FALL 1984 SEMESTER

- September 4-6
- September 8
- September 26-28
- October 6
- November 6
- November 12
- November 22-25
- December 24-January 1, 1985
- January 4
- January 5-11

Registration—Fall 1984
First day of classes—Fall 1984
Rosh Hashanah—no classes
Yom Kippur—no classes
Election Day—no classes
Veterans Day—no classes
Thanksgiving Recess—no classes
Winter Recess—no classes
Last day of classes
Final examinations

SPRING 1985 SEMESTER

- January 28-30
- February 4
- February 12
- February 18
- April 8-14
- May 21
- May 23-30
- June 7
- Lincoln's Birthday—no classes
- Washington's Birthday—no classes
- Spring Recess—no classes
- Last day of classes
- Final examinations
- Commencement

SUMMER SESSION 1985

- June 11
- June 17
- July 25

Registration
First day of classes—Summer 1985
Final examinations

* Subject to change.
bronx community college
of the city university of new york
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The program and requirements set forth in this catalog are necessarily subject to change without notice at any time at the discretion of the administration.
MISSION AND AIMS OF THE COLLEGE

Bronx Community College was founded in 1957 to offer ever-widened opportunities for higher education. In September 1970, with the advent of the City University’s policy of open admissions, the College’s original commitment was dramatically extended as it welcomed hundreds of students who previously had been denied a college education. Open admissions, though modified by the Board of Education in 1976, still offers the College an unprecedented opportunity to demonstrate its commitment to provide quality higher education for the many.

Traditionally, it has been the mission of the community college to provide sound general education, liberal arts transfer education and career education, as well as continuing education for students of all ages. In short, the community college prepares students for a life of independent and creative thinking, dignity and community participation.

At Bronx Community College, the primary emphasis is upon the relationship of the individual faculty member to the individual student. Perhaps more than ever, the administration and faculty recognize the responsibilities and challenges of educating students from a variety of ethnic and linguistic backgrounds. Bronx Community College accepts this responsibility and welcomes this challenge.

A Comprehensive Program: Career and Transfer Curricula

The breadth of the educational programs and curricula of the College provide offerings for students of many interests and talents. The comprehensive nature of the College makes it possible for students to choose career programs which may lead either directly to employment or to continued education toward a baccalaureate degree. The “transfer” or “university-parallel” curricula in Liberal Arts and Sciences, Business Administration, Computer Science, Engineering Science, Performing Arts-Music, and Pre-Pharmacy prepare students for continued study toward the baccalaureate degree, or professional and graduate studies.

Bronx Community College offers courses of study, both day and evening, that lead to a career after two years, or transfer to a four-year college.

Career programs leading to an Associate in Applied Science degree (A.A.S.) include audiovisual technology, accounting, data processing, marketing management and sales, paralegal studies, education associate, electronic and computer technology, medical laboratory technology, nuclear medicine technology, nursing, ornamental horticulture, and secretarial studies, and certificate programs in automotive mechanics and paralegal studies.

Transfer programs include business administration, business teaching, computer science, engineering science, human services, pre-pharmacy, and music. The Liberal Arts offer studies in art, biology, Black and Puerto Rican studies, chemistry, communication arts and sciences, dance, economics, English, French, German, health education, history, international studies, Italian, mathematics, philosophy, physical education, physics, political science, psychology, religion, sociology, Spanish, and theatre.
HISTORY OF BRONX COMMUNITY COLLEGE

The establishment of Bronx Community College in 1957 crowned a decade of effort by civic-minded groups in Bronx County to meet the growing need for increased higher education facilities in the "Borough of Universities and Progress."

Classes began in February 1959 at the former site of the Bronx High School of Science at Creston Avenue and 184th Street. With Dr. Morris Meister as its first president, the College soon developed into a much-acclaimed comprehensive community college offering a broad range of academic programs.

In April 1961, The City University of New York was created by the State Legislature, with Bronx Community College as one of its seven constituent undergraduate colleges. Presently, the City University includes seventeen undergraduate colleges, a graduate center, and an affiliated medical school.

Dr. James A. Colston became the second president of Bronx Community College on August 1, 1966, following Dr. Meister's retirement. For the next decade, the College grew dramatically, spurred in 1970 by the introduction of open admissions. By 1972 the College was occupying seven additional centers within walking distance of the main building and serving approximately 10,000 matriculated students.

On September 1, 1977, Dr. Roscoe C. Brown, Jr., became the third president of Bronx Community College.

In July 1973 the Dormitory Authority of the State of New York acquired the New York University Heights Campus for the use of Bronx Community College. Beginning with the fall 1973 semester, virtually all operations were moved to the 50-acre site overlooking the Harlem River. Bronx Community College students have the same facilities that served New York University so well. There are modern classrooms, lecture halls and laboratories; a student center, cafeteria and lounges; shaded walks and a grassy mall; athletic fields, tennis courts, and a swimming pool; and advanced media and library facilities. The Hall of Fame, a national landmark, is open to the public.

The College's important contribution to the cultural life of its students and the borough is felt through the Bronx Community and College Symphony, the Bronx Community and College Choir, work with the Bronx Council on the Arts, and the more than 120 events coordinated annually by the Committee on Community Projects and Special Events. Concerts, plays, films, speakers, and art exhibits are open to both students and the public, some at modest prices, many free.
ACCREDITATION

Bronx Community College is accredited by the Middle States Association of Colleges and Secondary Schools, through its Commission on Institutions of Higher Education, both as a unit of The City University of New York and as an individual college.

The curricula in Electrical and Mechanical Technologies are accredited by the Accreditation Board for Engineering and Technology (formerly Engineers' Council for Professional Development) as engineering technology curricula.

The Nursing curriculum is accredited by the National League for Nursing.

CHARTER

The New York State Board of Regents, through the Division of Higher Education of the New York State Department of Education, has chartered and approved all curricula and programs of Bronx Community College.

NONDISCRIMINATION POLICY

Bronx Community College has a policy of nondiscrimination, and of providing educational opportunities for the disadvantaged as a means of facilitating their access to a broader range of employment opportunities. Accordingly, no person shall, on the basis of race, religion, color, age, national origin, sex, disability, or handicap, be excluded from participation in or be denied the benefits, or be subjected to discrimination in any of the College's programs or activities.

Any student or employee of Bronx Community College who believes that there has been a violation of any affirmative action regulation may invoke these procedures.

For further Information, contact the Affirmative Action Coordinator, Office of Academic Affairs, Language Hall.

DEGREE PROGRAMS OFFERED

The applicant to Bronx Community College may be admitted to one of the various curricula offered. Detailed descriptions of the requirements for the degree in the curricula (and options) appear on pages 42 to 69.

Associate in Applied Sciences Degree (A.A.S.)—Career Programs
- Accounting
- Audiovisual Technology
- Data Processing (Programming)
- Education Associate (career or transfer)
- Electronic and Computer Technology (career or transfer)
- Marketing Management & Sales
- Medical Laboratory Technology
- Nuclear Medicine Technology
- Nursing (career or transfer)
- Ornamental Horticulture
- Paralegal Studies
- Performing Arts—Music (career or transfer)
- Pre-Pharmacy (transfer program)
- Secretarial Studies

Associate in Arts Degree (A.A.)—Transfer Programs
- Business Teaching (Accounting and Marketing Management)
- Human Services
- Liberal Arts and Sciences
- Secretarial Teaching

Associate in Science Degree (A.S.)—Transfer Programs
- Business Administration
  Accounting
  Marketing Management & Sales Management
- Engineering Science
- Liberal Arts and Sciences
- Medical Laboratory Technology

CERTIFICATE PROGRAMS
- Automotive Mechanics
- Paralegal Studies
Bronx Community College is situated on a beautiful 50-acre campus high above the Harlem River. The buildings originally housed the New York University School of Engineering and include several landmark structures dating back to the early part of this century.

The City University of New York acquired the campus in 1973 as the permanent home for Bronx Community College. A master plan which would renovate and adapt the campus to the special needs of a community college was deferred until recently by the city's fiscal crisis.

Silver Hall, a comparatively recent structure designed as a dormitory, has been approved for renovation as a classroom facility. It will provide classrooms and offices for academic departments as well as space for the Registrar, the Business Office and the Computer Center. The Biology and Chemistry Departments are also slated to move into renovated laboratories in the Technology Two building.

Auditoriums
The BCC campus has three major auditoriums. The largest is in the Gould Memorial Library. Its capacity of 750 allows its use for a variety of events including College convocations, cultural programs and community activities.

The Hall of Fame Playhouse in the Gould Student Center, with a capacity of 375, is used as a theatre for dramatic productions, musicals and concerts.

Schwendler Auditorium in Tech II, which seats 200, is also used for concerts and community activities.

BCC Child Development Center
The Bronx Community College Child Development Center was officially founded in October 1972 as a service to students of BCC. Its professional staff helps to provide a setting where children 2½ to 6 years old can develop physically, socially, and intellectually at their own pace and to their individual capacities.

The Center, located at 2205 Sedgwick Avenue, is open from 7:15 a.m. to 5:30 p.m., Monday through Friday. Hot meals and snacks are provided daily. Enrollment is limited.

Bookstore
The bookstore in the Gould Student Center, operated as a private concession under contract with the College, stocks all required and supplementary textbooks and supplies, in addition to greeting cards, stationery, college jewelry, sweatshirts, etc. Part of the bookstore's income goes to the Bronx Community College Association, Inc., funds from which are used to support student activities.

Cafeteria
A cafeteria, located in the Gould Student Center, is operated for the convenience of students and faculty. In addition to the meals and refreshments available, the facilities are used for receptions and meetings.

Computer Center
The Center serves both the administrative and academic needs of the College. Information vital to the proper functioning of the College is processed here. This includes admissions, registration, and end-of-semester grade reporting. Programs written by students and faculty are processed at the Center. A remote job entry link to the University Computing Center permits access to state of the art IBM computers. A Digital Equipment Corporation PDP 11/34 is provided to support computer-assisted instruction as well as other functions complementary to classroom experience.

Drop-In Center
Students can attend afternoon and evening classes while their children between the ages of 5 and 12 are provided with "after school" services at the Drop-In Center. Games, arts and crafts, snacks, athletics and tutoring are all available.

The Center is open from 2 to 8 p.m. Monday through Thursday. Students can register their children to use the Center regularly, or on an emergency basis. The Drop-In Center is located in Gould Student Center, Room 102.

Evening Office
Evening and Saturday classes are scheduled each semester to accommodate students' work and home commitments. Most courses leading to the Associate in Arts (A.A.), Associate in Science (A.S.), and Associate in Applied Sciences (A.A.S.) degrees are available to the students during evening hours. A wide range of courses is scheduled on Saturdays beginning at 8:30 a.m.

The Evening Office, located in Tech Two, Room G-02, is open the following hours when classes are in session:
Mondays-Thursdays—5 to 10 p.m.
Saturdays—8 a.m. to 2:30 p.m.

Extension Centers
A wide range of courses is offered by Bronx Community College at the Bronx Psychiatric Center, 1500 Waters Place, and at the New York Psychiatric Center, 722 West 168th Street. Classes are determined by student demand and space availability. Instructors are full-time or adjunct members of the faculty.

Health Services
The office of Health Services is Loew Hall 101. When classes are in session, a registered nurse is on duty from 9 a.m. to 9:30 p.m. Monday through Thursday, 9 a.m. to 5 p.m. on Friday, and 8:30 a.m. to 2:30 p.m. on Saturday. The Health Service provides first aid, health counseling, and referrals on any health-related matter.
Public Information Office
The Public Information Office is located in Language Hall 16. Information about cultural events and college activities is available there.

Safety and Security
This office in Loew Hall, Room 505, is responsible for lost-and-found services, campus parking, the issuance of ID cards, and the patrol of the campus and its buildings.

Student Lounges
Students are invited to use and enjoy lounges and recreation areas in the Gould Student Center.

Swimming Pool and Gymnasium
The swimming pool and gymnasium, located in Alumni Gym, are used by Health and Physical Education classes and college athletic teams. They are also available for student and faculty recreational use during specified hours.

LIBRARY AND LEARNING RESOURCES
The Library and Learning Resources Center at Bronx Community College is constituted as an instructional department. It is a materials center for student research and supplements classroom instruction through its print and nonprint collections.

Library and Learning Resources has two locations: Technology Two Building and Sage Hall.

The print collection now exceeds 85,000 volumes and is growing rapidly. The library currently receives close to 350 periodicals covering a wide variety of subjects and maintains extensive back files. The collection includes books for recreational reading and a pamphlet file on topics of current interest.

Nonprint Services provides many types of media for students and faculty. In the learning resources center a great variety of educational technology is employed to enhance learning—cartridge films, slides, film strips, records, tape recordings and video-cassettes.

An Academic Computer Center is located on the second floor of Sage Hall. Microcomputers, including Apple and IBM systems, are available for students and faculty use. Many of the educational materials were produced on campus to meet the specific requirements of students and faculty.

The Library and Learning Resources staff provides reference aid for the individual reader and prepares bibliographies for specific subject areas. In addition, the staff offers formal classroom instruction in the use of the library and in research procedures.
THE HALL OF FAME FOR GREAT AMERICANS

The Hall of Fame is a majestic 630-foot-long outdoor colonnade founded by New York University in 1900 and designed by Stanford White to honor historically significant American men and women.

Built in a sweeping semicircular Neo-Classical arc with wings at either end, it provides a panorama across the Harlem River to the Cloisters in Fort Tryon Park and beyond to the Palisades. It is a unique and patriotic reminder that this country’s phenomenal growth has been due to the vitality, ingenuity, and intellect of these individuals.

The 98 bronze busts that line the colonnade are original works by distinguished American sculptors. Bronze tablets recessed in the wall beneath the busts carry inscriptions of significant statements made by the men and women honored.

Represented are inventors (Robert Fulton, George Westinghouse, the Wright Brothers), statesmen (William Penn, Patrick Henry, Woodrow Wilson), jurists (Oliver Wendell Holmes, Jr., John Marshall), soldiers (Ulysses S. Grant, Stonewall Jackson), educators and reformers (Susan B. Anthony, Booker T. Washington), authors (Walt Whitman, Harriet Beecher Stowe, Edgar Allan Poe, Washington Irving), and artists from various disciplines (John James Audubon, James Abbott McNeill Whistler, Edwin Booth).

Any citizen who lived in the United States and who has been dead for 25 years or more is eligible for election to the shrine.

The electors of the Hall of Fame, approximately 100 people, represent the most distinguished men and women in our society in various endeavors from each of the 50 states. Six former electors, Grover Cleveland,
admission to the college

All inquiries and information pertaining to admission to the College should be addressed:

ADMISSIONS OFFICE
Bronx Community College
University Avenue and West 181 Street
The Bronx, New York 10453

ADMISSIONS OFFICE
Loew Hall Room 224
Phone: (212) 220-6284
Admissions Officer: Mr. Durward Collins
Assistant to Admissions Officer: Ms. Patria Marin

This office assists applicants in completing the appropriate application form, requesting official transcripts of grades or scores from the State Education Department, former high school(s) or college(s); and obtaining counseling or academic advisement before registration.

Most of the College's informational material is sent from this office to prospective applicants upon their request, including acceptance letters with the dates of important activities and examinations. The transcripts of transfer students are evaluated for possible advanced standing. One evening in every week during the fall and spring semesters the office is open until 7 p.m. to accommodate applicants who work during the day. We have bilingual staff to serve Spanish-speaking applicants.

An applicant for admission to Bronx Community College may be approved for one of the programs offered by the College if he fulfills the basic admissions requirements and follows the admission procedures.

BASIC ADMISSION REQUIREMENTS

All applicants must have official high school transcripts of grades or equivalency diploma scores sent to the College's Admissions Office and also meet the basic requirements as described below:

High School Diploma
A diploma from an accredited high school is required for admission to Bronx Community College. A high school certificate is not an acceptable substitute for the diploma.

A New York State Equivalency Diploma and General Education Development Examination may be substituted. A USAFI diploma must be converted to a New York State Equivalency Diploma.

Residence
The residency of a student under 18 years of age is governed by the residence of his parents or legal guardian.

New York City Residency Requirements — A student shall be considered a resident of the City of New York for purposes of "resident tuition fee rate" eligibility, if he or she has his or her principal place of abode in the City of New York for a period of at least twelve consecutive months immediately preceding the first day of classes for the semester with respect to which the residency determination is made, and states his or her intention to permanently live and maintain his or her principal place of abode in New York City.

New York State Residency Requirements — Tuition for out-of-city New York State residents, who have on file a valid Certificate of Residence issued by their county of residence, will be the same as tuition charged City residents. All New York State residents who reside outside of New York City and plan to register at Bronx Community College must complete Residence Forms B 80 and B 81, available in the Bronx Community College Admissions Office. Form B 81, Certificate of Residence, should be returned to the Bronx Community College Bursar's Office before registration. New York State residents who live outside New York City, but do not submit the required forms, will be charged nonresident fees. (See Tuition and Fees Schedule, page 15).

Health and Physical Standards
All students must submit, as part of the application, a medical examination report on the form provided by the College. Final admission requires approval by the College of the student's ability to meet its health and physical standards. In addition, students in Nursing must take a special physical examination given in cooperation with the Department of Hospitals of the City of New York.
The Freshman Application

The City University provides a form that includes two applications:
1. **The Regular Application Form** permits students to apply to as many as six regular college programs of City University on a single form. Even if the six programs are in six different CUNY colleges, only one application is necessary.
2. **The Special Programs Application** is designed for students applying to SEEK and College Discovery and contains its own instruction manual. It should be noted, however, that applications from students who cannot be admitted to SEEK and College Discovery but who meet CUNY admissions requirements will be admitted automatically to a regular community or senior college program.

Where to Apply:
The following applicants should complete the Regular Application Form and send it to:

University Application Processing Center
Box 136, Bay Station
Brooklyn, New York 11235

1. Students who are currently attending high school and who seek admission as matriculated students to the lower freshman class of any college (senior or community) of The City University of New York. Students must have completed at least six semesters (11th year) of high school.
2. Students who have earned an Equivalency Diploma and passed the General Education Development Examination.
3. Students who have been graduated from high school and have never attended any institution of higher learning.
4. All students who have had no more than one year of secondary schooling outside the United States.

All students who have had more than one year of secondary schooling outside the United States should file an International Student Application that is available at the Office of Admission Services, 875 Avenue of the Americas, New York, N.Y. 10001.

The following applicants should apply directly to the college of their choice:
Applicants who wish nondegree status (nonmatriculated students). Each college will advise and supply an application to the above applicants.

Application Fee
All applications must be accompanied by a money order for $25, made out to The City University of New York. (Instructions for submitting the fee are included with the application forms.)

Deadlines for Applications
All applications to the University Application Processing Center must be submitted by deadline dates: July 1 for the Fall Semester, and December 1 for the Spring Semester.

All applications for direct admission to the College must be submitted before the last scheduled CUNY Skills Assessment Examination.

Notification Dates
Applicants for Fall admission will be notified by August 15; applicants for Spring, by January 15.

Pre-Admissions Counseling
Pre-admissions counseling is available to all prospective students in Loew Hall. Services include group and individual counseling for current high school students, transfer students, and adults who are considering applying for college.

Skills Assessment Examinations
Each student must meet acceptable standards in the basic skills areas of reading, writing and mathematics established by the College. In addition, the Board of Higher Education has mandated that students meet a University-wide minimal level of skills proficiency before entrance to the upper division. Consequently, students will be tested in these areas after admission but before registration for courses to determine whether they meet the minimal University and college standards. Those who fail initially to meet these requirements will be given appropriate remedial instructions to assist them in achieving the required skills competency levels. Students who fail to achieve the minimal standards of CUNY by the end of their sophomore year* will not be permitted to continue in the University.

Students entering the University after Sept. 1, 1978, who have failed to meet the standards of proficiency in the basic skills areas of reading, writing and mathematics established by the University will not be permitted to transfer.

BCC Placement Tests
In addition to the Skills Assessment Examinations, some applicants must take separate departmental placement tests in mathematics, speech, typing and/or a foreign language, depending on their choice of curriculum. Separate tests are administered in chemistry (Toledo Examination) and engineering sciences and engineering technologies (Spatial Relations Test).

*For students enrolled in a community college, the end of the sophomore year shall be the semester or session in which the student completes the degree requirements for graduation from the program in which he or she is enrolled.
ADVANCED STANDING ADMISSION

An applicant who has previously attended another college, university or postsecondary institution must report that fact in an application for advanced standing admissions. The applicant must also have the former institution(s) submit official transcript(s), including an official statement of the conditions of withdrawal, directly to the Office of Admission Services, 875 Avenue of the Americas, New York, NY 10001. Even if attendance at such a college was for a short period of time and no grades are recorded, a certificate of honorable dismissal is required.

A student is allowed a maximum of 30 credits advanced standing (transfer credit) in equivalent courses completed at accredited institutions of collegiate rank. The total number of credits allowed toward the associate degree by BCC may not exceed 30, regardless of whether the courses were taken at other institutions before admission, during attendance at, or after leaving Bronx Community College. Grades of D received in equivalent courses taken at all other institutions will be accepted for credit.

In general, one-half of the career specialization (exclusive of general education courses) must be taken at BCC. Because of the nature of the curriculum, this regulation does not apply to the Liberal Arts and Sciences curriculum.

Any course for which advanced standing has been granted from another institution cannot be repeated at BCC.

Courses passed at BCC or another college with a grade of D or higher may not be repeated, except as an auditor (no credit). Exception: Nursing courses must be passed with a grade of C or better and must be repeated if a grade of D is received. A student is permitted to repeat only once any course he has failed.

New York State Equivalency Diploma

Students applying on the basis of a New York State Equivalency Diploma must submit:

1. copies of the Equivalency Diploma and General Educational Development Test Scores, and
2. official copies of any high school or college records they may have accrued.

INTERNATIONAL STUDENTS ADMISSION

Application Procedure
Application forms and detailed information may be obtained from Bronx Community College or from:

City University of New York
Office of Admission Services
875 Avenue of the Americas
New York, New York 10001

The Educational Background Summary Form (Part II of the application) should show a complete chronological survey of the applicant's educational experience in all schools attended, whether in the U.S.A. or elsewhere. It is to the applicant's advantage to complete the summary form accurately and completely.

It is the applicant's responsibility to write to all secondary and higher educational institutions attended and request that official proof be sent to the Office of Admission Services.

Application Fee
Each application form must be accompanied by a U.S. bank check or money order in the exact amount of $25 payable to The City University of New York. This fee is not refundable.

Deadline
A deadline date for fall and spring admission will be determined each semester by the Office of Admission Services.

Tuition and Fees
Qualified applicants from other countries must pay full tuition and student activity fees for one year. Upon receipt of this payment, the applicant will be issued an I-20 form by the Admissions Office.

Test Requirements
Applicants from non-English-speaking countries must have taken the Test of English as a Foreign Language (TOEFL).

Health Requirements
All applicants accepted for matriculation will be required to submit a health statement from a physician on a form provided by the College. The College determines whether the student's health permits school attendance.

Notification of Admission
Applicants will be notified of their admission by the college which has accepted them. They may be required to furnish additional documents, especially with regard to financial and housing arrangements, before their admission becomes final.

Students are admitted to all units of The City University of New York without regard to sex, age, religion, race, color, creed, national origin or disability. (This statement is made in compliance with U.S. Department of Health, Education and Welfare regulations.)
Tuition and Other Fees

All fees must be paid in full at the time of registration. Where tuition fees are reduced by place of residence, legal proof of such residence may be required to establish eligibility. (Any arrangements for loans or applications for loans or grants must be completed in advance of registration.)

All fees and tuition charges are subject to change at any time by action of the Board of Trustees without prior notice. In the event of any increase in the fees or tuition charges, payments already made to the College will be treated as a partial payment, and notification will be given of the additional amount due and the time and method for payment.

Tuition Deferrals
Students who have neither cash nor an approved form of financial aid to pay their tuition may apply for a tuition deferral. Under this plan, students make a partial payment at registration and pay the balance, on installments, during the semester. Information concerning tuition deferrals will be available at registration. There is a $15 fee for all tuition deferrals.

Association Fees
These fees are payable by all students—matriculated and nonmatriculated.

1. Students taking Day division courses or any combination of Day and Evening division courses (includes registration, library, laboratory, audio laboratory, breakage, malpractice insurance, student activities and graduation fees). $35/Sem.
2. Summer Session students and those taking Evening Division courses only (includes registration, library, laboratory, audio laboratory, breakage, student activities, and graduation fees). $17/Sem.

Special Fees
(For all students—matriculated and nonmatriculated.)

1. Application for admission (payable at registration time if not paid before). $25
2. Transcript (no charge for transcripts sent to colleges of The City University of New York). $4
3. Make-up and special examinations
   First examination per semester $15
   Each additional examination (maximum fee of $25 per semester for three or more examinations) $5
4. Late registration $15
5. Change of program (schedule of classes) $10
6. Duplicate ID card fee $5
7. Duplicate Record $1

Materials Charges
Special materials charges may be required in some courses. These include certain courses in Art, Biology, Chemistry, Medical Laboratory Technology, Music and Photography.

Tuition Fees *

<table>
<thead>
<tr>
<th>FULL-TIME STUDENTS</th>
<th>PART-TIME STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City resident, or New York State resident with a Certificate of Residence</td>
<td>$612.50/semester</td>
</tr>
<tr>
<td>New York State resident without a Certificate of Residence, or Non-New York State resident, including International Student</td>
<td>$1,012.50/semester</td>
</tr>
<tr>
<td>New York City resident, or New York State resident with a Certificate of Residence</td>
<td>$40/credit **</td>
</tr>
<tr>
<td>All others, including International Student</td>
<td>$76/credit **</td>
</tr>
</tbody>
</table>

** Subject to change.

** The following courses do not follow the normal pattern for calculating tuition. They include an additional charge for an hour of compensatory work.

EXPENSES

Dependent Students: Students who rely on their parents to provide a substantial part of their support are generally defined as dependent students. For such students, it is estimated that the following expenses would be incurred related to attendance at Bronx Community College for the nine-month academic year exclusive of tuition and fees.

| Books and supplies | $200 |
| Transportation | 490 |
| Lunch | 470 |
| Personal | 520 |
| Total | $1,680 |

Self-Supporting Students: A self-supporting (independent) student encounters day-to-day living expenses (housing, food, clothing, medical, etc.) in addition to costs related to college attendance. The following is an estimate of the expenses related to attendance at Bronx Community College for a nine-month academic year.

| Books and supplies | $200 |
| Transportation | 490 |
| Housing | 2230 |
| Food | 1730 |
| Clothing and medical | 630 |
| Personal | 620 |
| Total | $5900 |

Independent students who are married or who support additional dependents will incur additional expenses. More detailed information related to student costs is available by contacting the Financial Aid Office.
REFUND OF TUITION AND OTHER FEES

Fees are not refunded unless a course is withdrawn by the College. Under exceptional circumstances, upon approval of a written application made to the Registrar* a refund of tuition fees only may be made in accordance with the following schedule:

A full refund of tuition and General Fees (where applicable) will be made in the event that: (1) courses are cancelled by the College; (2) a student's registration is cancelled by the College.

*Students who wish to withdraw before the opening date of classes or who wish only to drop a course should apply in person directly to the Registrar's Office.

MILITARY SERVICE

Special academic standing and military refund regulations apply to students who enlist or are called to serve in the Armed Forces of the United States (see page 31). These students must present evidence of enlistment or induction orders.

VETERANS' BENEFITS

Information and advice concerning veterans will be furnished by the Office of Veterans' Affairs (see page 31).

All new students planning to receive education benefits under G.I. Bills should contact the Veterans' Administration, 252 Seventh Ave., New York City, before registration to make arrangements for benefits.

Currently enrolled BCC students eligible to continue receiving educational benefits while at BCC must present their current Bursar's Receipt at the Veterans' Affairs Office, Philosophy Hall Basement.

<table>
<thead>
<tr>
<th>SCHEDULE OF TUITION REFUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Other Than Summer Session</strong></td>
</tr>
<tr>
<td>Withdrawal from class before the scheduled date of the session</td>
</tr>
<tr>
<td>Withdrawal from course in order to register at another unit of the City University during that semester</td>
</tr>
<tr>
<td>Withdrawal within one week after scheduled opening date of the session</td>
</tr>
<tr>
<td>Withdrawal during the second week after scheduled opening of the session</td>
</tr>
<tr>
<td>Withdrawal during third week after scheduled opening date of the session</td>
</tr>
<tr>
<td>Withdrawal after completion of third week after scheduled opening date of session</td>
</tr>
</tbody>
</table>

14 introducing bronx community college
The Financial Aid Office administers all aid programs—federal, state, city and college funded. Applications, counseling and other information are available from the office. Financial Aid program descriptions are based on current statutes and regulations, and may be changed periodically. Entering students should contact the Financial Aid Office early in the admissions process to discuss eligibility requirements, to obtain forms, and to obtain up-to-date information on the various aid programs. Continuing students must file applications each spring.

NEW YORK STATE PROGRAMS

Tuition Assistance Program (TAP)

TAP is administered by the New York State Higher Education Services Corporation for residents of New York State. Under this program, full-time students (at least 12 credits or equated credits) whose families have an annual New York State taxable income of $25,000 or less may qualify for assistance to help meet tuition charges. Application forms are available in the Financial Aid Office. Before submitting the application, the applicant should review it with a financial aid officer, especially if there are questions relating to completion of the application. The Higher Education Services Corporation determines the applicant's eligibility and an award certificate indicating the amount of the grant is sent directly to the applicant.

Selection of Recipients and Allocation of Awards: TAP is an entitlement program. There is neither a qualifying examination nor a limited number of awards. To be eligible for financial assistance under TAP, you must be a New York State resident and a U.S. citizen or permanent resident alien; be enrolled full-time and matriculated; make satisfactory academic progress toward completion of your program; and be economically eligible according to current criteria.

An applicant who is in default in the repayment of a student loan is excluded from eligibility for this program.

Students may generally receive TAP awards for four years of study. Students enrolled in approved five-year programs, or in an opportunity program, such as the College Discovery Program at Bronx Community College, may receive undergraduate awards for five years.

Award schedule: The amount of the TAP award is scaled according to level of study, tuition charge, and net taxable income. The income measure is the family's or the independent student's net taxable income from the preceding tax year plus certain nontaxable income, and, for dependent students, support from divorced or separated parents. This income is further adjusted to reflect other family members enrolled full time in post-secondary study.
The City University of New York
ACADEMIC PROGRESS CHART FOR UNDERGRADUATES RECEIVING TAP

<table>
<thead>
<tr>
<th>Minimum number of credits earned</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>18</td>
<td>31</td>
<td>45</td>
<td>60</td>
<td>75</td>
<td>90</td>
<td>105</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum grade point average</th>
<th>0</th>
<th>0</th>
<th>1.00</th>
<th>1.20</th>
<th>1.40</th>
<th>1.65</th>
<th>1.70*</th>
<th>1.75*</th>
<th>1.80*</th>
<th>1.85</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Minimum credits/credit weights complete prior payment</th>
<th>0</th>
<th>6</th>
<th>6</th>
<th>9</th>
<th>9</th>
<th>12</th>
<th>12</th>
<th>12</th>
<th>12</th>
<th>12</th>
</tr>
</thead>
</table>

*Students in Associate Degree programs must have a 2.00 grade point average to graduate.

