwartzman Professor in Analytical Chemistry ..... Vacant
Bernard H. Stern Professor in Humor
Daniel Gurskis Film, 2003-05
Claire and Leonard Tow Professors
George Cunningham Africana Studies, 2002-04
Tania León Music, 2002-04
Mac Wellman English, 2002-04
Belle Zeller Visiting Professor in Public Policy and AdministrationVacant
Robert L. Hess Scholar in Residence
Vartan Gregorian, 1993-94
Ann Douglas, 1995-96
James S. Langer, 1996-97
Daniel Miller, 2000-01

| Associates for Film | Lindsay Law |
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| Marty Abrahams | Eileen Lottman |
| Barbara Barrie | Michael Lynne |
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| Nat Boxer | Paul Newman |
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| Marion Dougherty | Alain Robbe-Grillet |
| Rosanne Ehrlich | Donald Rosenfeld |
| Leon Falk | Monty Ross |
| Sid Finger | Nina Sadowsky |
| Tina Freedman | Andrew Sarris |
| Devery Freeman | Henry Seggerman |
| Seth Freeman | Susan Seidelman |
| Richard Friedman | Hal Seiden, '42 |
| Roy Furman | Joan Micklin Silver |
| James Glickenhaus | Ira Spiegel |
| Molly Haskell | Jean Vallier |
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Gregory Peterkin, '95
Anthony Phifer, '92
Dorothy Salwen Rabinoff, '51
Samuel Rabinoff, '49
Harriet Levy Rosenblum, '76
Marilyn Levy Sarhis, ' 53
Hal Schaffer, '56
Martin P. Schreibman, '56
Helen Kreiman Schwartz, '40
Ronald Schweiger, '70
Helen Zegerman Schwimmer, '69
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## Faculty and Staff

The date of initial appointment at Brooklyn College follows the listing for each faculty and staff member.

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# Accessible Facilities for Persons with Disabilities 

## Boylan Hall

Restrooms: Women: students, 0403 near bookstore, 2105, 5107, and 6111; staff, 2142.
Men: students, 0401, 2216, 5108, and 6113; staff, 2124.

Telephones: Volume control and wheelchair accessible: basement level, near room 0167, 2163A, 4163A, and near 6111.
Ramp: Main entrance on Quadrangle.
Automatic doors: Main entrance on Quadrangle.
Elevator: "B" near main entrance.

## Gershwin Hall

Restrooms: 06A, 011, 080, and 083.
Telephones: Wheelchair accessible: off theater lobby near 149.

Infrared listening devices: 092 Levenson Recital Hall; 143 Gershwin Theater.
Seating: Wheelchair seating locations with companion seating; aisle transfer seating.
Ramps: Theater entrance on Campus Road (open for performances only); building entrance on campus.
Automatic doors: Building entrance on campus.
Elevator: Building lobby.

## Ingersoll Hall

Restrooms: See Ingersoll Hall Extension.
Telephones: Volume control; 1165, 2105A, and near 2163A.

Infrared listening devices: 1310 and 2310.
Ramp: Main entrance on Quadrangle.
Automatic doors: Main entrance on Quadrangle.
Elevator: Near main entrance.

## Ingersoll Hall Extension

Restrooms: Women: students, 138; staff, 112.
Men: students, 140; staff, 110.
Telephones: Volume control: 136, 322b, and 338.
Wheelchair accessible: near 136, 439, and 525.
Infrared listening devices: 148.
Ramps: Bedford Avenue entrance and near Lily Pond.
Elevators: All.

## James Hall

Restrooms: Women: students, 1406; staff, 1605.
Men: students, 1312 and 1402; staff, 1601.
Telephones: Wheelchair accessible: near 1602;
with volume control: 2602.
Ramp: See Plaza Building.
Automatic doors: Second-floor exit to Plaza Deck.
Elevators: All. James Hall elevators provide access to Plaza Building, Plaza Deck, Roosevelt Hall, and Roosevelt Hall Extension. At the basement and first-floor levels of Plaza Building and Roosevelt Hall, Roosevelt Hall Extension can be accessed via interior ramp near the Bedford Avenue entrance to Roosevelt Hall.

## La Guardia Hall—Brooklyn College Library

Restrooms: All floors.
Telephones: Volume control and wheelchair accessible. Ramp: Main entrance on Quadrangle.
Automatic doors: Main entrance on Quadrangle. Elevators: All.

Infrared listening devices: Auditorium.

## Plaza Building

Restrooms: Women: 1119; men; 1121. Also basement level and men's and women's locker room, near Plaza Pool.
Telephones: Volume control and wheelchair accessible: outside main building entrance.
Ramps: Entrance off Bedford Avenue provides access to Plaza Building, Roosevelt Hall, Roosevelt Hall Extension, and James Hall.
Elevator: Elevator off Bedford Avenue ramp entrance provides access to the basement and first floor of Plaza Building. See also James Hall.

## Quadrangle

Ramps: Corner between La Guardia Hall and Ingersoll Hall; corner between La Guardia Hall and Boylan Hall.

## Roosevelt Hall

Restrooms: Health Clinic, 114. Women, 104. Men, 124.
Telephones: See Roosevelt Hall Extension.
Ramp: See Plaza Building and Roosevelt Hall Extension.
Automatic doors: Basement-level entrance, near loading dock and parking lot.
Elevator: East-side elevator opposite 004 and 108 provides access to Roosevelt Hall and Roosevelt Hall Extension.

## Roosevelt Hall Extension

Restrooms: Women: students, 202; students and staff, 405.
Men: students, 209; students and staff, 409.
Telephones: Volume control and wheelchair accessible: near 120.
Elevators: West-side elevator, opposite 005 and 102, provides access to Roosevelt Hall Extension only. East-side elevator, opposite 004 and 123, provides access to Roosevelt Hall and Roosevelt Hall Extension.

## Student Center

Restrooms: Basement level; second, fourth, fifth, and sixth floors; and Penthouse.

Telephones: Volume control: basement level and second, third, fifth, and sixth floors.

Ramp: Entrance near Campus Road and Amersfort Place.

Elevators: All.

## Whitehead Hall

Restrooms: Women: students, 108; staff, 308.
Men: students, 109; staff, 310.
Telephones: Volume control: first-floor lobby, near stairway, near 222. Wheelchair accessible: outside entrance, opposite library; first-floor lobby, near stairway; near 222 and 416.
Ramp: Entrance on Campus Road is on street level. Entrance on campus has chairlift to first floor.

Automatic doors: Entrances on Campus Road and opposite library.
Elevators: All.
Wheelchair lift: Entrance opposite library has interior wheelchair lift for access to elevator.

## Whitman Hall

Restrooms: Lobby and stage level.
Telephones: Volume control: mezzanine lobby.
Infrared listening devices: 023 New Workshop Theater; 101 Whitman Hall.
Seating: Wheelchair seating locations with companion seating; aisle transfer seating.
Ramp: Entrance on sidewalk level.
Automatic doors: Main entrance.


[^0]:    *Students majoring in teacher education programs that were revised in 2001 but now are completing the old requirements leading to the provisional teaching certificate should consult the Undergraduate Bulletin, 2000-2003. The revised programs in this list lead to the initial teaching certificate, which will be required for all teaching candidates effective February 2004.

[^1]:    *1 On Being Human: An Introduction to Anthropology 3 hours; 3 credits;
    General introduction to anthropology and its four subfields: archaeology, cultural anthropology, linguistics, and physical anthropology. Integration of subfields in approaches to the definition of humanity and the meaning of being human. Nature of the anthropological approach.