The Supplemental Tuition Assistance Program (STAP)
Students who receive their first TAP payment after July 1, 1981, are eligible for STAP which provides up to two extra TAP payments for students who enroll in at least six equated credits of remedial course work.

Good Academic Standing: Beginning September 1981, TAP recipients must comply with New York State Education Department regulations concerning good academic standing in order to continue receiving TAP. Students who received their first TAP payment prior to July 1, 1981, must complete at least one course during each semester they receive TAP. Students who received their first TAP payment after July 1, 1981, must, for each TAP payment, complete the number of credits indicated on the chart above and achieve the required index as per the chart. Students whose index falls below the required level or who fail to complete the required number of credits will lose TAP for the following semester. Students who lose TAP may once, under extraordinary circumstances, receive a waiver and thus continue to receive TAP. While receiving STAP, students must complete at least six credits in order to remain eligible for additional TAP or STAP assistance.

Regents College Scholarship

Application Procedures: Application forms are obtained from and filed with the local high school principal.

Selection of Recipients and Allocation of Awards: Regents College Scholarships are awarded competitively for full-time postsecondary study in New York State in:
1. an approved degree, certificate, or diploma program offered by a college;
2. a hospital school program leading to licensure or certification;
3. a two-year program in a registered business school not authorized to grant a degree.

Basis of the award is the Scholastic Achievement Test (SAT) or American College Testing Program (ACT) score. A total of 18,843 scholarships is allocated by county. Additional scholarships are allocated to insure that each approved high school has at least one scholarship for each 40 graduates.

Award Schedule: The award is $250 per year for up to five years, depending on the normal length of the program in which the recipient is enrolled.

Guaranteed Student Loan Program

Application Procedures: Students should obtain a loan application from a participating New York State bank. The completed application is presented to the Financial Aid Office. The application is then sent to the lending institution and the Higher Education Services Corporation. A counseling session or interview, or both, may be required. When the loan is approved, a promissory note is signed by the student.

Selection of Recipients and Allocation of Awards: To be eligible for a guaranteed loan a student must be:
1. a U.S. citizen or permanent resident alien, and
2. enrolled as a matriculated, at least half-time, student in an approved degree program.

Loan Schedule: A student may borrow up to $2500 per academic year, up to a total of $5000.

A student whose adjusted family income is less than $25,000 is eligible for a full interest subsidy, during the time in school, and for a nine-month grace period before repayment must begin. An annual insurance premium of 1 percent of the loan amount is payable in full at the time the check is issued. The interest rate is 9 percent.
If a student applies for an additional loan, application must be made to the original lending institution. Four months after ceasing to be at least a half-time student, the borrower must make formal arrangement with the lending institution to begin repayment. The following regulations apply:
1. depending on the amount of the loan, the minimum monthly payment is $30 plus interest (under unusual and extenuating circumstances the lender, on request, may permit reduced payments);
2. the maximum repayment period is ten years;
3. the maximum period of a loan from date of the original note may not exceed 15 years, excluding authorized deferments of payment;
4. repayment in whole or part may be made at any time without penalty.

Regents Nursing Scholarship

Application Procedures: Application forms are obtained from and filed with the local high school principal.

Selection of Recipients and Allocation of Awards: Regents Basic Nursing Scholarships are awarded competitively for full-time study in New York State in an undergraduate program approved for training of registered professional nurses, in a college or in a hospital school. Basis of the award is the Scholastic Achievement Test (SAT) or American College Testing Program (ACT) score. A total of 800 awards is allocated annually by county.

Award Schedule: The award is $250 per year for up to five years depending on the normal length of the program in which the recipient is enrolled.

College Discovery (CD)

The College Discovery Program (CD) was initiated in 1964 by the Board of Higher Education to provide higher educational opportunities at the community college level to economically and academically disadvantaged students, and is available at Bronx Community College. The program provides counseling, financial aid, remediation, and tutoring services.

Application Procedures: Application is by means of a form available from and returned to: University Application Processing Center, City University of New York, Box 136, Bay Station, Brooklyn, New York 11235.

Selection of Recipients and Allocation of Awards: The applicant must be:
1. a resident of New York City;
2. academically disadvantaged according to guidelines approved by the Board of Trustees of the University;
3. economically disadvantaged according to guidelines approved by the Board of Regents and the Director of the Budget; and
4. an applicant for admission to an associate's degree program in CUNY. Eligible applicants, after screening for academic potential, are offered admission to the CUNY college of their choice.

Note: State law requires that in order to receive CD stipends, students must file an application for the PELL (formerly BEOG) and the Tuition Assistance Program (TAP).

Award Schedule: The amount of financial assistance and other support provided to CD participants is dependent on need, as determined by the CUNY office of Student Financial Assistance and/or the individual college financial aid programs, within State guidelines.

FEDERAL PROGRAMS

PELL Grants

Applications and other materials are available in the Financial Aid Office.

The completed application should be submitted for processing according to the directions included on it. A Student Aid Report will be sent to the applicant. Based on this, the amount of the applicant's award is determined by the Financial Aid Office. Funds are paid directly to the student or may be credited to his/her account.

Selection of Recipients and Allocation of Awards: The PELL Grant Program is an entitlement program. Scholastic accomplishment has no bearing on eligibility. The applicant must be enrolled as an undergraduate student, at least on a half-time basis, in an approved post-secondary institution which is itself eligible under law to participate in the PELL Grant program, and must need financial assistance to continue his/her education.

Financial need is determined by a formula applied to all applicants. It was developed by the U.S. Department of Education and is reviewed annually by Congress. The student eligibility index is calculated by this formula.

Award Schedule: Awards vary from year to year, but are never more than one half the total cost of attendance, as defined by the PELL Grant program. The amount of the grant depends on the student's eligibility index and his/her enrollment status.

Rights and Responsibilities of Recipients: The student must continue to make satisfactory academic progress in the program in which enrolled. The student must not owe any repayments of PELL Grants or other awards paid, or be in default on payment of any student loan. Before receiving payment, the student must sign an affidavit, available from the financial aid office, that all money received will be used for the costs of attendance at Bronx Community College.
Supplemental Educational Opportunity Grants (SEOG)

A student enrolled at Bronx Community College can apply for an award under this program by completing the CUNY Student Aid Form (CSAF).

Selection of Recipients and Allocations of Awards: The applicant must be:
1. in exceptional financial need, to the extent that without a Supplemental Grant award his/her education could not be continued;
2. enrolled at least half time.

Award Schedule: The award ranges from $200 to $2,000.

Rights and Responsibilities of Recipients: The student must continue to make satisfactory academic progress.

National Direct Student Loan Program (NDSL)

Application Procedure: A student enrolled at Bronx Community College can apply for an award under this program by completing a CUNY Student Aid Form (CSAF) provided by the college. Forms, as well as specialized information on loan cancellation provisions for borrowers who go into certain fields of teaching or specified military duty, are available from the Financial Aid Office.

Selection of Recipients and Allocation of Awards: Loans are available to matriculated students enrolled at least half time.

Award Schedule: Amounts vary but no Bronx Community College student can receive more than $1,000 per year or a total of more than $2,500 while here.

Rights and Responsibilities of Recipients: The current interest rate, payable during the repayment period, is 5 percent on the unpaid principal. Repayment begins six months after graduation or leaving school, and may extend up to ten years. Payment is not required for up to three years of active U.S. military service, or service in the Peace Corps, VISTA, or similar national programs.

College Work Study Program (CWS)

Application Procedures: A student enrolled at Bronx Community College can apply for an award under this program by completing a CUNY Student Aid Form (CSAF), provided by the college.

Selection of Recipients and Allocation of Awards: The applicant must be enrolled at least half-time. In the event that more students are eligible for CWS than there are funds available, preference is given to students who have great financial need and who must earn a part of their educational expenses.

Award Schedule: The Financial Aid Office arranges jobs on-campus or off-campus with public or private nonprofit agencies. Factors considered by the Financial Aid Office in determining whether and how many hours the applicant may work under this program are: financial need, class schedule, academic progress, and health status. Salary is dependent on the nature of the job and applicant qualifications.

Rights and Responsibilities of Recipients: Satisfactory academic progress must be maintained.

Social Security Payments to Children of Deceased or Disabled Parents

Application Procedures: Application may be made at any Social Security Office. Applicants should present their Social Security card, if one has been issued, and provide the following information: name and address of the institution; dates of past attendance; student I.D. number if any; number of credit hours carried; and full- or part-time status planned for the next academic period.

Social Security recipients must have their attendance certified by the Registrar’s Office in Philosophy Hall.

Veterans Administration (VA) Educational Benefits

Application Procedures: Application forms are available at all VA offices, active duty stations, and American embassies. Completed forms are submitted to the nearest VA office.

Selection of Recipients and Allocation of Awards: Veterans who served over 180 days between January 31, 1955, and January 1, 1977, and:
1. continue on active duty;
2. were honorably discharged at the end of their tours of duty, or
3. who qualify because of service connected disabilities, are eligible for benefits.

Veterans are entitled to benefits for full-time study at Bronx Community College for one and one-half months for each month of active service, up to 45 months. Eligible veterans who served for 18 continuous months are entitled to benefits for 45 months of full-time study. In each case, the equivalent in part-time study may be authorized. The Veteran’s Affairs Office in Philosophy Hall is available to answer questions concerning VA benefits.
The Nursing Student Loan fund provides loans to full- or half-time students in the nursing curriculum. No loan may exceed $2,500 a year. Repayment begins nine months after leaving the nursing curriculum even if the student remains in college. Up to ten years may be allowed to repay the loan. Our loan the repayment period, 6 percent interest will be charged on the unpaid balance of the loan principal. No payments are required for up to three years while serving in any of the uniformed services or as a volunteer under the Peace Corps Act.

The Financial Aid Officer can explain cancellation provisions for borrowers who engage in full-time employment as a professional nurse in any public or nonprofit private institution.

Federal regulations require that students be in good standing and making satisfactory academic progress in order to receive financial aid. In addition, since financial aid is paid to help students come to college, students who withdraw from all their classes (officially or unofficially) may have to repay some of the financial aid they have received.

Regulations for the programs described above are subject to change without notice.

COLLEGE AND UNIVERSITY PROGRAMS

Tuition Assistance Waiver

To be eligible, a student must be classified as a part-time, New York City resident, matriculated student taking a minimum of six to a maximum of eleven credits. At the present time the application form is PELL Grant form and the Tuition Assistance Waiver is based upon the eligibility index of the PELL Grant. The amount of the award varies depending on the index. This program is subject to continued funding on an annual basis.

Lincoln Fund and Rudin Fund

These funds make grants available to needy nursing students. Grants of $1,000 are made to nursing students who are found eligible based upon the CUNY Student Aid Form.

Emergency Loan Funds

1. The H.W. Wilson Emergency Loan Fund and the Edna and Albert Goldman Emergency Loan Fund are revolving funds which provide small, short-term loans for emergencies.
2. The Dean's Confidential Loan Fund is a short-term loan for students with extraordinary emergency needs which cannot be met by other loan funds. It is administered by the Assistant Dean of Students.

Required Enrollment Status

In order to receive checks for payments in all financial aid programs which are made available through the College, a student must be currently enrolled. Payments in all programs are based upon the total number of credits for which the student is enrolled: the PELL award for a full-time student and the CD awards for stipends, books and fees require that the student be enrolled for at least 12 credits; the SEOG, NDSL, NSL and CWS awards require that a student be enrolled for no fewer than six credits. Enrollment requirements must be met at the time the payments are made; the payment must be made to the eligible student in person; and, to receive a payment, the student must present a current, valid Bronx Community College student I.D. card along with a copy of his or her most recently validated Bursar's receipt.

Financial Aid programs are subject to change, dependent upon the College's funding from Federal, State and City agencies.
OFFICE OF ACADEMIC AFFAIRS

Dean of Academic Affairs: Dr. Carl J. Polowczyn
Associate Dean: Mr. Seymour Reisin
Associate Dean: Dr. John O. Stevenson, Jr.

The Office of Academic Affairs is responsible for all the instructional activities at the College, and registration and the scheduling of classes, academic advisement, special programs, management of grants, and staff development.

The Dean of Academic Affairs supervises the Registrar, the Office of Continuing Education, and the Grants Office. In addition, the Dean reviews complaints about instruction after the instructor and department chairperson have been consulted. The Dean also has the authority to waive certain fees and curriculum requirements when warranted.

REGISTRAR'S OFFICE

Registrar: Mr. Harvey Erdsneker
Associate Registrars: Mr. A. Glasser, Mr. R. Lewis,
Ms. R. Tobin
Assistant Registrars: Mr. A. May, Ms. M. Siegel, Ms. S. Turk

The Registrar's Office will supply information to students about registration, grades, scholastic indexes and remaining requirements for graduation. Grade reports that include information on scholastic index and matriculation status are mailed or distributed to each student.

Student Identification Number

When registering for the first time, a student receives an identification number which is permanent for the duration of the student's stay at the College. This number is recorded on the Bursar’s Receipt and ID card.

Each student receives an ID card with his picture and student number on it. He must carry this card at all times for purposes of identification. The ID card is also used as a library card in the College. A replacement fee is charged for lost or mutilated cards.

Transcripts

Transcripts may be requested from the Registrar's Office on the special form provided by that office. There is a charge of $4 for each transcript requested to be sent, except that transcripts to be sent to colleges of The City University of New York are forwarded free of charge.

Transcripts are not sent automatically at any time, whether for transfer, employment, or any other reason; each must be specifically requested. Transcript requests cannot be processed during examination or registration week.
REGISTRATION

All students must register for courses during the official registration period each semester, and at the time designated for that student's classification. The "Registration Guide and Schedule of Classes" is available several weeks before the announced registration period.

An "early registration" period (for currently enrolled students) only takes place after mid-term of the semester preceding the actual registration.

Students are advised to appear for registration, with appropriate credentials, at the time specified in order to take advantage of their registration priority. Late registrants (those registering after the close of the official registration period) will be charged a late registration fee. The College reserves the right to cancel late registration.

Registration is not complete until all financial obligations have been met. A student's registration will be cancelled if payment is not made on time.

Counseling and Advisement for Registration

Advisers from all curricula offered in the College are available during the registration period. All students must have their programs approved by advisers during registration. Counselors of the Student Development Department are available throughout the semester. Appointments to see counselors may be made in the Office of Counseling in Loew Hall.

Auditing Classes

A student may audit a course only with official approval. An Application to Audit form is available from the Registrar's Office. Approval of the Department Chairman is required.

After permission to audit has been received, an auditor-student must register for the audit class in the same manner and at the same time prescribed for regular classes, and he must pay required fees as if he were registering for credit in the course. Once registration is completed as an auditor, no credit will be granted retroactively for that course during that semester.

Auditors are required to observe attendance regulations of the College and must participate in class to the extent deemed reasonable, desirable, and necessary by the instructor.

Requests to Take Courses at Other Colleges

A student desiring to take a course or courses at another college or at another unit of the City University while at Bronx Community College must fill out the required Permit Form issued by the Registrar's Office, where permission will be granted according to College regulations.

Students on Permit from Other Colleges

Students from other colleges are advised to secure written permission from their home colleges before applying to register for any courses at BCC.

City University of New York matriculants with permits may, subject to prior approval of the BCC Admissions Officer, register at a time reserved for BCC Matriculants in the Registration Schedule. However, baccalaureate matriculants from City University senior colleges will be required to pay nonmatriculant fees. Students with permits from colleges not of City University must all register as nonmatriculants regardless of status in their own colleges.

MATRICULATION

Upon admission to the College, a student is designated as matriculant or nondegree.

The student's matriculation status determines the course load he may carry during a semester and the order of priority in registration.

Official determination of scholastic index and certification of matriculation status of students already in attendance are made by the Registrar's Office, in accordance with standards set by the Committee on Academic Standing.

CLASSIFICATION AND CATEGORIES
(Definitions)

Matriculated Student: A student who is a candidate for an associate degree or certificate and has met the basic college admission requirements is classified as a matriculant.

A matriculant may carry a full- or part-time program of courses leading to a degree, and may register for day and/or evening classes, according to his choice and the availability of class space. A full-time course load is a minimum of 12 credits or credit weights up to the number listed for that semester on the curriculum in the Curriculum Patterns, pages 40-68. Be aware that to graduate in four semesters, a minimum of 16 credits is to be taken in each semester.

Students taking fewer than 12 credits, or the equivalent, are not considered full time for purposes of New York State Regents Scholarships, Scholar Incentive Awards, Selective Service, U.S. Immigration Service, etc. For purposes of Selective Service, State Scholarships, and foreign student visa status, a student must be carrying a full-time load or its equivalent.

Nondegree Student: A nondegree student is one who (a) presented incomplete records for admission, or (b) applied too late, or (c) transferred from another college with an unsatisfactory record or (d) who has been permanently suspended by the College. A student becomes a matriculant when all admission or transfer requirements are met. A student who has been permanently suspended can never become matriculated.
Senior Citizens: Residents of New York City, 65 years and older, may enroll in undergraduate courses on a space-available basis, tuition-free at any unit of the University. Individuals enrolling under this waiver are charged a $25 per semester fee as well as any penalty fees they may incur (e.g., late registration, payment, reprocessing fees, library fines). They are not charged any other regular fees. The $25 fee is considered a noninstructional fee.

Enrolled Student: A student who has paid all tuition and fees and is attending classes is considered enrolled. The College will remove from its section files any student who has never attended during the first three weeks or attended during the first three weeks but did not attend for weeks four and five. The student will be considered not to be enrolled in the course. The credits will not count toward the determination of full-time status.

Good Standing: A student remains in good standing at the College as long as he or she is enrolled. A student on probation is considered to be warned that he or she is compiling a record that could lead to loss of matriculation and/or suspension.

INDEX CLASSIFICATION CHART

Minimum Index needed to maintain Matriculant Status

The Board of Trustees of the City University of New York has mandated that all students must meet minimum standards in order to go on to the next semester. Students who fail to achieve the required standards on either of the following charts will be placed on probation for one semester. Students who fail to achieve those standards while on probation will be dropped from City University.

Index Classification Chart

<table>
<thead>
<tr>
<th>Cumulative credits taken</th>
<th>Probation must be assigned if Cumulative Index is lower than that listed</th>
<th>Suspension if Cumulative Index is lower than that listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11⅔</td>
<td>No Classification</td>
<td>No Classification</td>
</tr>
<tr>
<td>12-23⅔</td>
<td>1.67</td>
<td>1.00</td>
</tr>
<tr>
<td>24-37⅔</td>
<td>1.76</td>
<td>1.54</td>
</tr>
<tr>
<td>36-51⅔</td>
<td>1.88</td>
<td>1.78</td>
</tr>
<tr>
<td>52-63⅔</td>
<td>1.95</td>
<td>1.88</td>
</tr>
<tr>
<td>64-73⅔</td>
<td>2.00</td>
<td>1.95</td>
</tr>
<tr>
<td>74 or greater</td>
<td></td>
<td>2.00</td>
</tr>
</tbody>
</table>

STANDARDS OF SATISFACTORY PROGRESS

Beginning with the Spring 1984 semester, students must accumulate at least 18 degree credits for each Full-Time Equivalent Year (FTEY) of enrollment. An FTEY is two semesters of full-time enrollment.

Each semester of attendance equals a fraction of an FTEY according to the following chart:

<table>
<thead>
<tr>
<th>Degree credits attempted</th>
<th>Fractional FTEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>12.5%</td>
</tr>
<tr>
<td>6-8</td>
<td>25.0%</td>
</tr>
<tr>
<td>9-11</td>
<td>37.5%</td>
</tr>
<tr>
<td>12 plus</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

Students who do not accumulate 18 degree credits per FTEY will be on probation provided they accumulate at least 21 degree credits per FTEY minus one. Students who fall below the probationary standard will be suspended. Students who do not earn their associate degree in four FTEYs will be suspended. Students will be evaluated against these standards at the conclusion of the Spring term every year.

See the Student Handbook for a more complete discussion of these standards and the appeals procedure.

ACADEMIC SUSPENSION

Students who fail to achieve the required standards while on probation will be dropped from City University. The normal academic appeals procedure of the College will continue to consider individual cases and to make such exceptions to the implementation of the guidelines as circumstances may warrant.

Students may not be readmitted until they have been separated from the College for at least one semester or equivalent calendar time. Readmission shall be upon successful application to the appropriate faculty committee. Students who are separated from City University may not reenroll for credit-bearing courses in any unit of the University in any status.

PROGRAM ALLOWANCES AND COURSE LOADS

Limited Programs

Newly admitted matriculated students may be assigned a limited program, based on the standards of the curriculum and the recommendation of the Curriculum Coordinator or adviser.

Programs Exceeding Limits

A matriculated student may apply to his Curriculum Coordinator for permission to exceed the required program load, after he has consulted with his adviser.
READMISSION

After one or more semesters of absence from the College, a student must apply for readmission. Readmission applications are available in the Registrar's Office for this purpose. A student who has not submitted a medical form within the two-year period prior to readmission will also be required to submit a medical form before his readmission will be approved. Deadlines for the receipt of applications for readmission are: Fall Semester, August 30; Spring Semester, January 15; Summer Session, May 15.

CHANGE OF CURRICULUM

For a change of curriculum, a student should contact the Registrar's Office and complete a Change of Curriculum form. Once the change has been approved, a student must meet the prescribed requirements for the new curriculum. Credits taken and earned in the student's former curriculum may not necessarily be applicable in the new curriculum. Determination of transferability of credits from one curriculum to another rests with the new Curriculum Coordinator.

The following grades may be assigned by instructors:

<table>
<thead>
<tr>
<th>Grade</th>
<th>% Equivalent</th>
<th>Achievement</th>
<th>Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
<td>Excellent, superior</td>
<td>4</td>
</tr>
<tr>
<td>B+</td>
<td>85-89</td>
<td>Above average</td>
<td>3.5</td>
</tr>
<tr>
<td>B</td>
<td>80-84</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C+</td>
<td>75-79</td>
<td>Satisfactory</td>
<td>2.5</td>
</tr>
<tr>
<td>C</td>
<td>70-74</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D+</td>
<td>65-69</td>
<td>Passing, but below average</td>
<td>1.5</td>
</tr>
<tr>
<td>D</td>
<td>60-64</td>
<td>Just passing</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
<td>Failing (also assigned to a student who is absent from a final examination and has done failing work in course)</td>
<td>0</td>
</tr>
<tr>
<td>R*</td>
<td></td>
<td>Repeat</td>
<td>not counted</td>
</tr>
</tbody>
</table>

*Applicable only to certain non-credit remedial courses.

Special Grades

During the semester, and under circumstances described below, instructors may assign the following special grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Withdrew 3rd through 10th week only.</td>
</tr>
<tr>
<td>WF</td>
<td>Withdrew Failing (counts as a failure) 3rd week through end of semester.</td>
</tr>
<tr>
<td>WU</td>
<td>Withdrew Unofficially and/or Excessive Absence (counts as a failure) 3rd week through end of semester.</td>
</tr>
</tbody>
</table>

GRADES

The instructor assigns the grade which represents his evaluation of the work performed and the level of scholarship and competence of the student, based on a composite of the elements that went into the course.

Individual departments may set up policies with respect to minimum essentials, relative weighing of factors such as term paper, laboratory work, periodic quizzes, final examinations, special projects, etc.

Grading policies may be department-wide or those of an individual instructor. In either event, they are communicated to students early in the semester.

A permanent academic record for each student is maintained by the Registrar. Students receive reports of their achievement and status each semester.

Mid-Term Grades

Instructors assign and inform students of mid-term grades during a period designated in the Academic Calendar.

Unless otherwise announced, all courses have required final examinations for all students.

Other Grades

AUD Audit (registration only by special permission of the Registrar and Department Chairperson).

Z Administrative grade assigned temporarily when an instructor has been delayed in submitting the final grade. (Missing grade.)
Withdrawal Procedure
Students wishing to withdraw from any course in which they are registered may do so at any time prior to completion of all instruction and evaluative procedures of the course. The formal procedure for withdrawal shall be determined by the Registrar.

- Grades issued upon initiation of informal withdrawal procedures shall be as follows:

  Withdrawal during registration period (usually through the 3rd week of classes)—no grade assigned.
  W* Officially withdrew from course—student initiated. May only be administered from 4th through 10th weeks of a semester. Recorded as unsatisfactory rate of progress.
  WF Officially withdrew—student initiated. Indicates student was failing the course at the time of official withdrawal. May be administered from the 4th week of a semester through the end of the semester. Recorded as unsatisfactory rate of progress and 0.0 quality points in the Grade Point Average.

- Grades issued upon initiation of formal withdrawal procedure (student simply disappears) shall be as follows:

  Any time during the semester—WU grade only.
  (Note: WU grade = unofficial withdrawal, excessive absences, debarment.)

*CAS Policy: During the change of program period, usually the first through the third week of the semester (or dates as published by the Registrar's Office), students who officially drop a course or section or who take an official leave of absence are considered as having canceled the particular registration and no grade is assigned. Students are subject to the tuition refund policy as adopted by the Board of Trustees, in effect at the time.

Temporary Grades

An instructor may assign a temporary grade at the end of the semester only for one of the reasons given below:

Grade Explanation
ABS Absent from final examination, but student otherwise passing in course. Upon application supported by evidence of legitimate, unavoidable absence, student will be given a make-up examination. May resolve to A, B+, B, C+, C, D+, D, F, or INC. Equivalent to F if unresolved. (Refer to Regulations below.)

INC Work in course incomplete, but student otherwise passing in course. May not be assigned to student absent from final examination. May resolve to A, B+, B, C+, C, D+, D, F, or INC. Equivalent to F if unresolved. (Refer to Regulations below.)

1. Registration in subsequent level courses—A student with the grade of ABS or INC in any course may not register for the subsequent level course in a sequence, unless he has received written permission to do so from the Chairperson of the Department in which the course is given.

2. Make-up and special examinations—Scheduled make-up examinations are held as announced in the Academic Calendar. A student who misses (for a legitimate reason) a regularly scheduled final examination must apply to the Registrar for re-examination to be given on the scheduled date as announced. See Special Fees, page 13.

3. Temporary grades must be resolved no later than the end of the semester immediately following the one in which ABS or INC was received.

Students assigned the grade of ABS whose application for make-up examination is approved are also so notified. Students who miss the scheduled make-up examination, or who cannot apply for such examination prior to the scheduled date for such make-up examinations, must apply in writing through the Registrar to the Chairperson of the Department in which the course is given for a special examination. If the Department Chairperson does not grant permission for such examination, he should advise the Committee on Academic Standing. The denial of an application for examination should be communicated by the Department Chairperson to the CAS.

COMMITTEE ON ACADEMIC STANDING (CAS)
The Committee on Academic Standing formulates policy in all matters pertaining to the quality of scholarship and standards of academic achievements at the College. It deals with matters of standards for matriculation, awarding of degrees, grades, regulation of student program loads, and student appeals on these matters. Communications with the Committee should be made through the Registrar, who serves as its Executive Secretary.

Students are advised to secure a copy of the Codification of Academic Regulations of the Committee on Academic Standing. Copies are available in the Registrar's Office.
HONORS
Honors and recognition are given to those students who achieve outstanding academic records. All official awards made by the College to students, including Commencement awards and Dean's List Achievement, are noted on the student's permanent academic record. Honors fall into several categories as described below.

Dean's List
A matriculated student who has completed at least 12 degree credits in a given semester with a scholastic index of 3.00 or higher and no failing grade, will be placed on the Semester Dean's List.

A matriculated student who has taken at least 24 degree credits and has achieved a cumulative index of 3.00 or higher with no failing grade will be placed on the Cumulative Dean's List.

Both Dean's Lists are issued during the Fall and Spring semesters. (No lists are issued for Summer Session, but Summer Session grades are included in the cumulative index.)

Honor Societies
Presently two honor societies are active at the College. Phi Theta Kappa—a National Junior College Honor Society, and Tau Alpha Pi—a National Honor Society for Engineering Students. Each year, the honor societies initiate students who have met their requirements and qualify for membership.

Commencement Awards
Seniors who have maintained high levels of accomplishment are given special recognition at Commencement time. These awards may include departmental and curricular recognition for excellence in scholarship and for outstanding service to the College.

The following are among those given:

Morris Meister Medallion—in memory of the first president of Bronx Community College, a bronze medalion in Science and Engineering Technology for scholarship, character, leadership and contributions to the students and to the college.

Dr. Morris Meister Memorial Award—for scholarly achievement in the field of science.

James A. Colston Alumni Association Scholarship Award
—for a graduate with a superior academic record who intends to pursue a career in higher education.

Abraham Tauber Award—to the Liberal Arts and Sciences student ranking highest in scholarship.

Sidney Silverman Award—to the student who has made outstanding contributions to the college.

Accounting Club Service Award—to a graduating senior who has rendered outstanding service to the local community.

U and S Minority Faculty Association Scholarship—for academic excellence, high moral character and leadership ability.

Gonzalo Escobar Memorial Award—to College Discovery students demonstrating outstanding academic and personal achievement.

Annette Goldenberg Memorial Award—to the students demonstrating excellence in scholarship and general character.

Grand Street Boys' Association Award—for superior scholarship and high quality of character, to encourage and foster emulation of the lives and high idealism of the late Judge Jonah and Mrs. Harriet Goldstein.

Harriet Goldstein Memorial Award—for high moral character and scholarly achievement.

Gittel Silverman Memorial Award—to the students who have rendered unselfish service to the college and community.

Mel Winter Memorial Award—to a graduate who has shown outstanding qualities of leadership in an official position in day student government and/or in a chartered student organization.

Frederick J. Berger Award—to the Tau Alpha Pi student who has achieved high scholarship.

William C. Woolfson Award—for service on a student publication.
ATTENDANCE AT CLASSES

Regularity of Attendance
Attendance at all class sessions is required. Instructors keep an official record of absences in their grade folders and communicate with the Office of the Dean of Students regarding excessive absence involving individual students.

Excessive Absence—Warning and Debarment
Students excessively absent as indicated in the chart above may first be warned. If absence continues, they will be debarred, with an assigned grade of WU.

WITHDRAWAL FROM COLLEGE

A student who plans to withdraw from college should notify his counselor without delay by arranging a personnel interview. Students who are unable to withdraw from the College in person may do so by mail, by writing to the Registrar. The date of withdrawal will be the date on which the letter is received by the College. The letter should include the reason for withdrawal, a listing of the courses and sections in which the student is currently enrolled, and the names of the instructors in each class. Students should be certain to receive written acknowledgement of their withdrawal, to avoid academic penalty.

Students are urged to seek guidance before resigning. Counseling and advisement prior to the final decision to withdraw may solve their problem and make it feasible to remain in college. In any event, a formal withdrawal will protect a student’s record.

Under special circumstances, proportional refunds of tuition fees only may be made according to a schedule prescribed by the Board of Trustees, if withdrawal is made within the third week after opening of classes. Application for refund of tuition fees should be made to the Registrar.

LEAVES OF ABSENCE

A student who finds it necessary to withdraw from the College for a semester or longer should apply for an official leave of absence through a counselor in the Department of Student Development.

Military Leave
Students who enlist in the armed forces or who are inducted or recalled into service must present and place on file at the College a copy of the official induction notice indicating the exact date on which they must report for duty.

Disability (Including Pregnancy)
A student who becomes disabled should consider discussing with a counselor from the Dean of Students' staff the various alternatives regarding current and future academic plans. Some of these alternatives are continuation of attendance, a leave of absence, or a program adjustment. A recommendation from a physician will help in determining what options are feasible. This recommendation, which is filed in the Health Service Office, is useful information to the College and beneficial to the student should the student require any medical services while on campus.

TRANSFER POLICIES: FROM BCC TO A SENIOR COLLEGE

From transfer curricula to senior colleges of The City University of New York
• A student who has received an A.A. or A.S. degree, or an A.A.S. degree in a program officially designated as a transfer program by the City University, shall be admitted to the senior college of his choice.
• Upon completion of the Associate Degree, a senior college within The City University of New York will accept a minimum of 64 credits from the community college.
• A student who has completed an approved well-balanced program of at least 30 credits in an A.A. or A.S. curriculum and who has maintained an index of at least 2.75 (with a C being 2.00 and a B being 3.00) shall be admitted to the senior college of his choice.
• A graduate of a City University community college nursing program who has attained a 2.5 index shall be admitted to the nursing program of the senior college of his choice.
From transfer curricula to other higher educational institutions
Generally, students transferring from one of the City University community colleges to other higher educational institutions have found that transfer credit is awarded for credits earned with grades of C or better. Each institution makes its own transfer policies, however, and students planning to transfer to institutions outside the City University would be well-advised to contact the institution to which they are planning to transfer to discuss transfer policies.

Electrical and Mechanical Technology students who plan to continue their studies may transfer directly to The City College or to certain other four-year colleges, offering the baccalaureate degree in Engineering Technology and will receive full transfer credit for technology courses taken at Bronx Community College.

From career curricula to other higher educational institutions
Many four-year institutions will admit graduates of the career programs, granting varying amounts of advanced standing credit for studies completed at BCC.

All credit and noncredit courses taken at Bronx Community College may be incorporated in the calculations of the scholastic index by the receiving college.

All courses and grades taken at Bronx Community College appear on the student's Bronx Community College permanent record and transcript.

ACCESS TO STUDENT RECORDS
The Federal Education Rights and Privacy Act of 1974 and regulations pursuant thereto, grants students the right to be advised of:

1. The types of student records and the information contained therein which are maintained by the College.
2. The name and position of the official responsible for the maintenance of each type of record, the persons who have access to those records, and the purposes for which they have access.
3. The policies of the College for reviewing and expunging those records.
4. The procedures for granting students access rights to their student records.
5. The procedures for challenging the content of their student records.
6. The cost, if any, which will be charged to students for reproducing copies of their records.

CAMPUS BEHAVIOR CODE
In order to ensure the continuance and enhancement of the positive image and reputation of all members of the College community and in the interest of promoting student and faculty welfare at the College and the safety and security of our entire College community, the following Code of Behavior is in effect:

Gambling and the sale and possession of drugs, including marijuana, are illegal by New York State law. Violators will be subject to disciplinary action and/or referral to outside authorities.

Any student who does not show his or her ID Card upon a legitimate request will be considered a trespasser.

Use of alcoholic beverages is prohibited on campus, except for the consumption of beer and/or wine at special events sponsored by chartered student groups under the supervision of a faculty advisor with prior approval of the Dean of Students.

Any form of cheating is prohibited.

Any student violating the code of behavior or any law or regulation established by the College, and by the City, State, or Federal Government (including the use of drugs) shall be subject to formal disciplinary procedures as outlined in Articles 15.3 to 15.5 of the Board of Higher Education Bylaws and sanctions as listed in the Board of Higher Education Bylaws and Article 129A of the Education Law. The initiation of disciplinary procedures requires a predisciplinary hearing before a counselor from the Office of the Dean of Students as set up in line with the requirements of the Bylaws of the Board of Trustees immediately following an incident which is judged to be an infraction of law or Behavior Code to determine whether or not the case should be referred to the Student-Faculty Discipline Committee. In emergency or extraordinary circumstances immediate suspension can be effected pending a hearing within seven (7) school days.

If the charges are of sufficient nature and have not been settled at the predisciplinary hearing, a formal hearing will be scheduled before the Student-Faculty Discipline Committee as specifically outlined in Article 15.3 of the Bylaws of the Board of Trustees.

Students as a result of this hearing or failure to appear at the hearing may be subject to immediate and permanent suspension which may apply to all units of the City University of New York. All students involved will be advised of the various levels of appeal under the Bylaws of the Board of Higher Education.

Copies of Article 15.3 and Article 129A of the Education Law are available from the Dean of Students and the Office of Student Activities.
PUBLİC ORDER (EDUCATION LAW)

Rules and Regulations for the Maintenance of Public Order on Campuses of the City University Pursuant to Article 129A of the Education Law

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 educational unit, shall:

"(A) Have the affirmative responsibility of conserving and enhancing the educational standards of the college and schools under his jurisdiction;

"(B) Be the advisor and executive agent to the Board and of his 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 the educational unit."

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 interfere with the institution's educational process 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 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 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 possession a rifle, shotgun or firearm or knowingly have in his 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 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.

Penalties

1. Any student engaging in any manner in conduct prohibited under substantive Rules 1-8 shall be subject to the following range of sanctions as hereafter defined in the attached Appendix: admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion and/or arrest by the civil authorities.

2. Any tenured or nontenured faculty member, or tenured or nontenured member of the administrative or custodial staff, engaging in any manner in conduct prohibited under substantive Rules 1-8 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 Board of Higher Education, or suspension with/witout pay pending a hearing before an ap-
propriate college authority, dismissal after a hearing, ejection, and/or arrest by the civil authorities. In addition, in the case of a tenured faculty member, or tenured member of the administrative or custodial staff engaging in any manner in conduct prohibited under substantive Rules 1-8 shall be entitled to be treated in accordance with applicable provisions of the Education Law or Civil Service Law.

3. Any visitor, licensee, or invitee, engaging in any manner in conduct prohibited under substantive Rules 1-8 shall be subject to ejection and/or arrest by the civil authorities.

Appendix — Sanctions Defined:

Admonition — An oral statement to the offender that he has violated university rules.

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.

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.

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.

Restitution — Reimbursement for damage to or misappropriation of property. Reimbursement may take the form of appropriate service to repair or otherwise compensate for damages.

Suspension — Exclusion from classes and other privileges or activities as set forth in the note of suspension for a definite period of time.

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.

Complaint to Civil Authorities.

Ejection.

Adopted by the Board of Higher Education June 23, 1969, Calendar No. 3(b).

RELIGIOUS BELIEFS AND CLASS ATTENDANCE

Education Law Section 224-a.

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 is unable, because of his 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 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 religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he 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 a Saturday, similar or make-up 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 availing himself 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 rights under this section.

POLICY AGAINST SEXUAL HARASSMENT

It is a violation of policy for any member of the University community to engage in sexual harassment. It is a violation of policy for any member of the University community to take action against an individual for reporting sexual harassment.

Students claiming harassment on the basis of sex shall report such harassment to the Dean of Students.
STUDENT DEVELOPMENT DEPARTMENT

Dean of Students: Professor Sylvia Miranda
Assistant Dean: Professor Evelyn Kish
Professor: C. Saueracker
Associate Professors: L. Davis, D. Diamond
F. Donnangelo, W. Kleiber, W. Merrigan, E. Santa Rita
Assistant Professors: M. Adeyanju, J. Bacote, R. Barnette,
A. Baskind, J. Castle, M. Goldberg, I. Hawkins, J. Jupp,
E. Kish, M. Lamkay, R. Phillips, J. Seals, H. Whitcomb
Lecturers: J. Asch, A. Figueroa

The Department of Student Development comprises the offices of Admissions, Career Development, College Discovery, College Psychologist, Counseling, Financial Aid, International Student Counseling, Health Services, Recruitment, and Student Activities. It assists the highly diversified body of Bronx Community College in the process of academic, personal, and vocational growth. It also provides recruitment, admissions, and financial aid services.

It is concerned with student life on all levels, both in and out of the classroom, and its members strive to aid students to achieve optimum intellectual, social, and emotional development. In order that students can effectively pursue their studies at the College, it is essential that they have the assistance of expert counseling.

The Student Development counselor is concerned with the specific needs of each individual student. Areas of focus for counseling sessions may typically include aptitude and interest assessment and exploration, personal and educational adjustment, motivational factors influencing educational performance, and the vocational decision-making process. In addition to individual counseling, all new students are required to register in a freshman orientation class called Orientation and Career Development (OCD 01).

Counseling services are available to all students during the day, evening, and Saturday.

CURRICULUM ADVISEMENT

Course and Curriculum Advisement is done by the Student Development counselor in the student's first and second semesters. Students are assigned to counselors through OCD 01 registration.

Advisement for all other students is provided by academic departments. Faculty advisers are an additional source of career information for students.

ORIENTATION AND CAREER DEVELOPMENT—OCD 01

A one-semester course offered by the Department of Student Development is programmed for all entering freshmen. (See page 99 for description.)

COUNSELING SERVICES

Coordinator: Prof. Carl Saueracker

The Department of Student Development offers a variety of counseling services. Some of these are identified below. All students who need assistance in these and other areas are directed to Loew Hall for the name and room of the appropriate counselor.

Career Planning Services

The Office of Career Counseling provides resources designed to help Bronx Community College students make better career decisions.

A Career and Transfer Library in Loew Hall, Room 312, contains up-to-date career information and college catalogs.

Career Interest Inventories help students increase their understanding of themselves and how this understanding translates into making a sound career decision. Other forms of testing are also available.

Career Workshops are offered throughout the year. They provide an opportunity for students to meet professionals from specific career areas such as business technology, allied health fields, human services, etc.

A Career Development Course is available to students who wish to spend a full semester developing well-defined career goals. This one-credit course is offered to students who have completed 30 credits/credit weights.

Each spring, Career Day brings to the campus representatives from major corporations and public agencies who are interested in hiring Bronx Community College graduates.

Employment Counseling, Cooperative Education, and Placement

This office refers students and alumni to potential employers for both part-time and full-time employment. In addition, students and alumni are helped to develop job search strategies, prepare resumes, and employment application letters, and prepare for employment interviews.

The Cooperative Work Experience Program gives students an opportunity to gain the related work experience needed to obtain a permanent job after graduation. In addition, a representative of the New York State Employment Service is available to all students on a weekly basis. The employment service maintains an extensive computerized job bank. Consequently, students can be referred to many employers throughout New York City.

For the benefit of graduating students and alumni in all curricula, employment interviewers from major corporations are invited to recruit, on campus, on a regular basis.
The Office of Student Services, also located in Philosophy Hall, offers various resources and services to support students.

**Veterans Affairs**

Students are encouraged to participate in all college activities and courses. The Veterans Affairs Office is located in Philosophy Hall, 3rd Floor, Room 307. Veterans Affairs staff provide support and services to students who are eligible for veteran's benefits. For more information, please visit www.bronxcc.cuny.edu/veterans-affairs.

**Alumni Association**

The Alumni Association is an organization that connects alumni with the college and each other. Alumni are encouraged to stay involved with the college and support its programs.

**College Discovery Program**

The College Discovery Program is designed to help students identify and prepare for college. The program includes workshops, seminars, and one-on-one counseling sessions. For more information, please visit www.bronxcc.cuny.edu/cdp.

**Ombudsperson**

The Ombudsperson provides confidential and impartial assistance to students, faculty, and staff. The Ombudsperson can help resolve conflicts and concerns, and provide information and guidance on various college policies and procedures.

**Health Services**

Health Services provides a variety of health-related services to students, including counseling, mental health support, and health education. For more information, please visit www.bronxcc.cuny.edu/health-services.

**Psychological Counseling**

The Psychological Counseling Center provides individual and group therapy services to students. Services are available to students who need assistance with mental health issues. For more information, please visit www.bronxcc.cuny.edu/psychological-counseling.
ATHLETICS

Director of Athletics: Prof. Michael Steuerman

The Athletic Program at Bronx Community College is designed to fulfill the student's natural needs for physical activity under competitive as well as non-competitive conditions.

Participation in this program teaches the values of cooperation and collaboration as well as the spirit of competition. Through team play, the student athlete learns how to work with others for the achievement of group goals. Individuals on the playing field are judged for what they are and what they can do.

A second purpose of the athletic program is to channel interest and loyalty of the student body and the community into the College.

Membership on the teams is open to all full-time students who are making satisfactory progress toward an associate degree.

The College is a member of the National Junior College Athletic Association (NJCAA) Region XV and the Metropolitan Community College Athletic Conference.

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Intercollegiate Athletics
Men's Baseball Team
Men's Basketball Team
Men's Soccer Team
Track and Field (men and women)
Women's Basketball Team
Women's Softball Team
Women's Volleyball Team

Intramurals/Recreation/Sports Clubs

Coordinator of Intramurals: Prof. Frank Wong

The intramural sports program is primarily for those with average athletic abilities and, although spirited, is of a less competitive nature than intercollegiate sports. The recreational activities program is designed to provide opportunity for exercise of a non-competitive nature for all those who are motivated toward attaining or maintaining a satisfactory level of physical fitness.

Basketball, volleyball, ultimate frisbee, softball, swimming, karate, indoor hockey, soccer, tennis, table tennis and bowling are scheduled on an intramural tournament basis. The program is open to all students with an acceptable medical report on file in the Health Service Office.
STUDENT ACTIVITIES

Coordinator: Joanettia Seals

The student activities program includes a wide variety of organizations, clubs and special activities that are an integral part of the mission of the College.

The educational co-curricula organizations, the ethnic-cultural clubs, honor societies, student council, radio station and publication organizations are all part of the educational process that supports and encourages students in search for positive learning experiences. These programs enhance development of individual potentialities through broader perspectives via exposure to new experiences and roles. These experiences are enriched through the cooperation and guidance of interested faculty advisors. Students have an opportunity to apply skills learned in their academic curriculum. They experience small group dynamics and learn decision-making skills which prepare them for future roles.

The Office of Student Activities is the central clearinghouse for information on all student activities.

All officers of the Student Council, clubs and publications, and members of the College Senate and athletic teams must be matriculated as students with a minimum cumulative scholastic index of 2.00. All student representatives must be registered for classes while they serve.

Student Council

The Student Council is responsible for planning and executing programs best suited to the needs of its constituents. They work cooperatively for student welfare through the Student Council Executive Board. Ten members of the Student Council sit on BCC Association, Inc., which allocates activities fees.

College Senate

Student representatives from the Student Council hold senatorial seats on the BCC College Senate and are elected annually.

The College Senate has legislative power with regard to academic affairs, long-range planning, and campus life and activities. Student senators participate as voting members on various college committees. Among them are: Senate Executive Committee, Nominations and Elections, Budgets and Grants, Governance Structures and Functions, Curriculum, Instruction, Community Projects and Special Events and Student Activities.

Clubs and Organizations

The Inter-Organizational Council is the representative body of student clubs and organizations that plans and coordinates various club activities.

- African-Caribbean Student Association
- Art Club
- Bible Believers Club
- Black Student Union
- Bowling Club
- Ceramics and Crafts Club
- Chess Club
- Chinese Club
- Christian Fellowship
- Computer Club
- Cosmetiques
- Dance Workshop
- Education Club
- Forensic Society
- French Club
- Haitian Student Association
- History Club
- Institute of Electrical and Electronic Engineers
- International Indian Club
- Kung-fu Club
- Martial Arts Club
- Nursing Students Association
- Paralegal Club
- Personal Development Club (Modeling)
- Phi Theta Kappa (Honor Society)
- Photography Club
- Psychology Club
- Puerto Rican Student Association
- Readers Theatre
- Scuba Club
- Secretarial Club
- Synchronized Swimming
- Tau Alpha Pi (Engineering Honor Society)
- Theatre Workshop

Student Publications & Media

- BARLD (business magazine)
- The Communicator (newspaper)
- From the Heights (alumni newsletter)
- Language Forum (Modern Language literary magazine)
- Senior yearbook
- Through the Looking Glass (literary magazine)
- WBCC (Radio Station)

Gould Student Center

The Gould Student Center is dedicated to serving the social, cultural and recreational needs of Bronx Community College students and provides for a variety of services and educational experiences. The facility includes a cafeteria, theatre, lounges, game room, quiet browsing room, and meeting rooms. The BCC bookstore is located in the Center. For information regarding use of the facilities for programs, meetings or conferences, contact the Gould Student Center Office, Room 304.
CONTINUING EDUCATION AND COMMUNITY SERVICES

Associate Dean for Continuing Education:
Mr. Seymour Reisin

The Office of Continuing Education provides career and job training programs, educational assistance, and personal and family support services to the Bronx community. About 15 dynamic programs, tailored to the unique needs of senior citizens, bilingual adults, high school dropouts, and business employees, are developed and offered annually. In addition, certificate programs for N.Y. State licenses such as Real Estate Sales or Brokers licenses, special community events, and professional seminars are coordinated by this office.

Continuing Education at Bronx Community College is expanding its programs to address the needs of business and professional organizations with assertiveness training, plain language writing skills, and conversational language programs.

Other programs offer basic skills, vocational training, job counseling, personal growth and awareness, leisure-time pursuits, and professional upgrading.

Adult Basic Education (Ms. Blanche Kelawon, Director)—mathematics, reading, writing, and English as a Second Language for adults with limited ability.

Bilingual Training in Housing Maintenance and Repair (Mr. Rafael Diaz, Director)—specialized Spanish/English training for adults entering the housing maintenance field.

Career Directions for Displaced Homemakers (Ms. Carmen Cordero, Director)—counseling, support, and job placement for women who are heads of households.

Adult Education Office (Ms. Eileen Benson, Director)—short-term courses providing academic and vocational upgrading, recreational and leisure activities, and professional seminars.

Older Adults’ Luncheon Club (Ms. Gloria Hill, Director)—off campus at 120 East 184 Street, a center for senior citizens featuring a nutrition program, and counseling, educational and recreational programs.

Project S.O.S. (Ms. Eileen Resnick, Director)—advocacy series, counseling, and referrals for homebound older adults.

Chuck Davis Dance Company (Ms. Bess Pruitt, Executive Manager)—an artist-in-residence program offering instruction and public performances.

Small Business Skills Training for Minorities (Dr. Miguel Mendonez, Director)—workshops for minority business persons or those contemplating going into business. Several seminars are conducted in Spanish.

Summer Horizons Program (Prof. Gus Constantine, Director)—a summer day camp on campus for neighborhood youngsters.

Job Training Partnership Act Program (Ms. Olida Martinez, Director)—comprehensive vocational training in clerk typing/office practices, junior drafting, and building maintenance for economically disadvantaged adults.

Job Training Partnership Act Educational Program (Ms. Maria Gil, Director)—a supplemental educational component to the JTPA vocational training providing classes in GED preparation, Basic Education, and English as a Second Language.

Learning Center (Ms. Maria Gil, Director)—a program to supplement the JTPA 8% Set Aside Program which will concentrate on self instruction at a facility provided by the college.

Job TAP Center #6 (Ms. Adele Maine, Director)—a comprehensive employment services center providing job testing, assessment, and placement (TAP) to un- or underemployed New York City residents; the center is located at 1910 Arthur Avenue.

GATES Program (Mr. Martin Frey, Director)—an alternative public school setting for three-time repeaters in the seventh grade; students receive academic instruction and supervised work experience on the college campus.

CUNY Free GED Program (Mr. Harold Wright, Director)—a free GED preparation program offered evenings for high school dropouts 17 years of age or older.
COORDINATOR: Dr. Frank P. Donnangelo
Paralegal Coordinator: Dr. Allan Wolk

Coordinator: Dr. Frank P. Donnangelo
Paralegal Coordinator: Dr. Allan Wolk

Cooperative Education helps bridge the gap between college and career by giving students an opportunity to gain the related work experience needed to obtain a permanent job after graduation. It combines classroom study with supervised on-the-job training. Students registered for CWE 31 or 32 (two credits) are placed in part-time jobs for one semester. Students registered for CWE 33 (four credits) are placed in full-time positions for a six-month period.

The semester before placement, students are helped to develop job search strategies, prepare resumes and employment application letters, and prepare for employment interviews. During the internship, students attend seminars every other week at the college to share their on-the-job experiences with other interns.

Cooperative Education is required in the following curricula after completion of 30 degree credits: Business Accounting, Data Processing, Marketing Management and Sales, Secretarial Studies, and Paralegal Studies (after 45 credits). It may be taken for elective or extra credits in all other curricula.

CUNY BACCALAUREATE PROGRAM
Coordinator: Prof. Ismay Taylor

This is a four-year City University program leading to a bachelor's degree. It permits mature and highly motivated students with a clear idea of their educational and career objectives to design their own academic program. It provides an opportunity to do in-depth research and/or field work projects for a maximum of 30 credits. Valid nonclassroom learning experiences prior to admission (life experiences directly related to the student's area of interest) may be recognized for a maximum of 15 of the 30 credits.

An applicant to the program must be currently matriculated in good standing and must have completed 15 college credits.

ESL SEQUENCE

The ESL sequence is a coordinated intensive program for students with limited English speaking and writing skills. The first semester of instruction consists of twenty hours of course work in elementary ESL, oral communication, comparative grammar, reading, and orientation and career development. In addition to the course offerings, the project coordinator provides counseling and orientation to assist students through the admission and registration process, as well as during the semester.

The basic goal of the ESL sequence is to give students the opportunity to achieve proficiency in speaking, reading, and writing English for academic purposes. Special attention is given to helping students reach their educational goals in a timely manner.

INDEPENDENT STUDIES
Coordinator: Prof. Ismay Taylor

There are two types of independent studies courses for students who wish to design their own nonclassroom courses. Students are able to pursue supervised projects and studies which transcend discipline limitations. The courses are for elective credit only.

THE PARIS/CUNY EXCHANGE PROGRAM
Coordinator: Dr. Donald McCulloch

The Paris/CUNY Exchange Program offers CUNY students, undergraduate and graduate, in all disciplines, the opportunity to study at the University of Paris for either 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 they earned there will, after being evaluated by the appropriate department of the home college, be applied toward their degrees. Students of all departments are invited to apply: A minimal proficiency in French and a B average in the major are required. There is a representative of the program on each campus. For further information or application, contact Paris/CUNY Exchange Program, Room 1403, City University Graduate Center, 33 West 42 Street, New York, N.Y. 10036, or call (212) 790-4558.

PROJECT DOWNTOWN
Coordinator: Prof. Allen Pomerantz

Downtown is a unique arrangement which enables students in all humanities departments, Communication Arts and Sciences, English, History, Modern Languages, Music and Art, and Social Sciences, to combine regular classroom study with off-campus structured experiences. As part of the general course work, museums, theatres, courts, radio and television stations, international institutions, embassies and municipal agencies of the City of New York are available to serve as resources for study.

STARS
Coordinator: Dr. Jacqueline Stuchin

The STARS program is designed for entering students who require additional opportunities to enhance their academic success. Students are directed to the program for one year according to the results of the CUNY Skills Assessment examinations. The program offers an integrated language and math skills curriculum. Courses are block programmed in order that students may remain together in all their classes. A counselor is assigned to work with STARS students throughout the semester.

SUMMER SESSION
Announcements and a bulletin of courses offered in day and evening classes in the Summer Session are issued in the spring by the College.
BIOLOGY AND MEDICAL
LABORATORY TECHNOLOGY

Office: Havemeyer, Room 105
220-6122

Chairman: Professor Francis C. Costello
Professors: J. Davis, P. Fisher, R. Heller, K. Prestwidge,
R. Thomas
Associate Professors: H. Balter, B. Bates, M. Fein, F. Ford,
H. Fuld, J. Hayde, V. Kissel, B. Krostoff, E. Levitan,
L. Squitieri
Assistant Professors: F. Haase, H. Hermo, M. Kanuck,
A. Sobieraj
Lecturers: V. Maher, L. Mills, L. Rice

Courses offered: Biology (BIO), Botany (BOT), Floriculture
(FLO), Gardening (GAR), Horticulture (HRT), Interior Land-
scaping (INL), Landscape Design (LND)

Medical Laboratory Technology
Advisory Committee

Leonard Amaral, Ph.D., Assistant Director, Clinical
Pathology; Chief, Clinical Chemistry, Bronx-Lebanon
Hospital Center
Sylvia Blatt, Assistant Director, Department of
Laboratories, New York City Department of Health
Calvin Hatcher, Administrative Assistant, Columbia
Presbyterian Medical Center
George Hollenberg, M.D., Director of Laboratories,
St. Barnabas Medical Center
John K. Li, M.D., Director of Laboratories,
North Central Bronx Hospital
Fiorezzo Paranetto, M.D., Chief of Clinical Laboratory
Services, Kingsbridge Veterans Administration Hospital
Courtney Wood, M.D., Associate Chief of Staff for
Education & Allied Health, Kingsbridge Veterans Ad-
ministration Hospital

Clinical Associates

Mark H. Adelman, B.S.
Assistant Supervisor, Clinical Laboratory,
Beth Abraham Hospital
Amy Baisley, M.S.
Clinical Hematology
St. Barnabas Medical Center
Vera Bandurca, B.S.
Hematology Supervisor,
Columbia Presbyterian Medical Center
Edward Bottone, Ph.D.
Director of Microbiology
Mount Sinai Hospital
Christine Dioso, B.S.
Clinical Chemistry Supervisor
St. Barnabas Medical Center
Sylvia Ford, M.A.
Assistant Supervisor, Clinical Pathology,
Columbia Presbyterian Medical Center
Emile Francois, B.S.
Hematology Supervisor,
Mount Sinai Medical Center
Ronald Gordon, Ph.D.
Department of Pathology
North Central Bronx Hospital
William Hertelendy, M.S.
Pediatric Chemistry Supervisor,
Columbia Presbyterian Medical Center
E. Ralph Johnson, M.S.
Supervisor of Microbiology
Mount Sinai Hospital
Ezra Levy, Ph.D.
Chief, Biochemistry Section
Columbia Presbyterian Medical Center
Lauria Lindesay, M.S.
Supervisor, Clinical Chemistry,
North Central Bronx Hospital
Alejandra Martinez, B.A.
Histology Supervisor
St. Barnabas Medical Center
Abraham N. Neufeld, B.S.
Technologist, Beth Abraham Hospital
Edward M. Rudnick, B.S.
Clinical Laboratory Supervisor,
Beth Abraham Hospital
Neville Trowers, M.S.
Microbiology Supervisor,
North Central Bronx Hospital
Donna Vallone, B.S.
Blood Banking Supervisor
St. Barnabas Medical Center
BUSINESS

Office: Tech Two, Room G-20
220-6137

Professors: A. Hirshfield, M. Horn, W. Hynes,
M. O'Riordan, M. Pollack, M. Shopkow
Associate Professors: J. Gorham, P. Tucker, H. Weiman
Assistant Professors: V. Anderson, J. Bernhard, C. Lerner,
B. Reshen, J. Suarez, F. Terrell, M. Walwyn

Courses offered: Accounting (ACC), Business (BUS), Data Processing (DAT), Finance (FIN), Law (LAW), Marketing Management and Sales (MKT), Taxation (TAX)

Paralegal Studies Advisory Committee
A permanent Advisory Committee composed of distinguished members of the legal, business, and educational communities will help maintain the program's high academic quality. Members include:
Congressman Mario Biaggi
Margaret Burnham, Esq., President, National Conference of Black Lawyers
State Senator John Calandra
Justice John Carro, Supreme Court, Appellate Division,
State of New York
Michael Durso, Senior Vice President of Public Relations, Dominion Drydock Savings Bank
Charles Fleming, Counselor for Foreign Affairs, San Lucia,
United Nations Embassy (Bronx Community College graduate)
Congressman Robert Garcia
David Goldfarb, Esq., Attorney-in-Charge, Civil Office, Bronx Legal Aid Society
Professor Arthur Hirshfield, Department of Business, Bronx Community College
Hon. Mary Johnson Lowe, Federal District Court Judge
Justice Joseph Mazur, Supreme Court, State of New York
Hon. Mario Merola, Bronx District Attorney
Justice E. Leo Milonas, Supreme Court, Appellate Division,
State of New York
Judge Benjamin F. Nolan, Judge-in-Charge, Civil Court,
City of New York
John Patterson, Jr., President, South Bronx Overall Economic Development Corp.
Maxwell Pfeiffer, Esq., former President, Bronx County Bar Association
Judge Anne E. Targum, Civil Court, City of New York
Francis Terrell, Esq., Assistant Professor of Paralegal Studies, Bronx Community College
Justice Ivan Warner, Supreme Court, State of New York
Dr. Allan Wolk, Director of Paralegal Studies, Professor of Political Science, Bronx Community College

CHEMISTRY AND CHEMICAL TECHNOLOGY

Office: Nichols, Room 117
220-6218

Chairman: Professor Joseph G. Riley
Professors: J. Buckley, R. Clarke, J. Fahey, M. Pulver,
H. Stein, I. Zimmerman
Associate Professors: D. Gracian, R. Leinaeng, E. Passer
Assistant Professor: R. Miller

Courses offered: Chemistry (CHM)
ENGLISH
Office: Tech Two, Room 719
220-6296
Chairman: Professor Irwin Berger
Associate Professors: M. Matthew, A. Sandberg

Courses offered: English (ENG)

HEALTH AND PHYSICAL EDUCATION
Office: Alumni Gym, Room 300
220-6020
Chairman: Professor Mitchell Wenzel
Professors: J. Juechter, J. Katz, R. Kor, R. Salgado, M. Steuerman
Associate Professors: G. Constantine, C. Honda, S. Schwartz, M. Stern, J. Whelan, F. Wong
Assistant Professors: I. DeCicco, A. Kelemen, H. Skinner
Lecturer: D. Genova

Courses offered: Health (HLT), Physical Education (PEA), Recreation (REC)

HISTORY
Office: Tech Two, Room 422
220-6010
Chairman: Professor Samuel D. Ehrenpreis
Associate Professor: W. Sokolsky
Assistant Professor: G. Diallo
Lecturer: J. Gutwirth

Courses offered: Geography (GEO), History (HIS)

LIBRARY AND LEARNING RESOURCES
Office: Tech Two Basement
220-6099
Chairman: Professor Morton Rosenstock
Professors: J. Kolliner, E. Terry
Associate Professors: D. Canty, A. Peretz, J. Skurdenis
Assistant Professors: D. Hadgis, O. Klymowycz
Lecturer: M. Eisenschmied

Courses offered: Audiovisual Technology (AVT)

MATHEMATICS
Office: Gould Tech, Room 315
220-6341
Chairman: Professor Erwin Just
Associate Professors: L. Alpert, T. Finnegan, S. Friedlander, H. Frisz, J. Furst
Assistant Professors: M. Bates, M. Bennett, G. Bhalla, K. Fogarty, S. Forman, M. Glass, G. Glier, P. Klarreich, J. O'Sullivan, J. Rothschild, B. Stein
Instructor: J. Trent
Lecturers: S. Greenspan, R. Miller

Courses offered: Mathematics (MTH)

MODERN LANGUAGES
Office: Tech Two, Room 505
220-6151
Chairman: Professor Donald McCulloch
Professors: J. D'Andrea, H. Winterfeldt
Associate Professor: P. Lalli
Assistant Professors: F. DeLuca, L. Gorycki, R. Gourin, A. Lessard, L. Pinto, A. Pomerantz, F. Stabile, S. Wilkofsky
Lecturers: A. Resto, I. Taylor

Courses offered: French (FRN), German (GER), Italian (ITL), Language (LAN), Spanish (SPN)

MUSIC AND ART
Office: Guggenheim, Room 206
220-6213
Chairman: Professor Marvin Salzberg
Professors: R. Bass, P. Rosenfeld, L. Simon
Associate Professors: V. Capers, J. D'Angelo, J. Hamell, P. Schira
Assistant Professors: N. Canton, R. Cordray, S. Eversole, J. Magaziner
Lecturers: E. Kissel, F. Sharpe

Courses offered: Art (ART), Music (MUS)
NURSING
Office: Gould Tech, Room 413
220-6114
Chairperson: Professor Alice P. Fuller
Professors: A. Gotta, A. Jackson, V. Katz, A. Levey, C. Lofstedt
Associate Professors: J. Brand, D. Darby, W.W. Huang, J. Patterson, R. Tate, M. Walsh
Courses offered: Nursing (NUR), Nutrition (NTR), Pharmacology (PHM)

Nursing Advisory Committee
Ms. Mary Bergin, R.N., Consultant, Doctors Hospital
Mr. Reagan Brown, Executive Director, Local 144, Health Facilities Training and Upgrading Fund
Dr. Alice P. Fuller, R.N., Chairperson, Department of Nursing, Bronx Community College
Prof. Lfredia Davis, Student Development, Bronx Community College
Ms. Martha Gate, R.N., Director of Nursing, Harlem Hospital
Dr. Max Hahn, Special Assistant to the President, Bronx Community College
Mr. Ralph Lawrence, Bronx Borough Board
Ms. Edith Rubin, R.N., Consultant in Nursing Education, Division of Accreditation Services, Associate Degree Programs, National League for Nursing
Ms. Aileen Ryan
Ms. Margie Siclari, R.N., Vice-President for Nursing, Doctors Hospital
Prof. Marilyn Walsh, R.N., Department of Nursing, Bronx Community College

SECRETARIAL STUDIES
Office: Tech Two, Room 520
220-6145
Chairperson: Professor Doris Bluth
Professors: B. Ettenger, R. Quinn, K. Takei
Associate Professor: M. Wise
Assistant Professor: D. LaBlanc
Lecturer: M. Kassab
Courses offered: Orientation (ORI), Secretarial Studies (COM, SEC), Shorthand (SHO), Typing (KEY, TYP), Word Processing (WPR)

SOCIAL SCIENCES
Office: Tech Two, Room 323
220-6614
Chairman: Assistant Professor Howard Harris
Professors: M. Chang, A. Galub, L. Kovar, H. Robbins, A. Wolk
Associate Professors: C. Daley, P. Morrill, E. Rolnick, A. Schwartz, W. Wahlin
Assistant Professors: K. Berger, R. Stieby
Lecturer: T. Krainovich
Courses offered: Economics (ECO), Human Services (HSC), Philosophy (PHIL), Political Science (POL), Psychology (PSY), Sociology (SOC)

PHYSICS
Office: Gould Tech, Room 222
220-6209
Chairman: Associate Professor Miroslav Todorovich
Professors: L. DeAcetis, J. Prince
Associate Professor: E. Weiss
Assistant Professor: R. Gorman
Courses offered: Astronomy (AST), Physics (PHY), Radiation (RAD)

Committee on Nuclear Medicine Technology
Albert Einstein College of Medicine
Dr. M. Donald Blafox, M.D., Ph.D.
Director, Divisions of Nuclear Medicine
Professor of Radiology (Nuclear Medicine) and
Professor of Medicine
Dr. Lakshman Rao Chennu, Associate Professor of
Radiology and Chief, Nuclear Medicine, Central
Laboratory
Ms. Denise Lumping, Certified Nuclear Medicine
Technologist, Technical Supervisor, Nuclear Medicine

Bronx Community College
Prof. Bernard Bates, Biology
Dr. James Fahey, Chemistry
Dr. Alice Fuller, R.N., Nursing
Dr. Jack Prince, Physics

SPECIAL EDUCATIONAL SERVICES
Office: Tech Two, Room 220
220-6601
Chairman: Professor David Davidson
Professors: J. Rempson, J. Sutchin
Associate Professors: H. Iby, H. Shenkman
Assistant Professors: P. Lanier, S. O'Neill, H. Richardson
Lecturers: E. Callandro, I. Dutra, H. Rand, B. Wilson
Courses offered: Education (EDU), English as a Second Language (ESL), Reading (RDL)

Education Associate Advisory Committee
Dr. Miniam Dorn, Chairperson, Department of Elementary Education, City College of New York, CUNY
Dr. Lorraine Hale, Executive Director, Hale House Center for Promotion of Human Potential, Inc., New York
Mr. Edmund James, Principal, P.S. 162, Manhattan
Prof. Joseph Jigges, Professor, Special Education, City College of New York, CUNY
Dr. Edward G. Ponder, Early Childhood/Elementary Education, New York University
Ms. Inez Vanable, Early Childhood Coordinator, District 12, New York City
DEGREE REQUIREMENTS

The student is responsible for ascertaining and completing all the requirements for the degree for which he is a candidate at the time he matriculates. He is required to complete all courses prescribed by his curriculum before active candidacy and consideration for a degree can be entertained.

Courses taken at BCC to remove deficiencies in preparatory work, and those courses recommended as a result of placement examinations which are not part of the degree course requirements in the curriculum, are not creditable toward the degree and are not considered part of the minimum and maximum credits required for the degree.

A cumulative index of 2.00 is required for the Associate Degree. Candidates for the degree must be approved by the faculty for submission to the President and the Board of Trustees as worthy, meritorious and deserving, including moral and character qualifications in their record.

AUDIOVISUAL TECHNOLOGY

Curriculum Coordinator: Prof. D. Canty

Audiovisual Technology is one of the fastest growing fields today and one that holds much career promise for motivated students. The media field is not only entertainment—broadcasting, movies, and the like—but in fact, it has a whole other dimension. Media is used by major corporations, business, government agencies, and educational institutions to train, educate, communicate and publicize. This field, often called “corporate media,” is the primary focus of this AVT program.

The AV Technology curriculum is specifically oriented to teach the skills most required for “corporate media.” Students learn audiovisual photography methods, multi-media production, audiotape production and duplication, color video, video editing, mechanical and electronic graphics, equipment operation and maintenance, as well as oral and written communications.

Audiovisual Technology (AVT) Curriculum (Option I)
66½-67½ Credits required for A.A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENG 15</td>
<td>Composition &amp; Drama</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>MTH 13</td>
<td>Mathematics for Technology I</td>
<td>3</td>
</tr>
<tr>
<td>MTH 14</td>
<td>Mathematics for Technology II</td>
<td>3</td>
</tr>
<tr>
<td>ART 10</td>
<td>Art Survey</td>
<td>1</td>
</tr>
<tr>
<td>MUS 10</td>
<td>Music Survey</td>
<td>1</td>
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<tr>
<td>PEA</td>
<td>Physical Ed. (choose one)</td>
<td>1</td>
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Specialization Requirements

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<tr>
<th>Course No.</th>
<th>Title</th>
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<tbody>
<tr>
<td>ART 71</td>
<td>Photography</td>
<td>2</td>
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<tr>
<td>ART 81</td>
<td>Media &amp; Communication Art</td>
<td>2</td>
</tr>
<tr>
<td>AVT 10</td>
<td>Introduction to Audiovisual Technology</td>
<td>3</td>
</tr>
<tr>
<td>AVT 11</td>
<td>Audiovisual Photography</td>
<td>3</td>
</tr>
<tr>
<td>AVT 12</td>
<td>Small Studio Color Television</td>
<td>3</td>
</tr>
<tr>
<td>AVT 13</td>
<td>Audiovisual Equipment Operation &amp; Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>AVT 31</td>
<td>Audio Recording &amp; Duplication</td>
<td>3</td>
</tr>
<tr>
<td>AVT 32</td>
<td>Multimedia Operations &amp; Production</td>
<td>4</td>
</tr>
<tr>
<td>AVT 33</td>
<td>Television Editing &amp; Post Production Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CMS 12</td>
<td>Voice and Diction</td>
<td>2</td>
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<tr>
<td>CMS 60</td>
<td>Intro. to Mass Communication</td>
<td>3</td>
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<tr>
<td>ELC 10</td>
<td>Intro. to Electrical Technology</td>
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<td>ELC 20</td>
<td>Industrial Electricity &amp; Electronics</td>
<td>3</td>
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<tr>
<td>PHY 21</td>
<td>Physics for Engineering</td>
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<td>Total</td>
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<td>40½</td>
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</table>

Free Electives
To complete the required 66½ to 67½ credits.

* Students may substitute BUS 10 and ELC 12 under Option II which requires 65½-66½ credits.

AUTOMOTIVE MECHANICS CERTIFICATE PROGRAM

Automotive Director: Dr. H. Frisz

The Automotive Mechanics curriculum is designed to introduce and develop basic automotive skills required in most automotive repair shops. The curriculum integrates automotive theory with an emphasis on shop experience. Upon the successful completion of this curriculum, students will receive certification. Students may select between a Mechanic or Collision Repair major.

Automotive Mechanics Curriculum
30 Credits required for Certification

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACS 11</td>
<td>Engine</td>
<td>6</td>
</tr>
<tr>
<td>ACS 12</td>
<td>Brakes</td>
<td>3</td>
</tr>
<tr>
<td>ACS 13</td>
<td>Fuel Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACS 14</td>
<td>Manual Transmission</td>
<td>3</td>
</tr>
<tr>
<td>ACS 21</td>
<td>Front Ends</td>
<td>4</td>
</tr>
<tr>
<td>ACS 22</td>
<td>Automotive Transmission</td>
<td>4</td>
</tr>
<tr>
<td>ACS 23</td>
<td>Heating &amp; Air Conditioning</td>
<td>4</td>
</tr>
<tr>
<td>ACS 24</td>
<td>Electrical Systems</td>
<td>3</td>
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<td>Total</td>
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</table>

Collison Repair

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACS 31</td>
<td>Towing &amp; Shop Safety</td>
<td>3</td>
</tr>
<tr>
<td>ACS 32</td>
<td>Chassis &amp; Components</td>
<td>4</td>
</tr>
<tr>
<td>ACS 33</td>
<td>Metal Work</td>
<td>4</td>
</tr>
<tr>
<td>ACS 34</td>
<td>Painting</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
The programs offered in Business fall into three categories: Business Career, a two-year program which leads to the A.A.S. degree; Business Administration, a transfer Program which leads to the A.A. degree and to the third year at Baruch College or Lehman College of the City University of New York; and Business Teaching, a special program for students planning to teach business subjects at the high school level, which leads to the A.A. degree and to the third year at Baruch College or at Hunter College.

BUSINESS CAREER CURRICULA

There are several areas in the Business Career Curricula leading to the A.A.S. degree. A student may pursue a Business Career specialization in: 1) Accounting, 2) Marketing Management and Sales, 3) Data Processing with a specialization in Computer Programming and Systems Analysis, 4) Paralegal Studies.

Upon satisfactory completion of his work at Bronx Community College, the student may seek immediate employment in the field of his choice.

A career program graduate will be accepted directly as a matriculated student in related professional programs of senior units of the City University; or he may transfer to another appropriate college of his choice provided he meets the requirements of that institution; or he may decide — within the first year of his enrollment at Bronx Community College — upon intracurriculum transfer.

Business Career Curriculum — Accounting

The accountant is indispensable in modern business organization and management. His basic responsibilities include the recording and summarizing of financial transactions. Accountants are called upon to analyze, interpret and prepare business reports, often including recommendations for more efficient operations. Graduates may enter this field of specialization in such positions as bookkeepers, cost accounting clerks, junior accountants, and tax examiners for government agencies. With further study, graduates may go on to the baccalaureate degree and become business managers, budget directors, private accountants or controllers. With further appropriate training and experience, graduates may qualify for certification as Certified Public Accountants or as teachers of accounting and related subjects.

Accounting Specialization Curriculum
65-66 Credits required for A.A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>&quot;MTH 12</td>
<td>Intro to Mathematical Thought</td>
<td>3</td>
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Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>Humanities — Choose from</td>
<td>English, Music, Modern Languages, History or Social Sciences</td>
</tr>
<tr>
<td>ECO 11 or 12 — Micro or</td>
<td>Macroe Economics</td>
</tr>
<tr>
<td>MUS 10 or ART 10 — Music</td>
<td>Survey or Art Survey</td>
</tr>
<tr>
<td>*Science — BIO 18, AST 11</td>
<td>or CHM 13</td>
</tr>
<tr>
<td>*Physical Education (two</td>
<td>activity courses)</td>
</tr>
<tr>
<td>Specialization Requirements</td>
<td></td>
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<tr>
<td>Total 15-16</td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MKT 11</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>DAT 30</td>
<td>Introduction to Systems</td>
<td>3</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>**CWE 33</td>
<td>Cooperative Work Experience</td>
<td>4</td>
</tr>
<tr>
<td>ACC 13</td>
<td>Intermediate Accounting III</td>
<td>4</td>
</tr>
<tr>
<td>BUS 51</td>
<td>Business Organization &amp; Management</td>
<td></td>
</tr>
<tr>
<td>FIN 31</td>
<td>Principles of Finance</td>
<td>3</td>
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<tr>
<td>ACC 14</td>
<td>Cost Accounting</td>
<td>4</td>
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<tr>
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<td>38</td>
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</tbody>
</table>

* Students who may later transfer to a four-year college should take MUS 11 or ART 11 instead of MUS 10 or ART 10; a lab science from among BIO 11, CHM 11, PHY 11 or AST 12 instead of BIO 18, AST 11 or CHM 13; and MTH 30 instead of MTH 12.

** CWE 33 may be taken in the fourth semester, depending on CWE pattern assignment. CWE 33 is not required of full-time evening students. They may substitute one marketing elective.

*Students may also transfer to one of the other senior colleges of the City University of New York having a program in Business Administration.
Business Career Curriculum – Marketing Management and Sales

The retailer serves as a vital link between producer and consumer. Retailing organizations may be independent, chain or department stores, buying offices, or mail-order houses, all of which sell myriad products through a wide variety of outlets and by various techniques.

Students earn while they learn during their senior semester in the Cooperative Work Experience program, which provides part-time, supervised employment in a college-approved retail organization.

Completion of the marketing curriculum prepares a graduate to start a career in such positions as assistant buyer, head of stock, assistant store manager, comparison shopper, salesman, distributor, section manager.

Marketing Management and Sales Specialization Curriculum
66-67 Credits required for A.A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*MTH 12</td>
<td>Intro. to Mathematical Thought</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Required Areas of Study

- Humanities — Choose from Art, Communication, English, History, Modern Languages, Music or Social Sciences - 6 credits
- ECO 11 or 12 — Micro or Macro Economics - 3 credits
- *ART 10 or MUS 10 — Art Survey or Music Survey - 1 credit
- *Science — BIO 18, AST 11 or CHM 13 - 3-4 credits
- Physical Ed. (choose two activity courses) - 2 credits

**Total** 15-16 credits

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MKT 11</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>MKT 33</td>
<td>Retail Buying Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MKT 43</td>
<td>Advertising &amp; Sales Promotion</td>
<td>3</td>
</tr>
<tr>
<td>**CWE 33</td>
<td>Cooperative Work Experience</td>
<td>4</td>
</tr>
<tr>
<td>MKT 13</td>
<td>Textiles</td>
<td>4</td>
</tr>
<tr>
<td>MKT 17</td>
<td>Consumer Problems</td>
<td>3</td>
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<td>MKT 18</td>
<td>Consumer Behavior</td>
<td>3</td>
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<td>MKT 41 or 70</td>
<td>Marketing Elective</td>
<td>3</td>
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<tr>
<td>LAW 41</td>
<td>Business Law</td>
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</table>

**Total** 39 credits

*Students who may later transfer to a four-year college should take MUS 11 or ART 11 instead of MUS 10 or ART 10; a lab science from among BIO 11, CHM 11, PHY 11 or AST 12 instead of BIO 18, AST 11 or CHM 13; and MTH 30 instead of MTH 12.

**CWE 33 may be taken in the fourth semester, depending on CWE pattern assignment. CWE 33 is not required of full-time evening students. They may substitute FIN 31, DAT 30, or one marketing elective.
BUSINESS ADMINISTRATION CURRICULUM

(Transfer to Baruch or Lehman College)

The Business Administration program is designed to provide an introduction to Accounting, Management, or Marketing Management and Sales as part of a foundation for continuing for a baccalaureate degree at Baruch or Lehman College of The City University of New York, to which the student may transfer automatically upon graduation from Bronx Community College. This program also provides a basis for transfer to any other appropriate senior business college for which the student qualifies and chooses to attend. Upon graduation from Bronx Community College, the student earns the A.A. degree. Following are descriptions of the options in this program and the sequence of courses needed for fulfillment of degree requirements.

Business Administration—Accounting

The Accounting option of the Business Administration program prepares the student with fundamental courses in business and accounting and provides him with the proper background for transfer into a senior college and completion of the baccalaureate degree. The student who desires a career in executive and administrative positions in finance and budget direction, or in related business areas, should pursue this program. Upon completion of further appropriate education and training, and with experience, the student may qualify by state examination as a Certified Public Accountant, or as a teacher in the field of business administration.

Accounting Option Curriculum
(Transfer to Baruch or Lehman College)
69 Credits required for A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*MTH 30 or 31</td>
<td>Pre-Calculus or Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>**</td>
<td>Modern Language</td>
<td>8</td>
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<tr>
<td>Total</td>
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Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities A</td>
<td>Choose from ENG 14, 15 or 16</td>
<td>3</td>
</tr>
<tr>
<td>Humanities B</td>
<td>Art or Music</td>
<td>3</td>
</tr>
<tr>
<td>Social Science or History</td>
<td>Choose from History or PHL 11, POL 11, PSY 11 or SOC 11</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>Choose from Political Science, Philosophy, Psychology or Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>Choose from BIO 11, CHM 10, PHY 11 or AST 12</td>
<td>4</td>
</tr>
<tr>
<td>ECO 11 or 12</td>
<td>Micro or Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed.</td>
<td>(choose two activity courses)</td>
<td>2</td>
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<tr>
<td>Total</td>
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<td>21</td>
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</table>

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II</td>
<td>4</td>
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<tr>
<td>BUS 51</td>
<td>Business Organization &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>ACC 13</td>
<td>Intermediate Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS 41</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>ACC 14</td>
<td>Cost Accounting</td>
<td>4</td>
</tr>
<tr>
<td>CMS 12</td>
<td>Voice and Diction</td>
<td>2</td>
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<tr>
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<td>27</td>
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</table>

*Students who have taken Advanced Algebra in high school may be exempt from MTH 30 by permission of the Mathematics Department. In this instance, MTH 31 is required.

**A student who has completed three years of a foreign language in high school is exempt from the language requirement. Arrange for a course substitution with the Chairman of the Business Department.
Business Administration Curriculum  
Management Option  
(Transfer to Baruch or Lehman College)  
67 Credits required for A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*MTH 30 or 31</td>
<td>Pre-Calculus or Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>**</td>
<td>Modern Language</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>**Total 21</td>
<td></td>
</tr>
</tbody>
</table>

Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities A</td>
<td>Choose from ENG 14, 15 or 16</td>
<td>3</td>
</tr>
<tr>
<td>Humanities B</td>
<td>Art or Music</td>
<td>3</td>
</tr>
<tr>
<td>Social Science or History</td>
<td>Choose from History or PHL 11, POL 11, PSY 11 or SOC 11</td>
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</tr>
<tr>
<td>Social Science</td>
<td>Choose from Political Science, Philosophy, Psychology or Sociology</td>
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<tr>
<td>Science</td>
<td>Choose from BIO 11, CHM 10, PHY 11 or AST 12</td>
<td>4</td>
</tr>
<tr>
<td>ECO 11 or 12</td>
<td>Micro or Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed. (choose two activity courses)</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>**Total 21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 11</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 51</td>
<td>Business Organization &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>CMS 12</td>
<td>Voice and Diction</td>
<td>2</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUS 41</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>FIN 31 or DAT 30</td>
<td>Principles of Finance or Introduction to Systems</td>
<td>3</td>
</tr>
<tr>
<td>**Total 25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Students who have taken Advanced Algebra in high school may be exempt from MTH 30 by permission of the Mathematics Department. In this instance, MTH 31 is required.

**A student who has completed three years of a foreign language in high school is exempt from the language requirement. Arrange for a course substitution with the Chairman of the Business Department.

Business Administration — Marketing Management and Sales

For those students who wish to prepare for a career in marketing management and sales, this option of the Business Administration program provides them with basic courses before transferring into the four-year college. Administrative and executive positions require a firm foundation in the business subjects included in this curriculum.

Business Administration Curriculum  
Marketing Management and Sales Option  
(Transfer to Baruch College)  
69 Credits required for A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*MTH 30 or 31</td>
<td>Pre-Calculus or Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>**</td>
<td>Modern Language</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>**Total 21</td>
<td></td>
</tr>
</tbody>
</table>

Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities A</td>
<td>Choose from ENG 14, 15 or 16</td>
<td>3</td>
</tr>
<tr>
<td>Humanities B</td>
<td>Art or Music</td>
<td>3</td>
</tr>
<tr>
<td>Social Science or History</td>
<td>Choose from History or PHL 11, POL 11, PSY 11 or SOC 11</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>Choose from Political Science, Philosophy, Psychology or Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>Choose from BIO 11, CHM 10, PHY 11 or AST 12</td>
<td>4</td>
</tr>
<tr>
<td>ECO 11 or 12</td>
<td>Micro or Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ed. (choose two activity courses)</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>**Total 21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 11</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>MKT 18</td>
<td>Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>BUS 41</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MKT 33</td>
<td>Buying Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CMS 12</td>
<td>Voice and Diction</td>
<td>2</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>MKT 43 or</td>
<td>Advertising &amp; Sales Promotion or</td>
<td>3</td>
</tr>
<tr>
<td>FIN 31</td>
<td>Principles of Finance</td>
<td>3</td>
</tr>
<tr>
<td>DAT 30</td>
<td>Introduction to Systems</td>
<td>3</td>
</tr>
<tr>
<td>**Total 27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Students who have taken Advanced Algebra in high school may be exempt from MTH 30 by permission of the Mathematics Department. In this instance, MTH 31 is required.

**A student who has completed three years of a foreign language in high school is exempt from the language requirement. Arrange for a course substitution with the Chairman of the Business Department.
BUSINESS TEACHING CURRICULA

The Business Teaching program offers two plans to students preparing to teach in high school: 1) For students planning to teach Bookkeeping and Accounting at the secondary level and who plan to transfer to Baruch College; 2) for students planning to teach Marketing Management and Sales at the secondary level and who plan to transfer to Baruch College. These programs lead to the A.A. degree. Upon successful completion of this program, a student may transfer to the third year at Baruch College.

High School Teaching Option Curriculum: Bookkeeping and Accounting
(Transfer to Baruch College)
66-68 Credits required for A.A. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition 3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication 3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World 3</td>
</tr>
<tr>
<td>*MTH 30</td>
<td>Modern Language 0-8</td>
</tr>
<tr>
<td>**MTH 30</td>
<td>Pre-Calculus 4</td>
</tr>
<tr>
<td></td>
<td>Total 14-21</td>
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</tbody>
</table>

Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities A</td>
<td>Choose from ENG 14, 15 or 16</td>
</tr>
<tr>
<td>Humanities B</td>
<td>Choose from ENG 14, 15 or 16</td>
</tr>
<tr>
<td>Social Science</td>
<td>Choose from BIOL 11, CHM 11, PHY 11 or AST 12</td>
</tr>
<tr>
<td>History or Social Science</td>
<td>Choose from History, HPH 11, POL 11, PSY 11 or SOC 11</td>
</tr>
<tr>
<td>ECO 11 or 12</td>
<td>Micro or Macro Economics</td>
</tr>
<tr>
<td>Physical Ed.</td>
<td>(Choose two activity courses)</td>
</tr>
<tr>
<td></td>
<td>Total 19-21</td>
</tr>
</tbody>
</table>

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 11</td>
<td>Business Mathematics 3</td>
</tr>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I 4</td>
</tr>
<tr>
<td>MKT 13</td>
<td>Marketing 3</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II 4</td>
</tr>
<tr>
<td>BUS 51</td>
<td>Business Organization &amp; Management 3</td>
</tr>
<tr>
<td>CMS 12</td>
<td>Voice and Diction 2</td>
</tr>
<tr>
<td>ACC 13</td>
<td>Intermediate Accounting 4</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law 3</td>
</tr>
<tr>
<td></td>
<td>Total 26</td>
</tr>
</tbody>
</table>

Note: Students exempted from courses will arrange for course substitution through the Chairman of the Business and Commerce Department.

CHEMICAL TECHNOLOGY

Students interested in this field of study should see the Industrial Chemical Laboratory option (page 64).
The field of data processing is rich in career opportunities. Business organizations and government agencies use computers to perform such essential functions as inventory control, sales forecasting, production scheduling, statistical analysis and accounting applications.

Trained data processing personnel are in demand because of the ever-growing use of computers. Starting salaries are excellent for both men and women who qualify in the areas of systems analysis, programming, computer operations and the use of unit record equipment.

The Data Processing curriculum provides a well-grounded program of:

- general education in liberal arts and sciences
- business background preparation
- data processing specialization

Students who satisfactorily complete the Data Processing Curriculum and earn the A.A.S. degree may transfer to the third year at Baruch College.

**Data Processing Programming and Systems Option Curriculum**

67-68 Credits required for A.A.S. Degree

### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*MTH 12</td>
<td>Intro. to Mathematical Thought</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>12</td>
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</tbody>
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### Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities A — Choose from ENG 14, 15 or 16</td>
<td>3</td>
</tr>
<tr>
<td>*Humanities B — MUS 10 or ART 10</td>
<td>1</td>
</tr>
<tr>
<td>*Science — Choose from BIO 18, AST 11 or CHM 13</td>
<td>3-4</td>
</tr>
<tr>
<td>Physical Ed. (choose two activity courses)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

### Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAT 30</td>
<td>Introduction to Systems</td>
<td>3</td>
</tr>
<tr>
<td>BUS 10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>DAT 40</td>
<td>COBOL Programming</td>
<td>4</td>
</tr>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 51</td>
<td>Business Organization &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>**CWE 33</td>
<td>Cooperative Work Experience</td>
<td>4</td>
</tr>
<tr>
<td>DAT 32</td>
<td>Computer Programming Concepts &amp; Intro. to R.P.C.</td>
<td>3</td>
</tr>
<tr>
<td>DAT 43</td>
<td>Advanced COBOL Programming</td>
<td>4</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUS 41</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>DAT 41</td>
<td>Assembly Programming (BAL)</td>
<td>4</td>
</tr>
<tr>
<td>ACC 14</td>
<td>Cost Accounting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>46</td>
</tr>
</tbody>
</table>

*Students who may later transfer to a four-year college should take ART 11 or MUS 11 instead of ART 10 or MUS 10; a lab science from among BIO 11, CHM 11, PHY 11, or AST 12 instead of BIO 18, AST 11 or CHM 13; and MTH 30 instead of MTH 12.*

**CWE 33 may be taken in the fourth semester, depending on CWE pattern assignment. CWE 33 is not required of full-time evening students. They may substitute either FIN 31 or MKT 11.*
EDUCATION ASSOCIATE —
Child Care Option

Curriculum Coordinator: Dr. D. Davidson

Bronx Community College offers an Education Associate degree (A.A.S.) for students who major in early childhood and elementary education. This degree is also for students who want to concentrate in child care or in the education of the handicapped.

The degree prepares students for a paraprofessional position in one or more of the following settings: public schools, day care centers, and agencies that service the handicapped.

All courses are competency-based and have a field work component. Competency-based means that the specific knowledge, skills, abilities, and insights to be gained are explicitly stated, together with the method of acquiring and assessing them, and that the student has a chance to apply theoretical knowledge to practical situations by working directly with children or with school personnel.

The intent is to assure that upon satisfactory completion of a course, the student not only has knowledge, skills, abilities, and insights, but is also competent to use them in real situations.

<table>
<thead>
<tr>
<th>Specialization Requirements for Education Associate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 10</td>
</tr>
<tr>
<td>*EDU 15, 16, or 17</td>
</tr>
<tr>
<td>EDU 26</td>
</tr>
<tr>
<td>EDU 40</td>
</tr>
<tr>
<td>One or two of the following Education electives:</td>
</tr>
<tr>
<td>EDU 12</td>
</tr>
<tr>
<td>EDU 18</td>
</tr>
<tr>
<td>EDU 30</td>
</tr>
<tr>
<td>EDU 31</td>
</tr>
<tr>
<td>EDU 50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specialization Requirements for Child Care Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 10</td>
</tr>
<tr>
<td>*EDU 15, 16, or 40</td>
</tr>
<tr>
<td>EDU 24</td>
</tr>
<tr>
<td>EDU 25</td>
</tr>
<tr>
<td>EDU 26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration in Education of the Handicapped</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 10</td>
</tr>
<tr>
<td>*EDU 15, 16, or 17</td>
</tr>
<tr>
<td>EDU 30</td>
</tr>
<tr>
<td>EDU 31</td>
</tr>
<tr>
<td>EDU 40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Free Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>To complete the required minimum of 64 credits or the required maximum of 65 credits.</td>
</tr>
</tbody>
</table>

Transfer credit information: Twelve of the 15 required Education degree credits will be accepted towards Education degree requirements at City College, Hunter College, Lehman College, and other City University senior colleges. Additional Education degree credits will be considered electives and require consultation with the department. For transfer credit information regarding specific Education courses, see department.

*Course required depends upon advisement and transfer plans.
ELECTRONIC AND COMPUTER TECHNOLOGY

Curriculum Coordinator: Prof. M. Tyson, P.E.

This program prepares the student for immediate employment. Students who plan to continue their studies may transfer directly to a four-year college and earn a baccalaureate degree in Engineering Technology. The City College has such a program, as do other colleges in the metropolitan area. In addition, there are colleges that accept students with an A.A.S. in Electronic and Computer Technology and allow them to pursue an engineering degree.

Electrical engineering technology is one of the fastest-growing professions. The speed of technological advances has created a serious shortage of trained personnel.

Electrical, electronic, and computer technicians are needed to design, build, test and maintain such complex electronic equipment as computers, control systems, communications systems, and medical devices.

Electronic and Computer Technology Curriculum
67½ Credits required for A.A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 9

Required Areas of Study

Humanities—Choose from Art, Communication, English, History, Modern Languages, Music or Social Sciences 3-4

ART 10 or MUS 10—Art Survey or Music Survey 1

HIS 91 or PEA—Critical Health Issues or Physical Education activity course 1-2

Total 5-7

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 13</td>
<td>Trig. &amp; College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MEC 10</td>
<td>Intro. to Mech. Equipment &amp; Systems</td>
<td>2½</td>
</tr>
<tr>
<td>ELC 10</td>
<td>Intro. to Electrical Technology</td>
<td>2</td>
</tr>
<tr>
<td>ELC 11</td>
<td>DC Circuit Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ELC 12</td>
<td>Intro. to Digital Computers &amp; BASIC Programming</td>
<td>2</td>
</tr>
<tr>
<td>MTH 14</td>
<td>College Algebra &amp; Intro. to Calculus</td>
<td>3</td>
</tr>
<tr>
<td>PHY 21</td>
<td>Physics for Engrg. Tech I</td>
<td>4</td>
</tr>
<tr>
<td>ELC 21</td>
<td>AC Circuit Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ELC 25</td>
<td>Basic Electronics</td>
<td>4</td>
</tr>
<tr>
<td>MTH 15</td>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>PHY 22</td>
<td>Physics for Engrg. Tech. II</td>
<td>3</td>
</tr>
<tr>
<td>ELC 35</td>
<td>Communication Electronics</td>
<td>4</td>
</tr>
<tr>
<td>ELC 38</td>
<td>Electronic Product Design &amp; Measurements</td>
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</tr>
<tr>
<td>ELC 92</td>
<td>Pulse &amp; Digital Circuits</td>
<td>3</td>
</tr>
<tr>
<td>ELC 45</td>
<td>Electronics Project Lab</td>
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</tr>
<tr>
<td>ELC 95</td>
<td>Computer System Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>ELC 98</td>
<td>Computer Circuits</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 53½

ENGINEERING SCIENCE
(The first two years of the Engineering sequence)

Curriculum Coordinator: Prof. M. Todorovich

The Engineering Science program is designed for students with a special interest in engineering or physical science. Scientists and engineers need rigorous preparation in mathematics and basic science. In addition, the curriculum includes a substantial proportion of courses in the humanities.

Engineering Science Curriculum
67-70 Credits required for A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>ART 10 or MUS 10—Art Survey or Music Survey</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>PEA</td>
<td>Physical Ed. (choose one)</td>
<td>1</td>
</tr>
</tbody>
</table>

Select one course from Economics, History, Philosophy, Political Science, Psychology or Sociology (Choice of History course is in addition to HIS 10)

Total 3

Specialization Requirements

(Must be taken in required sequence as shown on the flowchart)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 31</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 32</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MTH 33</td>
<td>Analytic Geometry &amp; Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MTH 34</td>
<td>Advanced Calculus</td>
<td>4</td>
</tr>
<tr>
<td>PHY 31</td>
<td>Engineering Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 32</td>
<td>Engineering Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 33</td>
<td>Engineering Physics III</td>
<td>4</td>
</tr>
<tr>
<td>PHY 34</td>
<td>Applied Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>CHM 11</td>
<td>General College Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 12</td>
<td>General College Chemistry II</td>
<td>4</td>
</tr>
</tbody>
</table>

Choice of one of the following: 2-4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 31</td>
<td>Organic Chemistry I (Recommended for Chemical Engineering)</td>
<td>4</td>
</tr>
<tr>
<td>DAT 41</td>
<td>Assembly Programming (Recommended for Civil Engineering)</td>
<td>4</td>
</tr>
<tr>
<td>MEC 12</td>
<td>Applied Engineering Graphics (Recommended for Mechanical Engineering)</td>
<td>4</td>
</tr>
<tr>
<td>MTH 35</td>
<td>Adv. Calculus &amp; Linear Algebra (Recommended for Electrical and Civil Engineering)</td>
<td>2</td>
</tr>
<tr>
<td>PHY 34</td>
<td>Engineering Mechanics (Recommended for Electrical Engineering)</td>
<td>4</td>
</tr>
</tbody>
</table>

Free Electives

Students who are required to take MTH 30 will satisfy minimum credit requirements for graduation. All others must take 3-4 credits of electives in any department or discipline.

*Consult Curriculum Coordinator.
The Human Services program in the Social Sciences Department has a dual mission: It prepares students for entry-level career positions in a variety of human services occupations, and it provides the first two years of a course of study leading to a baccalaureate degree.

The program prepares students for employment as mental health aides, group residence workers, neighborhood outreach workers, social casework assistants, geriatric counselors, assistant probation officers, and other similar positions. Employment opportunities exist in such areas as day care, nursery school education, foster care, mental retardation, mental health, social services, aging, rehabilitation of the disabled, group and community work at the public and private level.

In addition, graduates are prepared to pursue further education at the senior colleges leading to a baccalaureate degree in a number of professional areas including social work, gerontology, juvenile justice, psychology, sociology, education and counseling.

Human Services students take a number of specialized courses in psychology and sociology and other selected courses in the various departments of the Liberal Arts and Sciences Division. Students are required to participate in two Human Services field work practicums which provide them with supervised learning experiences in work situations where they learn to apply theoretical material from the classroom and test career choices in the real world.

**Curriculum Pattern for Human Services**

**68 Credits required for A.A. Degree**

**Core Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENG 14, 15, 16</td>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>or 18</td>
<td>CMS 11</td>
<td>Fundamentals of Communication</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>POL 61</td>
<td>Solving Social Problems Through the Political Process</td>
<td>3</td>
</tr>
<tr>
<td>HLT 97</td>
<td>Field Work in Community Health Resources</td>
<td>3</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>*</td>
<td>Modern Language</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

**Required Areas of Study**

**Science**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 11 or MUS 11</td>
<td>Intro. to Art or Intro. to Music</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education—activity course</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>7-8</td>
</tr>
</tbody>
</table>

**Specialization Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 11</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 34</td>
<td>Social Deviance</td>
<td>3</td>
</tr>
<tr>
<td>SOC 35</td>
<td>Introduction to Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SOC 38</td>
<td>Social Advocacy</td>
<td>3</td>
</tr>
<tr>
<td>HSC 91</td>
<td>Field Work &amp; Seminar in Human Services I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 11</td>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 43</td>
<td>Psychological Development During Maturity and Aging</td>
<td>3</td>
</tr>
<tr>
<td>PSY 51</td>
<td>Clinical Techniques of Assessment: The Interview</td>
<td>3</td>
</tr>
<tr>
<td>PSY 71</td>
<td>Clinical Techniques of Assessment: The Interview</td>
<td>3</td>
</tr>
<tr>
<td>HSC 92</td>
<td>Field Work &amp; Seminar in Human Services II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

**Free Electives**

To complete the required 68 credits

*For language requirements, see page 55.
**Students who plan to transfer to a four-year college should take a lab science from Astronomy, Biology, Chemistry or Physics.
The Liberal Arts and Sciences curriculum prepares a student to be a productive and creative human being. This kind of education can open doors to the professions and to rewarding and responsible careers. Future physicians, teachers, scientists, lawyers, and businessmen, for example, develop themselves as sensitive individuals, in addition to completing their preprofessional work, through studies in the liberal arts and sciences. The academic experiences in liberal arts and sciences provide the foundation for later specialization, graduate study, and professional school.

There are several paths offered within the Liberal Arts and Sciences curriculum. The general AA. degree program provides a well-rounded background and the opportunity to explore a variety of subject areas, so that graduates may transfer to the third year of a senior college. Creative specialization in all disciplines may be pursued within the framework of this general Associate in Arts curriculum by concentrating elective courses in a specific subject area, such as:

- Communication Arts and Sciences
- Dance
- Economics
- English
- French
- German
- Health Education
- Italian
- Music
- Philosophy
- Physical Education
- Recreation
- Sociology
- Spanish
- Theatre

Those who wish to pursue a program which allows a greater degree of specialization in the first two years of college may select one of these options or concentrations:

**Associate in Science (A.S. Degree)**
- Biology
- Chemistry
- Computer Science
- Mathematics
- Physics

**Associate in Arts (A.A. Degree)**
- Art
- Black and Puerto Rican Studies
- History
- International Studies
- Political Science
- Psychology
- Religion

In order to graduate, a student must satisfy either all the requirements of the Associate in Arts general curriculum, or all of the requirements of one of the Associate in Science options or all of the requirements of one of the Associate in Arts options.
LIBERAL ARTS AND SCIENCES
TRANSFER OPTIONS (A.A. Degree)

Coordinator: Prof. S. D. Ehrenpreis

Liberal Arts and Sciences Curriculum (Transfer)
Art Option
64-68 Credits required for A.A. Degree

Curriculum Coordinator: Prof. P. Schira

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>MTH</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>*</td>
<td>Modern Language</td>
<td>0-8</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
</tbody>
</table>

Total 14-23

Required Areas of Study

Natural Sciences and Mathematics — Choose from
Math, Biology, Chemistry, Physics or Astronomy
(at least one laboratory science)          7-8

Humanities A — Choose from English and/or
Communication (at least one course in English) 6

Humanities B — Art or Music                3

Social Science and History — Choose from History,
Economics, Philosophy, Political Science, Psychology
or Sociology                                9

Physical Education — activity course         1

Total 26-27

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 11 or 12</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 15</td>
<td>Design</td>
<td>2</td>
</tr>
<tr>
<td>ART 21</td>
<td>Drawing &amp; Painting I</td>
<td>2</td>
</tr>
<tr>
<td>ART 22</td>
<td>Drawing &amp; Painting II</td>
<td>2</td>
</tr>
<tr>
<td>ART 51 or 52</td>
<td>Art of Africa &amp; North America or Oriental Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 31</td>
<td>Graphic Arts I</td>
<td>2</td>
</tr>
<tr>
<td>ART 41</td>
<td>Ceramics I</td>
<td>2</td>
</tr>
<tr>
<td>ART 55</td>
<td>Modern Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 32</td>
<td>Graphic Arts II</td>
<td>2</td>
</tr>
<tr>
<td>ART 42</td>
<td>Ceramics II</td>
<td>2</td>
</tr>
<tr>
<td>ART 61</td>
<td>Art as a Human Value</td>
<td>2-0</td>
</tr>
</tbody>
</table>

Total 23-25

Free Electives

To complete the required 64-68 credits.

*Credit will be given for one semester of repeated high school language, provided degree requirement is met. See Language Requirements for A.A. degree, page 55.

Curriculum Coordinator: Prof. I. Taylor

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>*</td>
<td>Modern Language</td>
<td>0-8</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 14-23

Required Areas of Study

Natural Sciences and Mathematics — Choose from Math, Biology, Chemistry, Physics or Astronomy (at least one laboratory science) 7-8

Humanities A — Choose from English and/or Communication (at least one course in English) 6

Humanities B — Art or Music 3

Social Science and History — Choose from History, Economics, Philosophy, Political Science, Psychology or Sociology 9

Physical Education — activity course 1

Total 26-27

Concentration Requirements

**A minimum of 15 credits must be selected from among the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEA 46</td>
<td>African &amp; Caribbean Dance</td>
</tr>
<tr>
<td>SPN 30, 31</td>
<td>Puerto Rican Literature &amp; Culture I &amp; II</td>
</tr>
<tr>
<td>CMS 28</td>
<td>Afro-American &amp; Puerto Rican Rhetoric</td>
</tr>
<tr>
<td>HIS 39</td>
<td>History of Puerto Rico &amp; The Caribbean</td>
</tr>
<tr>
<td>ENG 53</td>
<td>Black Writers in American Literature</td>
</tr>
<tr>
<td>ENG 54</td>
<td>Black Poetry</td>
</tr>
<tr>
<td>HIS 35</td>
<td>History of Africa</td>
</tr>
<tr>
<td>HIS 37</td>
<td>Afro-American History</td>
</tr>
<tr>
<td>HIS 38</td>
<td>Afro-American Intellectual History</td>
</tr>
<tr>
<td>ART 12</td>
<td>Intro. to Western and Non-Western Culture</td>
</tr>
<tr>
<td>MUS 12</td>
<td>Intro. to Music with Emphasis on Non-Western Cultures</td>
</tr>
<tr>
<td>ART 51</td>
<td>Art of Africa and North America</td>
</tr>
</tbody>
</table>

Free Electives

To complete the required 68 credits.

*See language requirements, page 53.

**These courses may be taken as free electives and/or to fulfill area requirements.

†These credits may be taken in any department or discipline provided that a minimum of 48 credits are in the Humanities, Natural Science and Mathematics and the Social Sciences.
Liberal Arts and Sciences Curriculum (Transfer)  
History Option  
64 Credits required for A.A. Degree

Curriculum Coordinator: Prof. S. D. Ehrenpreis

### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30 or 31</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30 or 31</td>
<td>Modern Language</td>
<td>0-12</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>14-27</td>
</tr>
</tbody>
</table>

### Required Areas of Study

- Mathematics and/or Natural Sciences — Choose from Math, Biology, Chemistry, Physics or Astronomy
- Humanities A — Choose from English and/or Communications (at least one course in English)
- Humanities B — Art or Music
- Social Sciences — Choose from Economics, Political Science, Philosophy, Psychology, and Sociology
- Physical Education — activity course

### Specialization Requirements

A minimum of 12 credits should be chosen from the following suggested groupings:

- American History — HIS 21, 22, 23, 24, 37, 50, 51
- Area studies — HIS 25, 27, 31, 35, 36, 39
- General — HIS 14, 15, 22, 34, 40, 50

### Free Electives

To complete the required 64 credits.

*See Liberal Arts and Sciences language requirements, page 55.*

### Liberal Arts and Sciences Curriculum (Transfer)  
Social Science Option — International Studies  
64-68 Credits required for A.A. Degree

Curriculum Coordinator: Dr. A. Galub

### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30 or 31</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30 or 31</td>
<td>Modern Language</td>
<td>0-12</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>14-27</td>
</tr>
</tbody>
</table>

### Required Areas of Study

- Science — One laboratory course in Biology, Chemistry, Physics or Astronomy
- Humanities A — Choose from English and/or Communication (at least one course in English)
- Humanities B — Art or Music
- Physical Education — activity course

### Specialization Requirements

**Area studies in a specific region**
- Language — Two courses in language of the designated area
- Political Science — Politics of the area designated
- History — A history elective centering on the designated area
- Economics — The economics of the designated area

### Free Electives

To complete the required 64-68 credits, students may take courses in any department or discipline with the approval of a counselor.

* Students are required to take 12 credits (3 courses) in language unless they have taken 4 years of one language in high school or, as a result of a placement examination, they have been excused from taking one or more of these courses. Native speakers are urged to take placement examinations.

** For Latin American area studies, Spanish or French is the applicable language. HIS 31 (Modern Latin American History) and HIS 39 (History of Puerto Rico) are the designated History electives. The required social science courses are POL 71 (Politics of Developing Areas) and ECO 71 (Economics of Developing Areas).

For Western European area studies, applicable languages are French, Spanish, Italian and German. The designated history elective is HIS 15 (Intellectual and Social History of Modern Europe). Designated social science courses are POL 31 (Comparative Government) and ECO 11 (Microeconomics).

For African area studies, the applicable languages are French, Italian, Spanish, or another language appropriate to the area selected in consultation with the Department of Modern Languages. The designated history elective is HIS 35 (History of Africa). The designated social sciences courses are POL 71 and ECO 71.

† For students interested in a potential career in international business or marketing, MKT 11, MKT 70 and BUS 71 are recommended electives.

Note: Students who expect to transfer to a senior college may need one year of laboratory science for a bachelor's degree and should take such requirements into consideration when choosing electives.
Liberal Arts and Sciences Curriculum (Transfer)  
Social Science Option — Political Science Concentration  
64 Credits required for A.A. Degree

Curriculum Coordinator: Prof. H. Harris

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>*</td>
<td>Modern Language</td>
<td>0-12</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 14-27

Required Areas of Study

Natural Sciences and Mathematics — Choose from Math, Biology, Chemistry, Physics or Astronomy (at least one laboratory science)

Humanities A — Choose from English and/or Communication (at least one course in English)

Humanities B — Art or Music

Social Sciences and History — Economics, History, Philosophy, Psychology and Sociology

**Physical Education — activity course

Total: 23-24

Concentration Requirements

A minimum of 15 credits must be selected from among the following, with POL 11 as the first course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL 11</td>
<td>American National Government</td>
</tr>
<tr>
<td>POL 31</td>
<td>Comparative Government</td>
</tr>
<tr>
<td>POL 41</td>
<td>The National Government &amp; Civil Rights Since 1954</td>
</tr>
<tr>
<td>POL 42</td>
<td>Civil Rights Throughout the World</td>
</tr>
<tr>
<td>POL 51</td>
<td>Urban Politics</td>
</tr>
<tr>
<td>POL 61</td>
<td>Solving Social Problems Through the Political Process</td>
</tr>
<tr>
<td>POL 71</td>
<td>Politics of Developing Areas</td>
</tr>
<tr>
<td>POL 72</td>
<td>International Politics</td>
</tr>
<tr>
<td>POL 81</td>
<td>Field Work and Seminar in Politics! Science</td>
</tr>
</tbody>
</table>

Free Electives

To complete the required 64 credits.

*See Language Requirements for Liberal Arts and Sciences A.A. degree, page 55.

**Or a substitute approved by the Health and Physical Education Department.

Liberal Arts and Sciences Curriculum (Transfer)  
Social Science Option — Psychology  
64 Credits required for A.A. Degree

Curriculum Coordinator: Prof. H. Harris

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>MTH 21, 23, 30</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>*</td>
<td>Modern Language</td>
<td>0-8</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 14-23

Required Areas of Study

Natural Science and Mathematics — Choose from Math, Biology, Chemistry, Physics or Astronomy (at least one laboratory science)

Humanities A — Choose from English and/or Communication (at least one course in English)

Humanities B — Art or Music

Social Science and History — Economics, History, Philosophy, Political Science, Psychology

**Physical Education — activity course

Total: 23-24

Concentration Requirements

Minimum of 12 credits in Psychology elective courses in addition to PSY 11.

Specializations:

Clinical Psychology — Choose from PSY 31, PSY 35 and 36, PSY 41 and 42, PSY 51 and 52, PSY 71 and 72

Social Psychology — Choose from PSY 22, PSY 51 and 52.

General Psychology — Choose from PSY 22, PSY 35 and 36, PSY 41 and 42, PSY 51.

Paraprofessional Clinical Services — Choose from PSY 11, PSY 31, PSY 51, PSY 61, PSY 71, plus at least one other Psychology elective.

Free Electives

To complete the required 64 credits.

*See language requirements, page 55.

**Maximum of three credits in Psychology for area requirement.

* Or a substitute approved by the Health and Physical Education Department.
### Liberal Arts and Sciences Curriculum

#### Transfer

**Social Science Option -- Religion**

64-66 Credits required for A.A. Degree

*Curriculum Coordinator: Prof. H. Harris*

#### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 26, 30</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>PHL 90</td>
<td>Philosophy of Religion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total**: 17-30

#### Required Areas of Study

**Natural Science and Mathematics** — Choose from Math, Biology, Chemistry, Physics or Astronomy (at least one laboratory science)

**Humanities A** — Choose from English and Communication (at least one course in English)

**Humanities B** — ART 11 or MUS 11

**Social Sciences and History** — Economics, History, Philosophy, Psychology and Sociology

**Physical Education** — activity course

**Total**: 26-27

#### Specialization Requirements

Students may choose courses with a focus on religion to satisfy 15 hours specialization requirements beyond Introduction to Religion (PHL 90). The following courses have a focus on religion:

<table>
<thead>
<tr>
<th>Communication</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>CMS 20</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CMS 22</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CMS 70</td>
<td>3</td>
</tr>
</tbody>
</table>

| English       | CMS 70                | 3       |
|               | CMS 71                | 3       |
|               | CMS 72                | 3       |
|               | CMS 73                | 3       |
|               | CMS 81                | 3       |

| History       | HIS 14                | 3       |
|               | HIS 15                | 3       |
|               | HIS 23                | 3       |
|               | HIS 40                | 3       |
|               | PHL 31                | 3       |
|               | PHL 91                | 3       |
|               | SOC 92                | 3       |

#### Free Electives

To complete the required minimum of 64 to 66 credits.

---

### Liberal Arts and Sciences

#### Transfer Options (A.S. Degree)

**Mathematics Option**

64-68 Credits required for A.S. Degree

*Curriculum Coordinator: Dr. E. Just*

#### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*</td>
<td>Modern Language</td>
<td>0-12</td>
</tr>
</tbody>
</table>

**Total**: 0-19

#### Required Areas of Study

**Humanities A** — Choose from English, Communication, Modern Languages, History, or Social Sciences — One course must be in English

**Humanities B** — Art or Music

**Physical Education**

**History or Social Science** — Choose from Economics, History, Philosophy, Political Science, Psychology or Sociology

**Total**: 15-16

#### Specialization Requirements

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>MTH 31</th>
<th>Analytic Geometry &amp; Calculus I</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MTH 32</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>MTH 33</td>
<td>Analytic Geometry &amp; Calculus III</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>MTH 34</td>
<td>Differential Equations &amp; Selected Topics in Advanced Calculus</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MTH 35</td>
<td>Selected Topics in Advanced Calculus &amp; Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PHY 31, 32</td>
<td>Physics I and II</td>
<td>8</td>
</tr>
</tbody>
</table>

**Total**: 30

#### Free Electives

To complete the required 64 to 68 credits, students may take up to 12 credits in any department or discipline.

0-12

**Total**: 64-68

---

*See Language Requirements of Liberal Arts and Sciences A.A. degree, page 55.
**Students are advised to consult the requirements of the senior college of their choice.*

---

*See language requirements, page 55.
**Selection may be made from Concentration Requirements.*
Modern Language Requirements

Basic language sequences are:
11,12,13: Four skills approach—speaking, understanding, reading, writing.
15, 16, 17: Conversational approach.
18, 19: Nurses, medical personnel (given in Spanish only).

Note: Students of Hispanic background must take a placement test for native speakers.

Students who plan to transfer to a four-year college should determine the language requirements for their four-year degree.

Modern Language Course Sequence and Placement Examination/Interview

(Course number 11 — SPN 11, FRN 11, etc.)
Courses must be taken in the direction of the arrows. Incorrect placement may jeopardize earning of credits.

Prerequisite for courses 20 through 31 is 13 - 17 or Placement Examination/Interview.

* A Placement Examination/Interview is required for those with a previous knowledge of French, German, Italian or Spanish. Change from one sequence to another requires a Placement Examination. Dotted lines (above) indicate possible results of new placement. Exams are given Monday through Friday, 9 to 1 p.m., Room TT 503 (20-30 minutes needed).

Computer Science

Curriculum Coordinator: Dr. E. Just

Computer science may be thought of as the study of the computer, its theory, its design, and the manner in which it may be applied. The computer scientist must be well trained in mathematics and in addition be familiar with a physical science; he will possess the breadth of knowledge presented by a liberal arts program, while at the same time concentrating on those areas particularly applicable to the computer.

The aim of this program is to provide the student with an introduction to the field of computer science, to provide him with a background in mathematics, science, and the humanities necessary to this study, and to enable him to successfully transfer to a computer science department of a senior college.

Liberal Arts and Sciences Curriculum Mathematics Option

Computer Science Concentration
64-60 Credits required for A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>11</td>
</tr>
</tbody>
</table>

* Required Areas of Study

Humanities A — One English course in addition to ENG 13 3
Humanities B — Art or Music 3
Physical Education 1
History or Social Science — Choose from Economics, History, Philosophy, Political Science, Psychology or Sociology 3
**Total** 10

Concentration Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 31</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 31</td>
<td>Physics I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 32</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>PHY 32</td>
<td>Physics II</td>
<td>4</td>
</tr>
<tr>
<td>MTH 33</td>
<td>Analytic Geometry &amp; Calculus III</td>
<td>5</td>
</tr>
<tr>
<td>PHY 33</td>
<td>Physics III</td>
<td>4</td>
</tr>
<tr>
<td>PHY 61</td>
<td>Computer Methods &amp; Programming for Applied Scientific Purposes</td>
<td>3</td>
</tr>
<tr>
<td>MTH 34</td>
<td>Differential Equations &amp; Selected Topics in Advanced Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MTH 35</td>
<td>Selected Topics in Advanced Calculus &amp; Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MTH 45</td>
<td>Discrete Mathematical Systems</td>
<td>3</td>
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<tr>
<td><strong>DAT 41</strong></td>
<td>Assembly Programming</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>44</td>
</tr>
</tbody>
</table>

Free Electives

To complete the required 64 to 68 credits.

* Students are required to consult the requirements of the senior college of their choice.
** Prerequisite for Computer Science students: PHY 61 only.
Liberal Arts and Sciences Curriculum (Transfer)

Biology Specialization
64-67 Credits required for A.S. Degree

Curriculum Coordinator: Prof. F. Costello

Chemistry Specialization
64-67 Credits required for A.S. Degree

Curriculum Coordinator: Prof. J. G. Riley

Physics Specialization
66-67 Credits required for A.S. Degree

Curriculum Coordinator: Prof. M. Todorovich

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Modern Language</td>
<td>0-8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11-19</td>
</tr>
</tbody>
</table>

**Required Areas of Study**

Humanities A—Choose from English, Communication, or Modern Languages (one course must be in English) 6-7

Humanities B—Art or Music 3

History or Social Science—Choose from Economics, History, Philosophy, Political Science, Psychology or Sociology 3

Physical Education—activity course 1

Total 13-14

Specialization Requirements for Biology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 11</td>
<td>General College Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 31</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 22</td>
<td>General Chemistry II with Qualitative Analysis</td>
<td>5</td>
</tr>
<tr>
<td>MTH 32</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>BIO 11</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 31</td>
<td>Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 12</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 32</td>
<td>Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td></td>
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</table>

Specialization Requirements for Chemistry

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 11</td>
<td>General College Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>tMTH 30</td>
<td>Pre-Calculus Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>CHM 22</td>
<td>General Chemistry II with Qualitative Analysis</td>
<td>5</td>
</tr>
<tr>
<td>tMTH 31</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 31</td>
<td>Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 33</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>tMTH 32</td>
<td>Analytic Geometry &amp; Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>CHM 32</td>
<td>Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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</table>

Specialization Requirements for Physics

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 31</td>
<td>Physics I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 31</td>
<td>Analytic Geometry &amp; Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 32</td>
<td>Physics II</td>
<td>4</td>
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<tr>
<td>MTH 32</td>
<td>Analytic Geometry &amp; Calculus II</td>
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<tr>
<td>PHY 33</td>
<td>Physics III</td>
<td>4</td>
</tr>
<tr>
<td>PHY 34</td>
<td>Engineering Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>MTH 33</td>
<td>Analytic Geometry &amp; Calculus III</td>
<td>5</td>
</tr>
<tr>
<td>tCHM 11</td>
<td>General College Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>34</td>
</tr>
</tbody>
</table>

Free Electives

To complete the required credits.

*See language requirements of Liberal Arts and Sciences, A.S. Degree, page 55.

**Students are advised to consult the requirements of the senior college of their choice.

††If level of preparation is adequate, student may take MTH 31, 32, 33.

††MTH 30 is a prerequisite for MTH 31. Students taking MTH 30 will not be required to take CHM 11.
The advance of scientific knowledge in the field of medicine has multiplied the need for personnel trained in such areas as hematology, serology, histology, and biochemistry. Opportunities for service and employment are plentiful for technicians and medical research assistants, in private or government offices, hospitals, laboratories and clinics, research divisions of drug and chemical companies, and in private and public educational and research institutions.

Training in biological and chemical science prepares the student for immediate employment. The Medical Laboratory Technology curriculum is a career program in which the student earns the A.A.S. degree. In addition to taking general education courses, the student has an opportunity to work in up-to-date, newly equipped laboratories to gain extensive experience in the performance of a medical laboratory technologist's duties.

Students will perform the chemical cytological, bacteriological, histological and other medical laboratory procedures used in the detection, diagnosis and treatment of disease. Such work demands knowledge and skill gained by careful and devoted preparation.

Note: Requirements for all students wishing to enter the Medical Laboratory Technology curricula include completion of the following pre-MLT sequence with a minimum index of 2.0: BIO 15, ENG 13, CHM 02, MTH 03, 06 or 13.

<table>
<thead>
<tr>
<th>Medical Laboratory Technology Curriculum*</th>
<th>Medical Laboratory Technology Curriculum (Transfer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Career Program)</td>
<td>68 Credits required for A.A.S. Degree</td>
</tr>
<tr>
<td>65-68 Credits required for A.A.S. Degree</td>
<td></td>
</tr>
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</table>

**Core Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 15</td>
<td>Zoology</td>
<td>4</td>
</tr>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td><strong>MTH</strong></td>
<td>Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>PEA</td>
<td>Physical Ed. (choose one)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Required Areas of Study**

| Humanities A — PSY 11 or SOC 11 (Psychology or Sociology) | 3 |
| Humanities B — ART 10 or MUS 10                           | 1 |
| Total                                                    | 4 |

**Specialization Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 23</td>
<td>Human Anatomy &amp; Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>tBIO 24</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 41</td>
<td>Histological Techniques</td>
<td>4</td>
</tr>
<tr>
<td>BIO 43</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 71</td>
<td>Clinical Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>BIO 72</td>
<td>Clinical Techniques II</td>
<td>3</td>
</tr>
<tr>
<td>BIO 73</td>
<td>Clinical Techniques III</td>
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<td>BIO 74</td>
<td>Clinical Techniques IV</td>
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<td>BIO 75</td>
<td>Clinical Practicum</td>
<td>1</td>
</tr>
<tr>
<td>CHM 17</td>
<td>Chemistry for Lab Technologies I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 18</td>
<td>Chemistry for Lab Technologies II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>41</td>
</tr>
</tbody>
</table>

**Free Electives**

To complete the required 65-68 credits, students may select courses from any academic department.

---

* Mandatory 1,000 hours clinical practicum required for New York City Department of Health Licensing (1 credit). Students already possessing New York City Department of Health License as a Medical Technologist are exempt from this requirement.

** Students must complete two semesters of college-level mathematics (MTH 13, 14 or higher).

tBIO 26 can be substituted for BIO 24 during Fall 1984.

---

Note: Requirements for all students wishing to enter the Medical Laboratory Technology curricula include completion of the following pre-MLT sequence with a minimum index of 2.0: BIO 15, ENG 13, CHM 02, MTH 03, 06 or 13.

<table>
<thead>
<tr>
<th>Medical Laboratory Technology Curriculum (Transfer)</th>
<th>68 Credits required for A.A.S. Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Core Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 15</td>
<td>Zoology</td>
<td>4</td>
</tr>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td><strong>MTH</strong></td>
<td>Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>PEA</td>
<td>Physical Ed. (choose one)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Required Areas of Study**

| Humanities A — PSY 11 or SOC 11 (Psychology or Sociology) | 3 |
| Humanities B — ART 10 or MUS 10                           | 1 |
| Total                                                    | 4 |

**Specialization Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 23</td>
<td>Human Anatomy &amp; Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>tBIO 24</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 41</td>
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</tr>
<tr>
<td>BIO 43</td>
<td>Microbiology</td>
<td>4</td>
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<td>BIO 71</td>
<td>Clinical Techniques I</td>
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<td>Clinical Techniques II</td>
<td>3</td>
</tr>
<tr>
<td>BIO 73</td>
<td>Clinical Techniques III</td>
<td>3</td>
</tr>
<tr>
<td>BIO 74</td>
<td>Clinical Techniques IV</td>
<td>3</td>
</tr>
<tr>
<td>BIO 75</td>
<td>Clinical Practicum</td>
<td>1</td>
</tr>
<tr>
<td>CHM 17</td>
<td>Chemistry for Lab Technologies I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 18</td>
<td>Chemistry for Lab Technologies II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 31</td>
<td>Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 32</td>
<td>Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>44</td>
</tr>
</tbody>
</table>

† Students must complete two semesters of college-level mathematics (MTH 13, 14 or higher).

††BIO 26 can be substituted for BIO 24 during Fall 1984.
NUCLEAR MEDICINE TECHNOLOGY

Offered in collaboration with The Albert Einstein College of Medicine of Yeshiva University

Educational Director: Prof. J. Prince
Medical Director: Dr. M. Donald Blaufux, M.D., Ph.D.

The rewarding profession of Nuclear Medicine Technology involves collaboration and interactions with highly specialized people, the operation of sophisticated instruments, and good salaries. Nuclear Medicine is a relatively new branch of medicine which uses isotopes for the diagnosis and treatment of certain diseases.

The Nuclear Medicine Technologist assists the physician in the operation of the gamma camera, the positioning of patients for the instruments, and in the calculations of the isotope doses to the patients.

In recent years, improved diagnoses of many important diseases have been achieved by methods used in Nuclear Medicine. These include diseases involving the liver, gastrointestinal tract, spleen, disorders of bone and vertebral column, and the heart and cardiovascular system. The number of nuclear medicine procedures in hospitals has been increasing over the past few years.

Upon the completion of the program at Bronx Community College, students become eligible for a National Registry Examination sponsored by the American Medical Association. Further study in this field is possible in institutions offering a baccalaureate degree in Nuclear Medicine Technology.

Nuclear Medicine Technology Curriculum* 68 Credits required for A.A.S. Degree

<table>
<thead>
<tr>
<th>Pre-NMT Sequence</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13 - Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>MTH 30 - Pre-Calculus Math</td>
<td>4</td>
</tr>
<tr>
<td>BIO 22 - Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>PHY 21 - Physics for Engineering Tech. I</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
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Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 10 or ART 10 — Art Survey or Music Survey</td>
<td>1</td>
</tr>
<tr>
<td>PEA — Physical Ed. (choose one)</td>
<td>1</td>
</tr>
<tr>
<td>HIS 10 — History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11 — Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 23</td>
<td>Human Anatomy &amp; Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 17</td>
<td>Chemistry for Lab. Technologies I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 22</td>
<td>Physics for Engineering Tech. II</td>
<td>3</td>
</tr>
<tr>
<td>NMT 81</td>
<td>Orientation in Nuclear Medicine</td>
<td>1</td>
</tr>
<tr>
<td>BIO 24</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 18</td>
<td>Chemistry for Lab. Technologies II</td>
<td>4</td>
</tr>
<tr>
<td>RAD 71</td>
<td>Radiation Physics &amp; Dosimetry I</td>
<td>3</td>
</tr>
<tr>
<td>NMT 82</td>
<td>Radio-Pharmaceutical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>NMT 83</td>
<td>Clinical Nuclear Medicine Practicum I</td>
<td>1</td>
</tr>
<tr>
<td>PSY 11</td>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>RAD 72</td>
<td>Radiation Physics &amp; Dosimetry II</td>
<td>3</td>
</tr>
<tr>
<td>NMT 84</td>
<td>Clinical Nuclear Medicine Practicum II</td>
<td>1</td>
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<tr>
<td>LAW 45</td>
<td>Medical Law</td>
<td>3</td>
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<tr>
<td>NUR 31</td>
<td>Essential Process of Nursing: Interaction</td>
<td>4</td>
</tr>
<tr>
<td>PHY 61</td>
<td>Computer Methods &amp; Programming</td>
<td>3</td>
</tr>
<tr>
<td>SOC 11</td>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>47</strong></td>
</tr>
</tbody>
</table>

*Completion of the Pre-NMT Sequence with an index of 2.5 or higher is required for admission to the Nuclear Medicine Technology curriculum.

If the number of students seeking to register for NMT 81, 82, 83 or 84 exceeds the number of seats available at the hospital at which these courses are offered, admission to these courses will be allocated on the basis of the highest cumulative academic index. A faculty committee will evaluate admission requests by students for exceptional considerations.

Note: Two clinical practica totaling 1000 hours are required for this curriculum.
Curriculum Coordinator: Prof. A. P. Fuller

Requirements for all students wishing to enter the Nursing curriculum include completion of basic skills at a level acceptable to the Nursing Department* and a one-semester pre-nursing sequence of courses with a minimum index of 2.5. Admission to all Nursing courses is based on the approved priority list which is on file in the Nursing Department.

Students matriculated in the full-time Nursing program may become nurses after two academic years of study. Students who win New York State Regents Scholarships may receive them at Bronx Community College.

The Department of Nursing offers instruction and guidance in clinical experience at Bronx Lebanon Hospital Center, Lincoln Medical and Mental Health Center, Veterans Administration Hospital, Bronx Psychiatric Center, The Hospital of Albert Einstein College of Medicine of Montefiore Hospital Medical Center, St. Barnabas Hospital, Maimonides Hospital and Medical Center, Bronx Municipal Hospital (Van Etten and Jacobi Hospitals), North Central Bronx Hospital, Metropolitan Hospital, Doctors Hospital, Morningside House, Jewish Home and Hospital, and King's Harbor Care Center.

Students enjoy valuable supplementary experience through arrangements with other community agencies, such as clinics, nursery schools and nursing homes.

Graduates of the Nursing program receive the A.A.S. degree and are eligible to take the R.N. Licensure Examination given by the State of New York. Graduates who achieve a 2.5 index are eligible to enter a senior institution within City University to continue study for a baccalaureate degree.

**Legal Limitations for State Licensure for Nurses**

A student who has charges pending or has ever been convicted of felony or misdemeanor and/or found guilty of professional misconduct, unprofessional conduct or negligence: (1) may enter the nursing program and sit for the professional licensing examination after completing the program; (2) may or may not be rendered a permit to practice and/or receive the registered professional nurse license following review of the student's Application for License and First Registration by the Regents of the University of the State of New York.

---

**Nursing Curriculum**

65-68 Credits required for A.A.S. Degree

*Pre-Nursing Semester*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>PSY 11</td>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>BIO 23</td>
<td>Human Anatomy &amp; Physiology I</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 13

**Required Areas of Study**

| Humanities A—Choose from English, Modern Languages or HIS 10 | 3-4 |
| Humanities B—ART 10 or MUS 10                                | 1   |
| Science or Mathematics—Choose from CHM 17 or MTH 12         | 3-4 |
| SOC 11 Sociology                                             | 3   |
| PEA 13 Physical Ed. (choose one)                             | 1   |

Total 11-13

**Specialization Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 31</td>
<td>Essential Process of Nursing: Interaction</td>
<td>4</td>
</tr>
<tr>
<td>BIO 24</td>
<td>Human Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>NUR 32</td>
<td>Major Health Problems &amp; Clinical Nursing Activities I (Relatedness)</td>
<td>3</td>
</tr>
<tr>
<td>NUR 33</td>
<td>Foundations of Nursing Skills/ Critical Situations</td>
<td>4</td>
</tr>
<tr>
<td>BIO 28</td>
<td>Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>NUR 34</td>
<td>Major Health Problems &amp; Clinical Nursing Activities II (Long-Term Problems: Motor &amp; Neurological)</td>
<td>4</td>
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<tr>
<td>NUR 35</td>
<td>Major Health Problems &amp; Clinical Nursing Activities III (Reproduction &amp; the Young Family)</td>
<td>4</td>
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<tr>
<td>NUR 36</td>
<td>Major Health Problems— Medical &amp; Surgical Problems of Adults &amp; Children</td>
<td>4</td>
</tr>
<tr>
<td>NUR 37</td>
<td>Clinical Nursing Activities— Medical &amp; Surgical Problems of Adults &amp; Children</td>
<td>4</td>
</tr>
<tr>
<td>NUR 38</td>
<td>Management in Nursing Health Promotion</td>
<td>4</td>
</tr>
</tbody>
</table>

Total 39

**Free Electives**

To complete the required 65-68 credits

*Remediation in English, Reading, Mathematics, and Chemistry, if required. Priority into NUR 31 will be given to students who have achieved a scale score of 17 or more on the CUNY Reading Assessment Test (12th grade level).*

** Choose from Art, Astronomy, Biology, CHM 18, Communication, English, Health and Physical Education, History, Mathematics, Modern Languages, Music, Nutrition, Pharmacology, Physics, RDL 21 or Social Sciences.
Horticulturists are skilled in the cultivation of plants and the care of gardens. They may work in our public parks and gardens; they may design, install and maintain the interior landscapes in public buildings and corporate headquarters; or they may work as florists, arranging plants and flowers for special occasions.

Recognizing the need for trained horticulturists, Bronx Community College and The New York Botanical Garden (NYBG) have established a joint program in ornamental Horticulture. Students study liberal arts and sciences at the BCC campus for the first year. They spend the second year at the NYBG for both academic courses and field experience in horticulture.

The program offers three areas of specialization: general horticulture, commercial floristry, or interior landscaping. Graduates earn an A.A.S. degree in Ornamental Horticulture from BCC. Graduates wanting additional training in horticulture may continue in the horticulture certificate program at the NYBG.

Curriculum Pattern for Ornamental Horticulture
64-67 Credits required for A.A.S. Degree

**BCC Core Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamentals of Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>BIO 11</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 12</td>
<td>General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 15</td>
<td>Fundamentals of Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
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<tr>
<td>BUS 51</td>
<td>Business Organization &amp; Management</td>
<td>3</td>
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**Required Areas of Study**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 10 or MUS 10—Art Survey or Music Survey</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>PSY 11 or SOC 11—Psychology or Sociology</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>PEA—Physical Education—activity course</td>
<td></td>
<td>1</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

**Free Electives**

To complete required 34-37 credits.

**NYBG Core Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BOT 11</td>
<td>Basic Botany</td>
<td>1</td>
</tr>
<tr>
<td>BOT 12</td>
<td>Plant Form and Function</td>
<td>1</td>
</tr>
<tr>
<td>BOT 13</td>
<td>Plant Physiology</td>
<td>1</td>
</tr>
<tr>
<td>BOT 41</td>
<td>Botany</td>
<td>1</td>
</tr>
<tr>
<td>GAR 11</td>
<td>Horticultural Techniques I</td>
<td>1</td>
</tr>
<tr>
<td>GAR 12</td>
<td>Horticultural Techniques II</td>
<td>1</td>
</tr>
<tr>
<td>GAR 13</td>
<td>Pruning</td>
<td>1</td>
</tr>
<tr>
<td>GAR 21</td>
<td>Soil Science</td>
<td>1</td>
</tr>
<tr>
<td>GAR 22</td>
<td>Soil Testing</td>
<td>½</td>
</tr>
<tr>
<td>GAR 23</td>
<td>Fertilizers</td>
<td>½</td>
</tr>
<tr>
<td>GAR 31</td>
<td>Preparation for Pesticide Applicator Certification</td>
<td>2</td>
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<tr>
<td>GAR 32</td>
<td>Diseases of Ornamental Plants</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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**Specialization Requirements for General Horticulture Option**

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<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BOT 61</td>
<td>Woody Plant Identification: Fall Trees &amp; Shrubs</td>
<td>1</td>
</tr>
<tr>
<td>BOT 63</td>
<td>Woody Plant Identification: Spring Trees &amp; Shrubs</td>
<td>1</td>
</tr>
<tr>
<td>GAR 41</td>
<td>Plant Propagation I</td>
<td>1</td>
</tr>
<tr>
<td>GAR 51</td>
<td>Turf and Grounds Maintenance</td>
<td>1</td>
</tr>
<tr>
<td>GAR 81</td>
<td>Plants for Landscaping</td>
<td>1</td>
</tr>
<tr>
<td>HRT 13</td>
<td>Turf &amp; Grounds Management I</td>
<td>2</td>
</tr>
<tr>
<td>HRT 14</td>
<td>Arboriculture</td>
<td>2</td>
</tr>
<tr>
<td>HRT 15</td>
<td>Perennials &amp; Flower Borders</td>
<td>2</td>
</tr>
<tr>
<td>HRT 16</td>
<td>Greenhouse Operations I</td>
<td>2</td>
</tr>
<tr>
<td>*HRT</td>
<td>Horticulture Field Exp. Electives</td>
<td>2</td>
</tr>
<tr>
<td>LND 11</td>
<td>Landscape Design Theory</td>
<td>1</td>
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<tr>
<td>LND 12</td>
<td>Graphics</td>
<td>1</td>
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<tr>
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**Specialization Requirements for Commercial Floristry Option**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLO 11</td>
<td>Basic Centerpieces</td>
<td>1</td>
</tr>
<tr>
<td>FLO 12</td>
<td>Holiday Arrangements</td>
<td>1</td>
</tr>
<tr>
<td>FLO 13</td>
<td>Funeral Arrangements</td>
<td>1</td>
</tr>
<tr>
<td>FLO 14</td>
<td>Practical House Plants</td>
<td>1</td>
</tr>
<tr>
<td>FLO 15</td>
<td>wedding Flowers</td>
<td>1</td>
</tr>
<tr>
<td>FLO 21</td>
<td>Ikebana for American Homes</td>
<td>1</td>
</tr>
<tr>
<td>FLO 22</td>
<td>Period Styles for Flower Arranging</td>
<td>1</td>
</tr>
<tr>
<td>+FLO 61</td>
<td>Commercial Floristry Field Exp. I</td>
<td>2</td>
</tr>
<tr>
<td>+FLO 62</td>
<td>Commercial Floristry Field Exp. II</td>
<td>4</td>
</tr>
<tr>
<td>+FLO 63</td>
<td>Commercial Floristry Field Exp. III</td>
<td>4</td>
</tr>
<tr>
<td>GAR 44</td>
<td>Commercial Greenhouse Management</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</table>

**Specialization Requirements for Interior Landscaping Option**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLO 14</td>
<td>Practical House Plants</td>
<td>1</td>
</tr>
<tr>
<td>GAR 44</td>
<td>Commercial Greenhouse Management</td>
<td>1</td>
</tr>
<tr>
<td>INL 11</td>
<td>Intro. to Interior Landscaping</td>
<td>1</td>
</tr>
<tr>
<td>INL 21</td>
<td>Commercial Plantscape Design</td>
<td>1</td>
</tr>
<tr>
<td>INL 22</td>
<td>Decorating with Plants Indoors</td>
<td>1</td>
</tr>
<tr>
<td>INL 31</td>
<td>Interior Plantscape Maintenance</td>
<td>½</td>
</tr>
<tr>
<td>INL 32</td>
<td>Plant Purchasing</td>
<td>½</td>
</tr>
<tr>
<td>INL 33</td>
<td>Installations of Interior Plantings</td>
<td>½</td>
</tr>
<tr>
<td>INL 34</td>
<td>Bidding and Plant Specifications</td>
<td>½</td>
</tr>
<tr>
<td>+INL 61</td>
<td>Interior Landscaping Field Exp. I</td>
<td>3</td>
</tr>
<tr>
<td>+INL 62</td>
<td>Interior Landscaping Field Exp. II</td>
<td>3½</td>
</tr>
<tr>
<td>+INL 63</td>
<td>Interior Landscaping Field Exp. III</td>
<td>3½</td>
</tr>
<tr>
<td>LND 12</td>
<td>Graphics</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

* Select from any department. MTH 12 or 26 is recommended.

* To be chosen from Horticulture with approval of department.
** To be chosen from Botany, Gardening and Landscaping with approval of department.
† To be arranged by NYBG at approved locations.
‡ To be chosen from Gardening and Interior Landscaping with approval of department.
PARALEGAL STUDIES

Program Director: Dr. A. Wolk

The Bronx Community College Paralegal Studies Program was developed in accordance with the guidelines provided by the American Bar Association’s Standing Committee on Legal Assistants. It offers students a balanced and varied background in the legal fundamentals, appropriate skills, and the practical experience necessary for professional employment. The Paralegal can perform tasks delegated by a lawyer as long as the lawyer is responsible to the client and assumes full professional responsibility for the work product. A Paralegal cannot give legal advice, appear in court or set fees.

There is an increasingly wide range of Paralegal job opportunities in both the private and public sectors. Employment for Paralegals exists in law firms, banks, accounting firms, insurance companies, brokerage houses, the court system, schools, hospitals, welfare centers, public program law offices, neighborhood legal centers, legal aid offices, and national, state and city government agencies. Federal, New York State, and New York City civil service systems have Paralegal job classifications.

A Paralegal education can prove to be a good background for an executive career in professions other than law and for the law profession itself. One can apply earned credits in a career ladder toward a higher degree.

The Paralegal Studies program has three options: Lawyer’s Assistant and Lay Advocate degrees and a Certificate. The Lawyer’s Assistant option emphasizes business and law courses which prepare students for employment that includes research, writing and other tasks commonly assigned by law firms to paralegals. The Lay Advocate option emphasizes a variety of courses which prepare students for responsibilities that might include rendering service to people and institutions that are concerned with the criminal system, family law, the poor, the mentally and physically handicapped and the elderly. The degree options feature a Cooperative Work Experience component in which students work in a legal setting. This helps prepare them, prior to graduation, with significant exposure to the legal profession, and makes them further aware of the ethical and professional responsibilities.

The Paralegal Certificate option is designed for advanced students who already have a minimum of 60 college credits or a two-year degree. A credit or non-credit internship is optional.

Paralegal Studies Curriculum

Lawyer’s Assistant Option *
68 Credits required for A.A.S. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>**MTH 12</td>
<td>Intro. to Mathematical Thought</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
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<td>12</td>
</tr>
</tbody>
</table>

Required Areas of Study

** Science—Choose from AST 11, BIO 50 or CHM 13  3
** Humanities A—Choose from ENG 14, 15, 16, or 18  3
** Humanities B—MUS 10 or ART 10  1
Physical Education—activity course  1

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 47</td>
<td>Legal Procedures</td>
<td>3</td>
</tr>
<tr>
<td>LAW 52</td>
<td>Business Organizations</td>
<td>3</td>
</tr>
<tr>
<td>LAW 62</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 65</td>
<td>Criminal Law and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>LAW 72</td>
<td>Real Property</td>
<td>3</td>
</tr>
<tr>
<td>LAW 82</td>
<td>Insurance and Torts</td>
<td>3</td>
</tr>
<tr>
<td>LAW 92</td>
<td>Estates, Trusts &amp; Wills</td>
<td>3</td>
</tr>
<tr>
<td>LAW 95</td>
<td>Legal Research &amp; Writing</td>
<td>3</td>
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<tr>
<td>LAW 96</td>
<td>Advanced Legal Research &amp; Writing</td>
<td>3</td>
</tr>
<tr>
<td>POL 11</td>
<td>American National Government</td>
<td>3</td>
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<td>SOC 35</td>
<td>Intro. to Social Work</td>
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<td>TAX 11</td>
<td>Intro. to Taxation</td>
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<tr>
<td>CWE 33</td>
<td>Cooperative Work Experience</td>
<td>4</td>
</tr>
</tbody>
</table>

* For students enrolling after September 1983.
** Students who may later transfer to a four-year college should consult an adviser for possible replacement courses. Many CUNY colleges require a lab science, a different mathematics, and a three-credit music or art course.
† Choose four out of five.
‡ Students will be eligible to take CWE 33 any time after completion of 45 curriculum credits with approval of the Curriculum Coordinator. Under exceptional circumstances, substitutions may be made for CWE 33 by the Curriculum Coordinator.
### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
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<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>*MTH 12</td>
<td>Intro. to Mathematical Thought</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
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### Required Areas of Study

*Science — Choose from BIO 50, CHM 13 or AST 11

*Humanities A — Choose from ENG 14, 15, 16 or 18

*Humanities B — MUS 10 or ART 10

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>HLT 97</td>
<td>Field Work in Community Health Resources</td>
<td>3</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 47</td>
<td>Legal Procedures</td>
<td>3</td>
</tr>
<tr>
<td>LAW 52, 72, 82</td>
<td>Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 62</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 65</td>
<td>Criminal Law and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>LAW 89</td>
<td>Legal Advocacy</td>
<td>3</td>
</tr>
<tr>
<td>LAW 95</td>
<td>Legal Research &amp; Writing</td>
<td>3</td>
</tr>
<tr>
<td>POL 11</td>
<td>American National Government</td>
<td>3</td>
</tr>
<tr>
<td>POL 61 or</td>
<td>Solving Social Problems Through the Political Process or Legal Personnel</td>
<td>3</td>
</tr>
<tr>
<td><strong>SPN 28</strong></td>
<td>Interpreting &amp; Translation Skills for Legal Personnel</td>
<td>3</td>
</tr>
<tr>
<td>MKT 17 or</td>
<td>Consumer Problems &amp; Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 33 or</td>
<td>Grant-Writing and Fundraising</td>
<td>3</td>
</tr>
<tr>
<td>SOC 35</td>
<td>Intro. to Social Work</td>
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<tr>
<td>SOC 38</td>
<td>Social Advocacy</td>
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<tr>
<td>CWE 33</td>
<td>Cooperative Work Experience</td>
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### Specialization Requirements

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<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>LAW 41</td>
<td>Business Law</td>
<td>3</td>
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<td>LAW 47</td>
<td>Legal Procedures</td>
<td>3</td>
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<tr>
<td>LAW 52 Business Organization</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>LAW 62</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 72</td>
<td>Real Property</td>
<td>3</td>
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<tr>
<td>LAW 82</td>
<td>Insurance and Torts</td>
<td>3</td>
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<td>LAW 92</td>
<td>Estates, Trusts &amp; Wills</td>
<td>3</td>
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<tr>
<td>LAW 95</td>
<td>Legal Research &amp; Writing</td>
<td>3</td>
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<tr>
<td>TAX 11</td>
<td>Intro. to Taxation</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
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</tbody>
</table>

### Note:

- Students who may later transfer to a four-year college should consult an advisor for possible replacement courses. Many CUNY colleges require a lab science, a different mathematics, and a three-credit music or art course.
- **SPN 28** is taught in Spanish.
- Students will be eligible to take CWE 33 any time after completion of 45 curriculum credits with approval of the Curriculum Coordinator. Under exceptional circumstances, substitutions may be made for CWE 33 by the Curriculum Coordinator.

**Note:** Students enrolled at the Arthur Kill Correctional Facility off-campus locale must complete a minimum of one year's residency at the main campus in order to qualify for a degree.
PERFORMING ARTS — MUSIC

Curriculum Coordinator: Dr. M. Salzberg

With the renaissance of the arts, there is a growing need for musicians, especially music teachers. Graduates with the Bachelor of Music degree will be prepared to be orchestra or ensemble instrumentalists, choral or ensemble vocalists, and teachers of music in private or public institutions. They may serve in schools and in community centers, in the music and performing arts industries, including radio, theatre, broadcasting, and telecasting.

Students can earn an Associate in Applied Science degree in Music in a two-year program at Bronx Community College. This includes private lessons at no additional cost in instrumental or vocal areas of the student's choice.

In addition to regular requirements, students must meet special standards in musical aptitude and ability, as well as demonstrate proficiency in vocal or instrumental areas, to be determined by tests, auditions and interviews conducted by the faculty of Bronx Community College. Students found deficient in musical aptitude skills may be required to take MUS 40 and/or MUS 50.

### Performing Arts — Music Curriculum

**64-68 Credits required for A.A.S. Degree**

#### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
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<tr>
<td>MUS 10</td>
<td>Modern Language</td>
<td>0-6</td>
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#### Required Areas of Study

<table>
<thead>
<tr>
<th>Area</th>
<th>Courses and Credits</th>
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<tbody>
<tr>
<td>Science or Mathematics</td>
<td>Choose from Astronomy, Biology, Chemistry, Physics or Math 3-4</td>
</tr>
<tr>
<td>Humanities</td>
<td>Choose from English, Communication or Art 3</td>
</tr>
<tr>
<td>History or Social Science</td>
<td>Choose from History, Economics, Philosophy, Political Science, Psychology or Sociology 3</td>
</tr>
<tr>
<td>PEA or HLT</td>
<td>Choose from Physical Education activity course or HLT 91 1-2</td>
</tr>
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<td><strong>Total</strong></td>
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#### Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 11  or 12</td>
<td>Introduction to Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 21 or MUS 31</td>
<td>Choral Performance I, or Orchestral Performance I</td>
<td>1</td>
</tr>
<tr>
<td>MUS 41</td>
<td>Theory I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 51</td>
<td>Ear Training I</td>
<td>1</td>
</tr>
<tr>
<td>MUS 71</td>
<td>Secondary Piano I</td>
<td>1</td>
</tr>
<tr>
<td>MUS 83</td>
<td>Private Instruction I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 22 or MUS 32</td>
<td>Choral Performance II, or Orchestral Performance II</td>
<td>1</td>
</tr>
<tr>
<td>MUS 42</td>
<td>Theory II</td>
<td>2</td>
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<tr>
<td>MUS 52</td>
<td>Ear Training II</td>
<td>1</td>
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<tr>
<td>MUS 72</td>
<td>Secondary Piano II</td>
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<td>MUS 84</td>
<td>Private Instruction II</td>
<td>2</td>
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<tr>
<td>MUS 23 or MUS 33</td>
<td>Choral Performance III, or Orchestral Performance III</td>
<td>1</td>
</tr>
<tr>
<td>MUS 43</td>
<td>Theory III</td>
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<tr>
<td>MUS 53</td>
<td>Ear Training III</td>
<td>1</td>
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<tr>
<td>MUS 61</td>
<td>Keyboard I</td>
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</tr>
<tr>
<td>MUS 85</td>
<td>Private Instruction III</td>
<td>2</td>
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<tr>
<td>MUS 91 or MUS 95</td>
<td>Instrumental Ensembles I, or Chamber Chorus I</td>
<td>1</td>
</tr>
<tr>
<td>MUS 24 or MUS 34</td>
<td>Choral Performance IV, or Orchestral Performance IV</td>
<td>1</td>
</tr>
<tr>
<td>MUS 44</td>
<td>Theory IV</td>
<td>2</td>
</tr>
<tr>
<td>MUS 54</td>
<td>Ear Training IV</td>
<td>1</td>
</tr>
<tr>
<td>MUS 62</td>
<td>Keyboard II</td>
<td>1</td>
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<tr>
<td>MUS 81</td>
<td>Recital Performance</td>
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<tr>
<td>MUS 86</td>
<td>Private Instruction IV</td>
<td>2</td>
</tr>
<tr>
<td>MUS 92 or MUS 96</td>
<td>Instrumental Ensembles II, or Chamber Chorus II</td>
<td>1</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
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</tbody>
</table>

#### Free Electives

To complete the required 64-68 credits.

*To be taken, if needed, to meet the degree requirements. Otherwise, may be used as elective credits or another elective may be substituted. See language requirements, page 55.*
**PRE-PHARMACY**

*Curriculum Coordinator: Prof. J. G. Riley*

The Pre-Pharmacy curriculum is a two-year course for which students receive complete credit on admission to the third year of the five-year pharmacy course at colleges of pharmacy such as St. John’s University and Arnold and Marie Schwartz College of Pharmacy of Long Island University.

**Pre-Pharmacy Curriculum**  
67-68 Credits required for A.A.S. Degree

<table>
<thead>
<tr>
<th>Core Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
</tr>
<tr>
<td>ENG 14, 15, or 16</td>
</tr>
<tr>
<td>CMS 11</td>
</tr>
<tr>
<td>HIS 10</td>
</tr>
<tr>
<td>PEA</td>
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<table>
<thead>
<tr>
<th>Specialization Requirements</th>
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</thead>
<tbody>
<tr>
<td>BIO 11</td>
</tr>
<tr>
<td>BIO 12</td>
</tr>
<tr>
<td>CHM 11</td>
</tr>
<tr>
<td>CHM 22</td>
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<td>CHM 33</td>
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<tr>
<td>PHY 11</td>
</tr>
<tr>
<td>PHY 12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

**Free Electives**

To complete the required 67-68 credits.

---

**INDUSTRIAL CHEMICAL LABORATORY**

*Curriculum Coordinator: Prof. J. G. Riley*

The Industrial Chemical Laboratory option of the Pre-Pharmacy curriculum is designed primarily for students who wish to seek employment in the chemical or pharmaceutical industry. The program provides a firm foundation in the practical as well as theoretical aspects of chemistry, with emphasis on modern laboratory techniques.

This option exposes students to current industrial and research practices which are used in such diverse fields as petrochemicals, foods, plastics, cosmetics, air and water pollution control, forensic science, and many others. An important feature of this program is the Cooperative Work Experience course during which students spend twenty hours each week while completing their final credits for the Associate in Applied Science degree.

**Pre-Pharmacy Curriculum**  
Industrial Chemical Laboratory Option  
64-67 Credits required for A.A.S. Degree

<table>
<thead>
<tr>
<th>Core Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
</tr>
<tr>
<td>CMS 11</td>
</tr>
<tr>
<td>HIS 10</td>
</tr>
<tr>
<td>HLT 91</td>
</tr>
<tr>
<td>MTH 13</td>
</tr>
<tr>
<td>MTH 14</td>
</tr>
<tr>
<td>PEA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Required Areas of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art or Music</td>
</tr>
<tr>
<td>English, Modern Language, or Communication—Choose one course (in addition to ENG 13 and CMS 11)</td>
</tr>
<tr>
<td>History or Social Science—Select one course from any of the following: History, Economics, Philosophy, Political Science, Sociology and Psychology. (Choice of history course is in addition to HIS 10.)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Specialization Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 21</td>
</tr>
<tr>
<td>PHY 22</td>
</tr>
<tr>
<td><em>CHM 11 or 17</em></td>
</tr>
<tr>
<td><em>CHM 22 or 18</em></td>
</tr>
<tr>
<td>CHM 31</td>
</tr>
<tr>
<td>CHM 32</td>
</tr>
<tr>
<td>CHM 33</td>
</tr>
<tr>
<td>CHM 44 or Instrumental Methods of Industrial &amp; Environmental Analysis</td>
</tr>
<tr>
<td>BIO 74</td>
</tr>
<tr>
<td>CHM 61</td>
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<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

**Free Electives**

To complete the maximum of 67 credits.

---

*Arnold and Marie Schwartz College of Pharmacy of Long Island University require both HIS 10 and another history course to be chosen from HIS 15, 21, 22, 27, 31, 35, 37, 39. Students who are planning to transfer to Arnold and Marie Schwartz College should also choose an English course from ENG 14-81 and PSE 11 or PHL 11. For transfer to St. John’s College of Pharmacy, choose ECO 11, ECO 12, HLT 91 and a 1- or 2-credit MUS or ART course. Students planning to transfer to pharmacy schools other than St. John’s or Arnold and Marie Schwartz College of Pharmacy should consult the schools’ catalogs for the proper requirements for electives.*

---

*Student may choose the first-year chemistry sequence from either CHM 11, 22 or CHM 17, 18. Choice should be made in consultation with an adviser.*
Demand for college-trained secretaries is increasing rapidly, and numerous opportunities for employment exist in a wide variety of industries. Training in secretarial skills prepares students for immediate employment in a modern office or for transfer to a four-year college to prepare to teach secretarial studies.

The department is equipped with the latest technology and maintains a Learning Resource Center and a Word Processing Center where students may practice their skills. The Centers are staffed by qualified personnel who answer questions and help.

All graduates will be able to initiate their own correspondence, maintain filing systems, understand modern office procedures, and work effectively with others. The College offers six separate programs:

Executive secretaries can work in any business office—advertising, television, fashion, finance, publishing, or government.

Legal secretaries may work in law offices, in courtrooms, and in legal departments. Graduates of the program will understand the American legal system; typewrite at 60 words a minute or more; take legal dictation at 100-120 words per minute; prepare legal documents accurately and completely; and understand legal procedures.

Medical secretarial assistants work in physicians' offices, hospitals, clinics, and laboratories. Students in the program are trained to transcribe recorded dictation of medical correspondence and case histories; complete medical forms; maintain physicians' financial, medical, and office records; prepare patients for medical examination; perform basic clinical laboratory tests; and manage a medical office.

Public, private and parochial educational institutions all need school secretaries. Students in this program receive specialized training in the preparation of testing materials and in dealing with school records and accounting systems. They cover the organization, functions, and problems of the New York City school system, including how to deal effectively with parents and the community.

Word processing specialists may function in any business, professional, or governmental organization which utilizes electronic systems to communicate. Students receive training in machine transcription, electronic typewriting, and in the operation of several types of word processing equipment.

For high school teaching, students receive skills training in typewriting, shorthand, transcription, business communications and secretarial practice. Graduates can transfer to a four-year institution to complete their bachelor's degree to qualify as high school teachers of typewriting, shorthand, machine transcription, office practice, and clerical skills.

### Secretarial Studies Curriculum

#### Executive Secretary Option

* 65-68 Credits required for A.A.S. Degree

#### Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>**BIO 18</td>
<td>Human Physiology</td>
<td>4</td>
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<tr>
<td>♦MTH 12</td>
<td>Intro. to Mathematical Thought</td>
<td>3</td>
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#### Required Areas of Study

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<tr>
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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART or MUS</td>
<td>Art or Music</td>
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</tr>
<tr>
<td>PEA</td>
<td>Physical Ed. (choose one)</td>
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<tr>
<td>Social Science Elective</td>
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#### Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>SHO 11</td>
<td>Shorthand I</td>
<td>3</td>
</tr>
<tr>
<td>TYP 11</td>
<td>Typing I</td>
<td>2</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>SHO 12</td>
<td>Shorthand II</td>
<td>3</td>
</tr>
<tr>
<td>TYP 12</td>
<td>Typing II</td>
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<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
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<td>♦ORI 43</td>
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<tr>
<td>SHO 13 or 17</td>
<td>Shorthand III</td>
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<tr>
<td>TYP 13</td>
<td>Typing III</td>
<td>2</td>
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<tr>
<td>COM 31</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>SHO 14 or 18</td>
<td>Shorthand IV</td>
<td>3</td>
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<tr>
<td>SEC 41</td>
<td>Secretarial Practice</td>
<td>2</td>
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<tr>
<td>♦CWE 31</td>
<td>Cooperative Work Exp. I</td>
<td>2</td>
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<tr>
<td></td>
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</tbody>
</table>

#### Free Electives

To complete the required 65-68 credits.

* Students receiving exemption in Shorthand and/or Typewriting need 65 credits; others require 68 credits.
* Students considering transfer to a senior college should consult their curriculum adviser for science requirement.
♦ Students may qualify for advanced math placement resulting from evaluation of high school math background. MTH 30 is recommended for students considering transfer to a senior college.
♦♦ May be waived for Evening Session students with approval of curriculum coordinator.
§ MKT 11, BUS 51, LAW 41 or any other course subject to the approval of the counselor.
# CWE 31 may be taken as an elective in the third semester or may be waived with the approval of the curriculum coordinator.
Secretarial Studies Curriculum
Word Processing Option
*64-65 Credits required for A.A.S. Degree

<table>
<thead>
<tr>
<th>Core Requirements</th>
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<tbody>
<tr>
<td>ENG 13 Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11 Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10 History of the Modern World</td>
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</tr>
<tr>
<td>**MTH 12 Intro. to Mathematical Thought</td>
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</table>

<table>
<thead>
<tr>
<th>Required Areas of Study</th>
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</thead>
<tbody>
<tr>
<td><strong>SCI Science</strong></td>
</tr>
<tr>
<td>ART or MUS Art or Music</td>
</tr>
<tr>
<td>PEA Physical Ed. (choose one)</td>
</tr>
<tr>
<td>PSY 11 or Psychology or</td>
</tr>
<tr>
<td>SOC 11 or Sociology or</td>
</tr>
<tr>
<td>CMS 20 Public Speaking</td>
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<tr>
<td>Secretarial Studies or Business elective</td>
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| Total | 12 |

<table>
<thead>
<tr>
<th>Specialization Requirements</th>
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<tbody>
<tr>
<td>TYP 11 Typing I</td>
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<tr>
<td>BUS 11 Business Mathematics</td>
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<tr>
<td>TYP 12 Typing II</td>
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<tr>
<td>ACC 11 Fundamental Accounting I</td>
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<tr>
<td>BUS 51 Business Organization &amp; Management</td>
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<tr>
<td>♦TOM 43 Career Orientation</td>
</tr>
<tr>
<td>TYP 13 Typing III</td>
</tr>
<tr>
<td>WPR 11 Machine Transcription I</td>
</tr>
<tr>
<td>COM 31 Business Communications</td>
</tr>
<tr>
<td>WPR 21 Word Processing Administration</td>
</tr>
<tr>
<td>TYP 14 Typing IV</td>
</tr>
<tr>
<td>WPR 12 Machine Transcription II</td>
</tr>
<tr>
<td>WPR 22 Word Processing Office Simulation</td>
</tr>
<tr>
<td>♦CWE 31 Cooperative Work Exp. I</td>
</tr>
</tbody>
</table>

| Total | 36 |

<table>
<thead>
<tr>
<th>Free Electives</th>
</tr>
</thead>
</table>

To complete the required 64-65 credits.

---

Secretarial Studies Curriculum
Legal Secretary Option
*65-68 Credits required for A.A.S. Degree

<table>
<thead>
<tr>
<th>Core Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13 Fundamental Composition</td>
</tr>
<tr>
<td>CMS 11 Fundamental Communication</td>
</tr>
<tr>
<td>HIS 10 History of the Modern World</td>
</tr>
<tr>
<td>**BIO 18 Intro. to Mathematical Thought</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Areas of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦SOC Social Science elective</td>
</tr>
<tr>
<td>ART or MUS Art or Music</td>
</tr>
<tr>
<td>♦PEA Physical Ed. (choose one)</td>
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</table>

| Total | 16 |

<table>
<thead>
<tr>
<th>Specialization Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHO 11 Shorthand I</td>
</tr>
<tr>
<td>TYP 11 Typing I</td>
</tr>
<tr>
<td>BUS 11 Business Mathematics</td>
</tr>
<tr>
<td>SHO 12 Shorthand II</td>
</tr>
<tr>
<td>TYP 12 Typing II</td>
</tr>
<tr>
<td>ACC 11 Fundamental Accounting I</td>
</tr>
<tr>
<td>♦LAW 47 Legal Procedures</td>
</tr>
<tr>
<td>♦TOM 43 Career Orientation</td>
</tr>
<tr>
<td>SHO 13 or 17 Shorthand III</td>
</tr>
<tr>
<td>TYP 13 Typing III</td>
</tr>
<tr>
<td>SHO 31 Legal Shorthand I</td>
</tr>
<tr>
<td>COM 31 Business Communications</td>
</tr>
<tr>
<td>LAW 41 Business Law</td>
</tr>
<tr>
<td>SHO 32 Legal Shorthand II</td>
</tr>
<tr>
<td>SEC 41 Secretarial Practice</td>
</tr>
<tr>
<td>♦CWE 31 Cooperative Work Exp. I</td>
</tr>
</tbody>
</table>

| Total | 42 |

| Free Electives |

To complete the required 65-68 credits.

---

* Students receiving exemption in Typewriting need 64 credits; others require 65 credits.
** Students may qualify for advanced math placement resulting from evaluation of high school math background. MTH 30 is recommended for students considering transfer to a senior college.
♦ Students considering transfer to a senior college should consult their curriculum adviser for science requirement.
† May be waived for Evening Session students with approval of the curriculum coordinator.
§ May be taken as an elective in the third semester or waived with the approval of the curriculum coordinator.

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66 the curricula and programs
### Secretarial Studies Curriculum

#### Medical Secretarial Assistant Option

*65-68 Credits required for A.A.S. Degree*

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13 (Fundamental Composition)</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11 (Fundamental Communication)</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10 (History of the Modern World)</td>
<td>3</td>
</tr>
<tr>
<td>&quot;MTH 12 (Intro. to Mathematical Thought)</td>
<td>3</td>
</tr>
<tr>
<td>BIO 18 (Human Physiology)</td>
<td>4</td>
</tr>
<tr>
<td>HLT 91 (Critical Health Issues)</td>
<td>2</td>
</tr>
<tr>
<td>PSY 11 (Psychology)</td>
<td>3</td>
</tr>
<tr>
<td>SOC 11 (Sociology)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Areas of Study</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ART or MUS (Art or Music)</td>
<td>3</td>
</tr>
<tr>
<td>PEA (Physical Ed (choose one))</td>
<td>1</td>
</tr>
<tr>
<td>PSY (Clinical Psychology elective)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Specialization Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYP 11 (Typing I)</td>
<td>2</td>
</tr>
<tr>
<td>BUS 11 (Business Mathematics)</td>
<td>3</td>
</tr>
<tr>
<td>ACC 11 (Fundamental Accounting I)</td>
<td>4</td>
</tr>
<tr>
<td>TYP 12 (Typing II)</td>
<td>2</td>
</tr>
<tr>
<td>BIO 22 (Medical Terminology)</td>
<td>2</td>
</tr>
<tr>
<td>TTR 43 (Career Orientation)</td>
<td>0</td>
</tr>
<tr>
<td>TYP 13 (Typing III)</td>
<td>2</td>
</tr>
<tr>
<td>BIO 46 (Clinical Techniques I)</td>
<td>2</td>
</tr>
<tr>
<td>SEC 34 (Medical Office Practice I)</td>
<td>2</td>
</tr>
<tr>
<td>COM 31 (Business Communications)</td>
<td>3</td>
</tr>
<tr>
<td>SEC 35 (Medical Office Practice II)</td>
<td>2</td>
</tr>
<tr>
<td>BIO 47 (Clinical Techniques II)</td>
<td>2</td>
</tr>
<tr>
<td>LAW 45 (Medical Law)</td>
<td>3</td>
</tr>
<tr>
<td>TTR 31 (Cooperative Work Experience I)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>31</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Free Electives</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>To complete the required 65-68 credits.</td>
<td></td>
</tr>
</tbody>
</table>

---

*Students receiving exemption in Shorthand and/or Typewriting need 65 credits; others require 68 credits.

**Students may qualify for advanced math placement resulting from evaluation of high school math background. MTH 30 is recommended for students considering transfer to a senior college.

†May be waived for Evening Session students with approval of curriculum coordinator.

‡CWE 31 may be taken as an elective in the third semester or may be waived with the approval of the curriculum coordinator and another course substituted.
SECRETARIAL TEACHING CURRICULUM

Students who wish to teach secretarial studies in high schools may earn the A.A. degree at Bronx Community College and transfer into the third year at senior colleges of The City University of New York.

Secretarial Teaching Curriculum
High School Teaching Option
*65-68 Credits required for A.A. Degree

Core Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 13</td>
<td>Fundamental Composition</td>
<td>3</td>
</tr>
<tr>
<td>CMS 11</td>
<td>Fundamental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HIS 10</td>
<td>History of the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>**</td>
<td>Modern Language</td>
<td>8</td>
</tr>
<tr>
<td>MTH 21, 22, 23, 30 or 31</td>
<td>Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>HLT 91</td>
<td>Critical Health Issues</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>22-23</td>
</tr>
</tbody>
</table>

Required Areas of Study

- Humanities: Choose from English, Communication, Economics, Political Science, Psychology, Philosophy, Sociology or History
- Science: Choose from AST 12, BIO 11, CHM 11 or PHY 11
- MUS or ART: Music or Art
- PEA: Physical Ed. (choose one)

Total 11

Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHO 11</td>
<td>Shorthand I</td>
<td>3</td>
</tr>
<tr>
<td>TYP 11</td>
<td>Typing I</td>
<td>2</td>
</tr>
<tr>
<td>SHO 12</td>
<td>Shorthand II</td>
<td>3</td>
</tr>
<tr>
<td>BUS 11</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>TYP 12</td>
<td>Typing II</td>
<td>2</td>
</tr>
<tr>
<td>SHO 13 or 17</td>
<td>Shorthand III</td>
<td>3</td>
</tr>
<tr>
<td>COM 31</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>TYP 13</td>
<td>Typing III</td>
<td>2</td>
</tr>
<tr>
<td>SHO 14 or 18</td>
<td>Shorthand IV</td>
<td>3</td>
</tr>
<tr>
<td>SEC 41</td>
<td>Secretarial Practice</td>
<td>2</td>
</tr>
<tr>
<td>BUS 31 or</td>
<td>Business Organization &amp; Management</td>
<td>3-4</td>
</tr>
<tr>
<td>†ACC 11 or</td>
<td>or Fundamental Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>LAW 41</td>
<td>or Business Law</td>
<td>0</td>
</tr>
<tr>
<td>†HORI 43</td>
<td>Senior Orientation</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29-30</td>
</tr>
</tbody>
</table>

Free Electives

To complete the required 65-68 credits.

* Students receiving exemption in Shorthand and/or Typewriting need 65 credits; others require 68 credits.
** Students must consult counselor for language requirements of senior college to which they plan to transfer.
†ACC 11 required for students planning to transfer to Baruch College.
†† May be waived for Evening Session students with approval of curriculum coordinator.
EXPLANATION OF SYMBOLS

Prerequisites must be completed with a passing grade before the subsequent course may be taken.

Corequisites may be taken simultaneously, or before a given course.

AN EXPLANATION OF CREDIT

The allocation of credits to courses is based on New York State Department of Education regulations in higher education.

Generally, the formula is that one semester-hour of credit is awarded in a course meeting for 15 weeks for each hour of class or lecture for which considerable out-of-class preparation is required; or for a unit of two or three "laboratory," "gym," or "clinic" hours.

1. The term rec (recitation) refers to the traditional recitation-discussion-seminar form.

2. The term lect (lecture) means that several sections have been combined into a single group in which the presentation is sometimes accompanied by a demonstration and audio-visual material.

3. The term lab (laboratory) indicates that the class meets in a specially equipped area where students may do individualized work in experimentation with instruments, tools and similar equipment.

4. The term clin (clinic) indicates supervised, individualized clinical experience in a hospital setting, including group and individual instruction.

The College reserves the right to limit the number of students registered in any course, or to cancel any course for which there is insufficient enrollment, or to make any changes in prerequisites, course descriptions, credit allocations, schedule and section offerings in the academic year as it may deem necessary for the proper and efficient functioning of the College.

Students who place into ENG 01 and RDL 01 are allowed to register only for the following credit-bearing courses:

- PEA courses
- Music performance courses
- ESL 11 (by placement)
- Language courses (Level 12 or above, by placement)
- ELC 11 and/or 15 (corequisite MTH 13 recommended for Electronic and Computer Engineering Technology students only)
- TYP 11
- MEC 11 (by placement)
- Art studio courses
- CMS 10 and/or CMS 12

Students who place into ENG 02 may also register for the following credit-bearing courses:

- ART 10
- HIS 10
- ART 11
- MEC 12
- ART 12
- MUS 10
- CMS 11
- MUS 11
- CMS 30
- MUS 12
- COM 31
- PHL 11
- DAT 30
- POL 11
- ECO 11
- PSY 11
- ECO 12
- SOC 11
## ACCOUNTING

**Department of Business**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 11</td>
<td>Fundamental Accounting I</td>
<td>5</td>
<td>Principles of accounting applied to single proprietorship. Journalizing and posting, adjusting and closing entries, preparation of the work sheet, balance sheet and income statement. Prerequisite or corequisite depending upon student's curriculum: BUS 11.</td>
</tr>
<tr>
<td>ACC 12</td>
<td>Fundamental Accounting II</td>
<td>5</td>
<td>Extension of the principles of accounting to partnerships and corporations. Prerequisite: ACC 11.</td>
</tr>
<tr>
<td>ACC 13</td>
<td>Intermediate Accounting</td>
<td>5</td>
<td>Theory and problems of accounting applied to construction: financial statements; problems of valuation and income determination. Prerequisite: ACC 12.</td>
</tr>
<tr>
<td>ACC 14</td>
<td>Cost Accounting</td>
<td>5</td>
<td>Principles of cost accounting for manufacturing and business: managerial uses of cost data under the job order and process system; use of estimate, standard and direct costing techniques related to job order and process costing. Prerequisite: ACC 13; for Data Processing students: ACC 12.</td>
</tr>
</tbody>
</table>

## ART

**Department of Music and Art**

Music or Art requirements for all curricula may be satisfied by any course or combination of courses in Art and/or Music for which the student is qualified. Students planning to transfer to a four-year college should check with that institution to see which courses are acceptable for transfer credit.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 10</td>
<td>Art Survey</td>
<td>2</td>
<td>Survey of art in selected historical periods of Western civilization. Note: Not open to students taking ART 11 or ART 12. Corequisite: ENG 02 or RDL 02 if required.</td>
</tr>
<tr>
<td>ART 11</td>
<td>Introduction to Art</td>
<td>3</td>
<td>Survey of our artistic heritage from the classical period of Western civilization to modern art. Discussion of social and philosophical influences. Creative studio experiences are encouraged. Art museum visits. Corequisite: ENG 02 or RDL 02 if required.</td>
</tr>
<tr>
<td>ART 12</td>
<td>Introduction to Western and Non-Western Cultures</td>
<td>3</td>
<td>African, pre-Columbian and Oceanian; their relationship to the art of our Western world. Creative studio experiences are encouraged. Museum visits. (May be taken to fulfill ART 11 requirement.) Corequisite: ENG 02 or RDL 02 if required.</td>
</tr>
</tbody>
</table>

### ART 15  Design  4 rec 2 cr  Studio course introducing the principles of two dimensional design. Using color creatively, dynamic designs for commercial success and fine art composition. Wide ranging applications for all curricula including Audio-visual Technology.

### ART 21  Drawing and Painting I  4 rec 2 cr  Studio course to develop basic skills and concepts in drawing and painting. Emphasis on drawing anatomy and portraits. Use of different mediums and techniques. Students draw from professional models.

### ART 22  Drawing and Painting II  4 rec 2 cr  Studio course with emphasis on painting in oil and acrylics and life drawing. Fundamentals of form, color, texture, and composition as applied to still life, landscape, and portraits. Assignments are adapted to each student's ability. Development of student's personal style.

### ART 31  Graphics I  4 rec 2 cr  Studio course in relief printing. Instruction includes your own woodcut and linocut prints, and other innovative methods. Color printing by hand and on the printing press.

### ART 32  Graphics II  4 rec 2 cr  Studio course in etching, silkscreen, color printing, and black and white prints using the printing press. Creative experience with mixed media. Proofing and making editions.

### ART 41  Ceramics I  4 rec 2 cr  Fundamental techniques of pottery and ceramics. Emphasis on standards of design and development of craftsmanship. Art museum visits.

### ART 42  Ceramics II  4 rec 2 cr  Building, decorating, glazing techniques. Emphasis on three dimensional design and craftsmanship.

### ART 51  Art of Africa and North America  3 rec 3 cr  Exploration of the art forms of West, Central and East Africa, as well as those of the Eskimo and of the North American Indian. Discussion of impact of these cultures on the development of modern art, with attention to the humanistic traditions involved. Art museum visits. Corequisite: ENG 02 or RDL 02 if required.

### ART 52  Oriental Art  3 rec 3 cr  Emphasis on art of China and Japan from prehistoric periods through the great Buddhist and dynastic styles in architecture, sculpture, pottery, painting, and calligraphy. Studio practice in techniques of Chinese painting. Art museum visits. Corequisite: ENG 02 or RDL 02 if required.

### ART 55  Modern Art  3 rec 3 cr  Important movements in modern art, including Impressionism, Post-Impressionism, Expressionism, Cubism, Dada, Surrealism, Abstract Expressionism, Pop Art, Minimal Art, Conceptual Art, and modern architecture. Lectures, films and visits to museums, art galleries, architectural monuments. Corequisite: ENG 02 or RDL 02 if required.

70 course descriptions
ART 61  Art as a Human Value  3 rec  3 cr*
Introductory course which considers the role of art in society. Various art forms including painting, sculpture, architecture, music, poetry, drama and dance are studied in relation to selected theories of art and beauty. Trips to art galleries, concerts, plays. Corequisite: ENG 02 or RDL if required.

ART 71  Photography I  4 rec  2 cr
Basic photographic techniques as a creative medium; emphasis on composition and lighting; developing, printing and enlarging. Students provide their own cameras and materials.

ART 72  Photography II  4 rec  2 cr
Continuation of ART 71. More creative experimentation through studio and field assignments. Photographic exhibitions. Prerequisite: ART 71 or permission of instructor.

ART 80  Introduction to Commercial Art  4 rec  2 cr
Introduction to art requirements of advertising, publishing, merchandising, training and education, business and industry, theatre, television and motion pictures, fundamental requirements of all commercial art with emphasis on the use of communicating forms in mass media.

ART 81  Media and Communication Art  4 rec  2 cr
Introduction to skills and techniques used in commercial art: composition and layout, lettering and typography, mechanicals and paste-ups, commercial reproduction methods. Style and techniques for rough and comprehensive layouts. Use of photography and photo reproductions. Finished art and illustrations.

* Pending approval.

ASTRONOMY

Department of Physics

AST 11  Astronomy and Space Science  1 lect  2 rec  3 cr
Elementary study of the solar system, stellar populations, structure of the universe, and other aspects of modern astronomy. Prerequisites: Elementary Algebra or MTH 05, or permission of the department, and RDL 02 if required; corequisite: ENG 02 if required.

AST 12  Astronomy and Space Science  2 lab  4 cr
Same as AST 11, but includes additional two-hour laboratory. Students who have received credit for AST 11 cannot receive credit for AST 12. Prerequisite and corequisite: Same as AST 11.

AST 21  Intermediate Astronomy  2 lect  1 rec  3 cr
Continuation of Astronomy 11 or 12; more detailed study of astronomical coordinate systems, stellar population, black holes, Hertzsprung-Russell diagrams, eclipses, and other topics of interest to amateur astronomers. Prerequisites: AST 11 or 12, and MTH 06 or equivalent.

AUDIOVISUAL TECHNOLOGY

Library

AVT 10  Introduction to Audiovisual Technology  3 rec  3 cr
Provides students with a context and framework for the field of audiovisual technology through a study of the types of media formats such as videocassette and sound/slide. Technical aspects of media, especially television, are explored as they relate to the technican's role of equipment operator and production assistant. Corequisites: RDL 02, ENG 02, if required.

AVT 11  Audiovisual Photography  3 rec  3 cr
Specialized photographic techniques required of the audiovisual technician, such as slide and filmstrip production and reproduction, copystand techniques, kodalith slides, Polaroid films and uses, public relations photography, macro and micro photography, advanced darkroom techniques. Students are required to produce a portfolio of materials for evaluation and to produce, at his/her own expense, a 35mm camera, film and any other material or outside-the-college film processing necessary to produce the portfolio. Prerequisite: ART 71 or permission of instructor.

AVT 12  Small Studio Color Television  3 rec  3 cr
Theory and practice of typical small studio color television systems, including color alignment, lighting, electronic editing in various tape formats and switching. Emphasis on production techniques (staging, setting, etc.) commonly used in training and other instructional program formats. Prerequisite: AVT 10.
AVT 13 Audiovisual Equipment 3 rec 3 cr 
Operation and Maintenance
The operation and simple maintenance of all audiovisual equipment and materials. Students are required to serve a minimum of five hours per week as an apprentice AV operator in the college's AV facilities. Prerequisite: AVT 10

AVT 31 Audio Recording and Duplication 3 rec 3 cr
Theoretical and practical "hands on" experience in all phases of audio recording and tape duplication as they apply to the production of audiovisual materials and the operation of audiovisual equipment.

AVT 32 Multimedia Operations and Production 4 rec 3 cr
Multimedia (two or more screen images, presented simultaneously or in a variety of sequential patterns) production techniques are discussed and demonstrated. Various types of equipment, including sophisticated computer-managed systems, are analyzed and sample programs are studied. Practice in special photographic and graphics techniques required for multi-image production. Students participate in the production of a complete multi-image program. Prerequisite: AVT 11 and AVT 31.

AVT 33 Television Editing 2 rec 2 lab 3 cr
and Post-Production Techniques
Provides theoretical and practical experience in video editing and post-production. Emphasis on special production techniques for assembling program shots or sequences in a post-production editing facility. Insertion of additional material, via time base correction is covered. Prerequisite: AVT 12.

AUTOMOTIVE MECHANICS

Department of Physics

ACS 11 Engine (Internal Combustion) 3 rec 6 lab 6 cr
Operation service procedures, diagnostic methods of an internal combustion engine. An internal combustion engine will be completely disassembled, inspected, precision measured, repaired, reassembled and tuned up.

ACS 12 Brakes 1 rec 4 lab 3 cr
Construction, servicing and repair of both disc and drum brakes of the automobile.

ACS 13 Fuel Systems 2 rec 2 lab 3 cr
Fundamentals of design, operation and assembly of the automotive system, integrated into repair service and overhaul of the essential components of the fuel systems.

ACS 14 Manual Transmission and Rear Axle 1 rec 4 lab 3 cr
Operation and service procedures for the automotive manual transmission and rear axle. A manual transmission and rear axle will be completely disassembled, inspected and reassembled.

ACS 21 Front Ends 2 rec 4 lab 4 cr
Diagnostic and service procedure, inspection, repair and alignment of the automobile's front end. The rear suspension system and steering gears will be developed and related to the front-end system.

ACS 22 Automatic Transmission 1 rec 6 lab 4 cr
Operation and service of most conventional automatic transmissions. An automatic transmission will be completely disassembled, inspected and reassembled. Prerequisite: ACS 14.

ACS 23 Heating and Air Conditioning 2 rec 4 lab 4 cr
Heating and air-conditioning system of an automobile. Emphasis on trouble-shooting and servicing the climate control system (heating and air-conditioning).

ACS 24 Electrical Systems 2 rec 2 lab 3 cr
Operation, service and repair of automotive electrical starting, lighting, generating and ignition systems.

ACS 31 Towing, Shop Safety and General Cleanup 2 rec 2 lab 3 cr
Covers various methods of towing cars. Students are encouraged to have a driver's license before registering for this class. Basic procedures for shop safety and methods used in the collision shop will be established. Interior cleanup and spot removal, dust removal, plastic removal and chrome cleanup. Prerequisite: First semester course sequence in Automotive Mechanics Program.

ACS 32 Chassis and Components 3 rec 2 lab 4 cr
Emphasis will be placed on disassembly and assembly procedures for bumpers, fenders, doors, trunk lid, interior and radiator. Prerequisite: First semester course sequence in Automotive Mechanics Program.

ACS 33 Metal Working Skills 1 rec 6 lab 4 cr
Includes the different stages of repair, such as analysis, roughing out, metal straightening, filling and metal refinishing. Basic skills of hammer and dolly using, grinder files, picks and fillers. Prerequisite: First semester course sequence in Automotive Mechanics Program.

ACS 34 Painting Procedures 2 rec 4 lab 4 cr
Identifying dents, applying primers, applying putty, sanding and waxing and poly-glycoat procedures.

BIOLOGY

Department of Biology and Medical Laboratory Technology

BIO 11 General Biology I 2 lect 4 lab 4 cr
Chemical basis of life: cellular structure, function and reproduction; photosynthesis and cell respiration; human anatomy and physiology; plant structure and function. Prerequisite: RDL 01 if required.
BIO 12 General Biology II 2 lect 4 lab 4 cr  
Continuation of BIO 11 with emphasis on plant and animal development; Mendelian and molecular genetics, evolution, animal and plant diversity and ecology. Prerequisite: BIO 11.

BIO 15 Zoology 2 lect 4 lab 4 cr  
Anatomy, physiology, morphology, taxonomy, ecology and economic importance of the animal kingdom; relationships of animal parasites to the human organism. Required for Medical Lab. Tech. students. Prerequisite: RDL 01 if required.

BIO 18 Human Physiology 4 lect 4 cr  
A physiological study of the skeletal, muscular, integumentary, digestive, nervous, circulatory, excretory, respiratory, endocrine and reproductive systems of the human body; special senses. Prerequisite: RDL 01 if required.

BIO 22 Medical Terminology 2 lect 2 cr  
Acquaintance with medical concepts, medical terms and scientific principles; various ailments and diseases; tests used in their analyses; treatments and therapeutic techniques for alleviation and cure. Required for Medical Secretarial Assistants. Prerequisite: RDL 01 if required.

BIO 23 Human Anatomy and Physiology I 3 lect 3 lab 4 cr  
An integrated lab-lecture method for the study of gross and microscopic anatomy, basic chemistry, fluid and electrolyte balance, normal physiological processes, integumentary, skeletal, digestive, muscular, circulatory and respiratory systems. Required for health career students. Prerequisite: RDL 01 if required.

BIO 24 Human Anatomy and Physiology II 3 lect 3 lab 4 cr  
An integrated lab-lecture method for the study of gross and microscopic anatomy, normal physiological processes, reproductive, excretory, nerve-endocrine systems, special senses, embryology, genetics, and aging. Prerequisite: BIO 23. Required for health career students.

BIO 26 Anatomy and Physiology II 3 lect 3 lab 4 cr  
Study of human excretory, reproductive and endocrine systems; electrolyte and water balance; the senses: metabolism, immunity. Recent advances in prevention of disease. Prerequisites: CHM 18 and BIO 23 or BIO 25. Required for Medical Laboratory Technology students.

BIO 28 Microbiology and Infection Control 3 lect 3 lab 4 cr  
Introduction to microbial structure, function and reproduction. Introduces the medical aspects of bacteriology, mycology, parasitology, virology, serology, immunology, epidemiology, and infection control. Emphasis on biological and clinical aspects of infectious diseases. Prerequisites: BIO 23, BIO 24 or permission of department chairman. Required for Nursing Students.

BIO 41 Histological Techniques* 2 lect 4 lab 4 cr  
Study and preparation of vertebrate tissues and organs for microscopic study, with emphasis on clinical histological techniques. Prerequisites: M.L.T.—CHM 17, 18 and BIO 24 or BIO 26.

BIO 43 Microbiology* 2 lect 4 lab 4 cr  
Introduction to basic microbiological concepts and role of microorganisms in health and other applied areas. Emphasis on microbiological physiology, genetics and ecology. Prerequisites: CHM 18 and BIO 24 or BIO 26.

BIO 44 Medical Microbiology* 2 lect 4 lab 4 cr  
Advanced study of microorganisms with emphasis on diagnostic techniques for identifying pathogens. Included are morphological, cultural, biochemical, immunological and serological methods, and antibiotic testing. Prerequisite: BIO 43.

BIO 46 Clinical Techniques for Medical Secretaries I 1 lect 3 lab 2 cr  
Use and care of such instruments as the microscope, sphygmomanometer, basal metabolizer, electrocardiograph, sterilizer, centrifuge and balance; urinalysis—physical, chemical and microscopic tests. Prerequisite: BIO 18, BIO 22.

BIO 47 Clinical Techniques for Medical Secretaries II 1 lect 3 lab 2 cr  
Use and care of various medical instruments; sterile techniques; analysis of blood—complete blood count, hematocrit, sedimentation rate, blood glucose. Prerequisite: BIO 46.

BIO 50 Biology and the Law 3 lect 3 cr  
Basic understanding of current and future legal implications of research and practices in the biological sciences and health professions. Topics include genetics, public health, public and occupational safety as well as health and ecological hazards. Corequisites: ENG 02 or RDL 02 if required.

BIO 51 Fundamentals of Ecology 2 lect 4 lab 4 cr  
Introduction to dynamics of the ecosystem, population development, food chains, succession; current topics in ecology. Laboratory and field work utilize techniques useful in basic environmental and community analysis. Field trips. Prerequisite: BIO 11.

BIO 55 Genetics and Man 3 rec 3 cr  
Principles of heredity, an historical view culminating in modern genetics. Cytogenetics and the physical basis of heredity; Mendelian and non-Mendelian genetics; molecular and biochemical genetics; chromosomal aberrations; sex chromosomes; blood groups; population genetics; social impact of genetic control. Prerequisite: Any one of the following: BIO 11, BIO 15, BIO 21, BIO 23 or BIO 24.
Exemption

Student will be limited credit with further information, to restriction. After completing such exemption exams, students will be granted credit with grade and index value for the appropriate courses. For further information, the student should consult the department chairman prior to registration.

BIO 71 Clinical Laboratory Techniques I*
Use of basic laboratory equipment: skills of urinalysis—physical, chemical and microscopic examinations; introduction to blood banking—blood typing, ABO, Rh, compatibility testing; introduction to serology—principles, pregnancy testing, latex tests. Prerequisites: BIO 15, CHM 02.

BIO 72 Clinical Laboratory Techniques II*
Complete blood counts, normal and abnormal smears; basic routine blood procedures—sickle cell, sedimentation rate, reticulocyte count, platelet count; coagulation studies—prothrombin time, clot retraction; special procedures—alkaline phosphatase staining, electrophoresis. Prerequisites: BIO 71, BIO 23, CHM 17.

BIO 73 Clinical Laboratory Techniques III*
Principles and practice of volumetric equipment and spectrophotometers (visible and ultraviolet). Clinical chemistry tests; BUN and creatinine, glucose, serum proteins, bilirubin and other liver function tests, electrolytes, isoamylases used in cardiac profile, acid and alkaline phosphatases. Emphasis on clinical techniques, chemical principles and diagnostic significance. Prerequisites: CHM 18, BIO 72 and BIO 24 or BIO 26.

BIO 74 Clinical Laboratory Techniques IV*
Basic principles, operation and proper maintenance of instruments used in clinical laboratories: Coulter counter, electrophoresis and densitometry, fluorometer, flame photometers, chloridimeter. Particular emphasis placed on chemical analyzers: discrete, centrifugal force and auto-analyzers. Prerequisite: BIO 73 or written permission of the chairman.

BIO 75 Clinical Practicum
Six-month, full-time clinical laboratory training in an approved hospital laboratory. Required for a New York City Department of Health License as a medical laboratory technician. Placement for training is limited and cannot be guaranteed. Prerequisite: completion of all other requirements and departmental approval.

BOTANY

Department of Biology

Enrollment in these courses is limited to students in the Ornamental Horticulture curricula or with special permission of the department.

BOT 11 Basic Botany 15 hr/sem 1 cr
Survey of plant cells and tissues, cell division, reproduction, genetics, anatomy, systematics, evolution and ecology. Prerequisites: BIO 11 and 12.

BOT 12 Plant Form and Function 12 hr/sem 1 cr
Anatomy and physiology of plant cells and organs; cellular respiration and photosynthesis. Prerequisite: BOT 11.

BOT 13 Plant Physiology 12 hr/sem 1 cr
Plant growth and development, hormones, tropisms, phycology, dormancy, responses to low temperature, flowering, senescence and abscission. Prerequisite: BOT 12.

BOT 41 Entomology 16 hr/sem 1 cr
Structure, growth and development of insects and related arthropods. Background to insect classification and identification; collection and preservation of insects. Prerequisites: BIO 11 and 12.

BOT 42 Weeds 12 hr/sem 1 cr
Learn the identification of weeds, their biology, seeds, and control, and their relationship to ornamentals. Prerequisites: BIO 11 and 12.

BOT 61 Woody Plant Identification: Fall Trees and Shrubs 12 hr/sem 1 cr
Identification and landscape use of ornamental trees and shrubs. Emphasis on shade trees and shrubs grown for ornamental foliage and fruit. Prerequisites: BIO 11 and 12.

BOT 62 Woody Plant Identification: Broadleaved Evergreens 8 hr/sem 1/2 cr
Survey of broadleaved evergreens, their identification and ornamental characteristics. Prerequisites: BIO 11 and 12.

BOT 63 Woody Plant Identification: Conifers 12 hr/sem 1 cr
Identification and landscape use of ornamental conifers. Review of winter identification of deciduous material. Prerequisites: BIO 11 and 12.

BOT 64 Woody Plant Identification: Spring Trees and Shrubs 12 hr/sem 1 cr
Continuation of BOT 61, with emphasis on spring flowering trees and shrubs. Prerequisites: BIO 11 and 12.

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74 course descriptions
BUSINESS

Department of Business

BUS 10 Introduction to Business 3 cr
Introductory survey course to acquaint students with Business as a field of study. Analysis of the role of business in society, with emphasis on how the business system operates. Functional areas of accounting, marketing, finance, business law, management and information systems are explored. Prerequisites: RDL 02 or ENG 02 if required.

BUS 41 Business Statistics 3 rec 1 lab 1 cr
Introduction to statistical methods as a basis for decision-making and operations control in business, utilizing principles of probability, sampling error, estimation and the descriptive methods of frequency distribution correlation, index number and time series analysis. Application to data pertinent to business and economic problems in such areas as accounting controls, production and marketing. Prerequisite: Three years of high school mathematics or MTH 06; corequisite: ENG 02 or RDL 02 if required.

BUS 41 Business Organization and Management 3 cr
Advantages, limitations and financing of basic forms of business organization. Management problems of organization, policy formation, communication and efficiency with particular reference to personnel and their supervision, budget and automation. Prerequisite or corequisite: ENG 13.

BUS 71 International Business 3 rec 3 cr
Introduction to basic terminology and concepts of international business. The world environment of business enterprise, foreign trade and investment patterns, problems and opportunities. Emphasis on analysis of current policy issues. Prerequisites: RDL 02 if required; BUS 10, or a course in Economics or Political Science; corequisite: ENG 13.

*Business Mathematics (BUS 11) is prerequisite to ACC 11 for all students except those matriculated in Liberal Arts and Sciences and Business Administration. BUS 11 is pre- or corequisite to ACC 11 for matriculants in the Business Curriculum with Accounting Specialization.

CHEMISTRY

Department of Chemistry and Chemical Technology

CHM 02 Introduction to Chemistry* 1 rec 2 lect
Introduction to types of matter, elements, compound formulas, equations, use of arithmetic for chemical problem-solving, nomenclature, atomic structure and chemical bonding. Basic laboratory skills. Corequisite: MTH 03 or RDL 02 or permission of department.

CHM 10 Contemporary Chemistry 3 rec 3 lab 4 cr
Exploration of problems arising from the expanding human population and increasing industrial technology and how chemistry relates to and can aid in understanding the problems and attempting solutions. Laboratory includes introduction to properties of chemicals and use of techniques for present pollution detection and monitoring. Recommended for non-science Liberal Arts students. Corequisite: ENG 02 or RDL 02 if required.

CHM 11 General College Chemistry I** 1 rec 2 lect
Fundamental principles and theories of chemistry, aspects of atomic structure and bonding, chemical calculations, states of matter, solutions, kinetics equilibria, electro-chemistry, properties of non-metallic and metallic elements, nuclear chemistry, organic chemistry. Laboratory chemical techniques and principles, qualitative analysis. (Chemistry and other science majors should take CHM 22 in the second semester. Engineering Science majors may choose either CHM 12 or CHM 22 in the second semester.) Prerequisites for CHM 11: Placement exam of CHM 02, MTH 03; for CHM 12; CHM 11.

CHM 12 General College Chemistry II 1 rec 2 lect
Fundamental principles and theories of chemistry, aspects of atomic structure and bonding, chemical calculations, states of matter, solutions, kinetics equilibria, electro-chemistry, properties of non-metallic and metallic elements, nuclear chemistry, organic chemistry. Laboratory chemical techniques and principles, qualitative analysis. (Chemistry and other science majors should take CHM 22 in the second semester. Engineering Science majors may choose either CHM 12 or CHM 22 in the second semester.) Prerequisites for CHM 11: Placement exam of CHM 02, MTH 03; for CHM 12; CHM 11.

*Students who have completed one year of chemistry in high school and plan to major in Engineering Science, Medical Laboratory Technology, Nursing, Pre-Pharmacy, Pre-Medicine, Pre-Dentistry, and other science curricula, are required to take a placement examination. Students with an insufficient background in high school chemistry, or students who fail the placement examination and wish to specialize in one of the above-mentioned curricula, are required to take CHM 02. This course is not intended for non-science Liberal Arts students.

**Required for students in Engineering Science, Medical Laboratory Technology, Pre-Pharmacy, Pre-Medicine, Pre-Dentistry, and other science curricula. This course is not intended for non-science Liberal Arts students.
CHM 13 Current Topics in Chemistry  
3 rec 2 cr  
Exploration of problems arising from the expanding human population and increasing industrial technology and how chemistry relates to and can aid in understanding the problems and attempting solutions. Corequisite: ENG 02 or RDL 02 if required.

CHM 14 Introduction to General, Organic and Biological Chemistry  
3 lect 3 lab 4 cr  
Matter, atomic structure, chemical bonds, radioactivity, liquid state and solutions, ionization, acids and bases, hydrocarbons and derivatives, carbohydrates, lipids and proteins, metabolism, respiration, blood and urine. Prerequisites: BIO 21 or BIO 28 or permission of the department: placement exam or CHM 02.

CHM 15 Fundamentals of Chemistry  
2 lect 4 lab 3 cr  
Fundamental principles and theories of chemistry; emphasis on topics of interest to the technologies. Can satisfy one semester of laboratory science in Liberal Arts programs. Corequisite: ENG 02 or RDL 02 if required.

CHM 17 Fundamentals of General Chemistry I  
1 rec 2 lect 3 lab 4 cr  
Introductory course in general chemistry, atomic theory, formulas and equations, electron configurations, periodic table, chemical bonding, molecular structure, calculations, gas, liquid and solid states, solutions. Laboratory exercises illustrate principles of course and laboratory techniques. Prerequisites: CHM 02 or passing of placement examination, MTH 02 or 03 or RDL 02.

CHM 18 Fundamentals of General Chemistry II  
1 rec 2 lect 3 lab 4 cr  
Continuation of CHM 17. Ionic reactions, acid-base theories, pH, chemical equilibria, structure, nomenclature and properties of hydrocarbons, alcohols, ethers, carboxyls, acids, esters, fats, lipids, amino acids, and proteins, carbohydrates. Prerequisite: CHM 17.

CHM 22 General Chemistry II with Qualitative Analysis  
1 rec 2 lect 6 lab 5 cr  
Emphasis on solutions, equilibria, acids and bases, ionization equilibria, solubility product, complexions, oxidation-reduction and survey of metallic and non-metallic elements, organic and nuclear chemistry. Laboratory: qualitative analysis of solutions; salts and alloys. Prerequisite: CHM 11.

CHM 24 Plastics Chemistry  
3 rec 3 lab 4 cr  
Chemistry in relation to the plastics industry. Special emphasis on organic chemistry and chemistry of high polymers. Corequisite: ENG 02 or RDL 02 if required.

CHM 31 Organic Chemistry I  
1 rec 2 lect 4 lab 4 cr  
Structure, nomenclature, properties and reactions of organic compounds including electronic theory and mechanism. Laboratory: preparation, purification and identification of representative organic compounds. Prerequisites: CHM 12 or CHM 22.

CHM 32 Organic Chemistry II  
1 rec 2 lect 4 lab 4 cr  
A continuation of CHM 31. Prerequisite: CHM 31.

CHM 33 Quantitative Analysis  
2 lect 6 lab 4 cr  
Theory and laboratory methods of Quantitative Chemical Analysis with laboratory determinations employing gravimetric and titrimetric (volumetric) methods, including acid-base, precipitation and oxidation-reduction reactions; use of chelating agents and analytical instruments. Prerequisite: CHM 22.

CHM 35 Fundamentals of Organic Chemistry  
1 rec 2 lect 3 lab 4 cr  
Nomenclature, structure, properties and reactions of typical organic molecules. Laboratory: preparation, properties and identification of typical organic compounds. Prerequisite: CHM 12 or CHM 18.

CHM 41 Biochemistry  
1 rec 2 lect 4 lab 4 cr  
Chemistry of metabolism, electrolytic equilibria, reaction mechanism, catalysis, oxidation-reduction, enzymes, metabolism of carbohydrates, proteins, fats and nucleic acids. Prerequisite: CHM 35.

CHM 44 Instrumental Methods of Industrial and Environmental Analysis  
2 rec 4 lab 3 cr  
Introduction to concepts of modern analytical methods. Elementary principles of electronics and uses of instruments. Spectrophotometry (visual, ultraviolet and infrared); polarography, potentiometry, gas liquid partition, chromatography, electrophotographic methods, radioactive techniques; emission spectrophotometry, flame and atomic absorption photometry. Prerequisite: CHM 33.

CHM 45 Industrial Environmental Methods of Analysis  
2 rec 6 lab 4 cr  
Analysis of representative products of chemical plant operations as well as air, water and environmental materials, using typical industrial equipment. Methods according to ASTM, AOAC. EPA and OSHA. Prerequisites: CHM 31, CHM 33. NOTE: Students in their final semester may substitute CHM 61.

CHM 61 Cooperative Work Experience  
3 rec 6 cr  
and Seminar in 20 hrs field work  
Chemical Technology  
An opportunity for chemical technology students to work in an industrial laboratory of a cooperating employer. Students are compensated at the prevailing wage rate for the job they hold. Accompanying seminar integrates chemical principles with the practical aspects of industrial analysis, methods, and processes. Experiences and problems encountered in their work are discussed and analyzed. Satisfactory ratings by industrial supervisor and seminar instructor required. Prerequisites: Fully matriculated student status in the Industrial Chemical Laboratory option, CHM 33, and departmental approval.

*Paid part-time employment of at least 20 hours per week for a 14-week semester.
COMMUNICATION

Department of Communication Arts and Sciences

CMS 01 Basic Spoken English for the Non-Native Speaker
Introduction to basic spoken English through the study of sounds, vocabulary, and grammar. Oral exercises and practice. Prerequisite: Permission of department required.

CMS 02 Intermediate Spoken English for the Non-Native Speaker
Continued, more advanced practice of basic spoken English. More intensive oral practice. Prerequisite: Permission of department required.

CMS 03 Developmental Oral Skills I
(Formerly CMS 01)
Development of speaking, listening, and linguistic skills related to basic reading and writing skills development. Use of audiovisual materials in Speech Laboratory and Learning Center. Permission of department required.

CMS 04 Developmental Oral Skills II
(Formerly CMS 02)
Continuation of speaking, listening, and linguistic skills development. Emphasis on developing acceptable speech patterns and the ability to speak coherently. Related throughout to reading and writing skills. Prerequisite: CMS 03 and permission of department.

CMS 09 Speech Clinic
Clinical program of speech therapy for organic and functional disorders such as severe voice, lisp, stuttering, and related articulatory difficulties. Students are assigned on the basis of Speech Placement Screening, diagnostic interview, or referral by department faculty. Required course for students where evaluation indicates need.

CMS 10 Phonetics (Formerly CMS 13)
Study of contemporary American English through phonetic analysis; practice in broad and narrow transcription, using the International Phonetic Alphabet, and exercises designed to develop auditory and kinesthetic sensitivity to phonetic distinctions.

CMS 11 Fundamentals of Interpersonal Communication
Dynamics of communication through examination of theory and discussion. Designed to provide understanding of communicative processes; opportunities for each student to experiment with his personal communicative activity. Prerequisite: ENG 02 or RDL 02 if required.

CMS 12 Voice and Diction: Communication in the Professional Environment (formerly CMS 21)
Study of voice and articulatory factors in effective speech communication, with special attention to individual needs through speech diagnosis, development of auditory discrimination, and exercises geared to individual and group needs. Designed for the student who needs more effective speech communication for the business and professional environment.

CMS 20 Public Speaking and Critical Listening (Formerly CMS 15)
Principles and practice of contemporary forms of public speech communication: informative, persuasive, inspirational, and entertaining; principles and practice of critical listening; analysis and evaluation of public communication. Corequisite: ENG 02 or RDL 02 if required.

CMS 22 Small Group Discussion
(Formerly CMS 16)
Principles and practice of small group discussion; investigation and analysis of problems in selecting group situations. Corequisite: ENG 02 or RDL 02 if required.

CMS 23 Communication Strategies
(Formerly CMS 61)

CMS 24 Parliamentary Procedure and Practice (Formerly CMS 35)
Not offered 1984-86.

CMS 25 Argumentation and Debate
Principles and practices of argumentation and debate, including the nature of persuasion, stating and analyzing propositions, identifying issues, collecting materials, making briefs, preparing the case, evidence and reasoning, refutation, style and delivery. Individual conferences. Prerequisite: CMS 11.

CMS 26 Oral Interpretation of Literature
(Formerly CMS 31)
Principles and practice of oral interpretation of literature, including oral presentation of appropriate selections of prose and poetry. Final oral project and critical paper are required. Corequisite: ENG 02 or RDL 02 if required.

CMS 28 Afro-American and Puerto Rican Rhetoric (Formerly CMS 71)
Not offered 1984-86.

CMS 60 Introduction to Mass Communication
Survey of mass communication media, including radio, television, film, and print (press); the development, characteristics and uses of the media and their effects on the individual and his environment. Prerequisite: CMS 11.
CMS 61 Introduction to Film (Formerly CMF 91) 3 rec 3 cr
Study of documentary and narrative motion pictures and their role in the world. Development of the film as an art form, as entertainment, as a business, and as a major source of influence upon and reflection of society. Corequisite: ENG 02 or RDL 02 if required.

CMS 62 Beginning Film Production (Formerly CMF 92) 3 rec 3 cr
Not offered 1984-86.

CMS 66 Beginning Television Production (Formerly CMV 96) 3 rec 3 cr
Study of social, educational and economic impact of television. Relation between the urban community and the medium examined. Is the medium the message? What are the cultural implications? What can be done to improve the medium? Technological, artistic and communicative aspects explored for their educational potential. Permission of instructor required. Corequisite: ENG 02 or RDL 02 if required.

CMS 67 Advanced Television Production (Formerly CMV 97) 3 rec 3 cr
Not Offered 1984-86.

CMS 70 Introduction to Theatre (Formerly CMT 53) 3 rec 3 cr
Study of the movements and theories of world theatre, including an examination of relevant theatrical structures and equipment. European and American theatre; Oriental theatre and related dance, including Japanese, Chinese, Indian, Balinese; African theatre. Emphasis on theatrical elements rather than the dramatic literature. Corequisite: ENG 02 or RDL 02 if required.

CMS 71 Stagecraft I (Formerly CMT 41) 3 rec 3 cr
Elements of acting, directing, stage managing, lighting sets, costume and make-up; emphasis on directing and stage managing. Opportunity for evaluated practical experience. Corequisite: ENG 02 or RDL 02 if required.

CMS 72 Stagecraft II (Formerly CMT 42) 3 rec 3 cr
Theatre arts; individual projects chosen by the student from costuming, make-up, lighting, scenic design and construction, rehearsal techniques, role of the director and/or producer, and stage manager are the major areas of study. Goal is to give students the technical skill to mount an actual production. Field work. Prerequisite: CMS 71; Corequisite: ENG 02 or RDL 02 if required.

CMS 73 Principles of Directing (Formerly CMT 43) 3 rec 3 cr
Not offered 1984-86.

CMS 75 Acting I (Formerly CMT 51) 3 rec 3 cr
Introduction to basic acting problems of analyzing and creating a character through improvisation, pantomime, theatre games, scene practice and analysis of scenes, culminating in presentation of a one-act play. Outside class assignments. Field work. Corequisite: ENG 02 or RDL 02 if required.

CMS 76 Acting II (Formerly CMT 52) 3 rec 3 cr
Advanced course for those who have successfully completed CMT 51. Rehearsal and study performance techniques. Problems of auditioning, research work on theories of acting, interpretation of absurdist and avant-garde theatre culminating in presentation of a full-length play. Field work. Prerequisite: CMS 75; Corequisite: ENG 02 or RDL 02 if required.

CMS 81 Seminar and Independent Study in Dramatic Arts with Field Projects 1 rec 3 cr
Elective for students who wish to work independently in some area of dramatic art. Weekly seminar in addition to independent work on an acceptable creative project, or with the Bronx Council on the Arts in a community center supervising and instructing in drama. Prerequisite: Permission of instructor.

COOPERATIVE EDUCATION

Department of Student Development

CWE 31 Cooperative Work Experience I 0 rec 2 cr
CWE 32 Cooperative Work Experience II 0 rec 2 cr
Students are assigned to a job with cooperating employer for part-time work (minimum of 15 hours a week for 13 weeks a semester) under the supervision of the program coordinator. Students are required to attend periodic job reviews with the program coordinator, maintain daily log of job activities, prepare semester report analyzing the problems and procedures of assigned organization. Prerequisite: Fully matriculated students carrying minimum of 12 credits, who have satisfactorily completed 30 credits in chosen curriculum pattern for CWE 31; 42 credits for CWE 32.

CWE 33 Cooperative Work Experience 1 rec 4 cr
Under supervision of program director, students are placed in full-time internships (jobs) with cooperating employers for 26 weeks. An individualized program of job preparation and counseling precede placements. Students attend 15 hours of evening seminars every other week during the internship period. These meetings will be devoted to problem-sharing, problem-solving and integrating classroom theory with practical job applications. Prerequisite: Fully matriculated students who have completed 30 degree credits with an overall G.P.A. of 2.00 and departmental approval (45 credits for Paralegal Studies).
DATA PROCESSING

Department of Business

DAT 30 Introduction to Systems 3 lect 3 cr
Introduction to data processing equipment and operation: ranges from unit-record equipment to electronic computers. Introduction to basic elements of electronic data processing, input, processing, storage, and output; flow-charting, numbering systems, and programming languages. Applications include business, economics, science and social problems. Prerequisites: Students are expected to complete RDL 02 and ENG 01, prior to enrolling in DAT 30. Corequisite: MTH 02.

DAT 32 Computer Programming 3 lect 3 cr
Concepts and Introduction to R.P.G. Programming
Designed to introduce concepts and techniques involved in analyzing and designing business data processing systems. Topics cover file organization and control, documentation, forms design, system implementation and maintenance. Practical applications to business situations utilize Report Program Generator (R.P.G.) as its programming language. Included are R.P.G. concepts and techniques used in designing and writing programs for card, printer, magnetic tape and magnetic disc application. Students develop understanding of how to write R.P.G. programs for any computer on which it is available. Prerequisite: DAT 30.

DAT 40 COBOL Programming 3 lect 2 lab 4 cr
Introduction to COBOL programming utilizing the IBM/360. Problems are assigned and students are required to flowchart, code, debug, test, and document their solutions. Applications in accounting, inventory control, retailing, and other record-keeping operations. Prerequisite: DAT 30 or permission of chairman.

DAT 41 Assembly Language Programming 3 lect 2 lab 4 cr
Techniques of writing computer programs in Basic Assembly Language, a symbolic language. This includes data representation, operation codes, direct and indirect addressing, development of data files and use of macro instructions. Students are assigned several programs to demonstrate their programming ability. Prerequisite: DAT 40 or PHY 61, or permission of chairman.

DAT 43 Advanced COBOL Programming 3 lect 2 lab 4 cr
Designed to present concepts of magnetic tape and direct access processing, and programming methods used for these devices. ANSI COBOL and programming techniques taught will be usable on almost all computers. Topics cover data definitions, data usage in mixed modes, data conversion, decimal point alignment sign control and subscripting, concepts of magnetic tape processing, sequential life updating. DASD sequential file processing, DASD indexed sequential file processing, COBOL subroutined, program overlays and segmentation. Use of Report Writer feature. Prerequisite: DAT 40.

ECONOMICS

Department of Social Sciences

ECO 11 Microeconomics 3 rec 3 cr
Study and analysis of economic principles and policies; theory of pricing and distribution under various market conditions. Government intervention in the market and policy problems. Corequisite: ENC 02 or RDL 02 if required.

ECO 12 Macroeconomics 3 rec 3 cr
Study and analysis of factors underlying economic growth and determination of the aggregate levels of employment, prices and income. Counter-cyclical measures and international trade relations are examined. Corequisite: ENC 02 or RDL 02 if required.

ECO 15 History of Economic Thought 3 rec 3 cr
Study of evolution of economic ideas; basic problems of economics: factor allocation, distribution and growth. Major schools of economic thought (primitive, feudal, classical, marginalist, Keynesian, “Neo-classical synthesis,” modern socialism) are emphasized. Prerequisite: ECO 11 or 12, or permission of the instructor.

ECO 31 Economics of Labor 3 rec 3 cr
Study of all labor resources; their utilization, allocation, and compensation; unionism, government regulation, and other factors affecting the labor resource. No prerequisite.

ECO 71 Economics of Developing Areas 3 rec 3 cr
Basic principles and current problems of economic growth and development. Within a broad framework of economic modernization during the last two centuries, focus is on the less-developed nations, “third-world” and “fourth-world,” and their present drive for a “new international economic order” in their relations with industrial powers and the United Nations. Prerequisite: ECO 11 or ECO 12 or HIS 10 or SOC 11.

EDUCATION

Department of Special Educational Services

EDU 10 Child Study 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Classroom management; discipline and control; writing a case history and a life space description of a child; analyzing and interpreting child study data; planning educational activities based on child study data; and knowledge of useful references. Minimum of 15 hours of practicum experience required. Required for all Education majors. Prerequisite: RDL 02 and ENG 02 or ESL 11 or equivalent. Prerequisite or corequisite: PSY 41.
EDU 12 Contemporary Urban Education 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Structure of American public education; historical overview of education of minorities; profile of the urban public school student; problems and issues in urban education; urban education programs, factors that affect teaching-learning in an urban setting; and knowledge of references. An elective course. Prerequisite: RDL 02 and ENG 02 or ESL 11 or equivalent.

EDU 15 Reading and Other Language Arts 3 rec 3 cr for the Early Childhood and Elementary Years
A competency-based course enabling students to acquire teaching abilities. Various approaches to teaching reading and other language arts, e.g., handwriting, spelling, listening, composition, and literature. Minimum of 20 hours of tutoring and practicum experience required. Provisions made to meet the needs of students who take this course as an alternative to EDU 40. Required upon advisement. Prerequisite: EDU 10; prerequisite or corequisite: ENG 13.

EDU 16 Teaching Reading in the Primary Grades (N-3) 3 rec 3 cr
A competency-based course enabling students to acquire knowledge, skills, teaching abilities, and/or insights in relations to: word recognition; comprehension skills; reading readiness skills; various approaches to teaching reading; phonemic and morphemic elements; phonic and structural analysis skills; reading achievement tests; reading interests of children; and knowledge of useful references. Minimum of 20 hours of tutoring and practicum experience required. Required, depending on curriculum pattern and advisement. Prerequisite: EDU 10.

EDU 17 Teaching Reading in the Middle Grades (4-6) 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Word recognition skills; comprehension skills; various approaches to teaching reading; phonemic and morphemic elements; phonic and structural analysis skills; reading achievement tests; reading interests of children; oral and silent reading; reading in the content areas; and knowledge of useful references. Minimum of 20 hours of tutoring and practicum experience required. Required, depending on curriculum pattern and advisement. Prerequisite: EDU 10.

EDU 18 Methods and Materials for Teaching Language Arts in a Bilingual Program 3 rec 3 cr
Competency-based course enabling students to acquire the knowledge and skills to teach in a bilingual program. Competencies: Understanding how children acquire and develop language; knowledge of psychological principles underlying current methods in second language teaching; knowledge of language arts literature in the field of bilingual education; knowledge of second language teaching materials and techniques; ability to teach oral and other language development skills; and ability to apply observation and analysis skills to second language learning situations. Prerequisites: RDL 02, ENG 13, EDU 16 or EDU 17; corequisite: literacy at the 13 level, e.g., SPN 13, FRN 13, ITL 13, or permission from department.

EDU 24 Child Care Seminar I 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Interaction among parents, staff, and children; historical and philosophical background; planning an educational program; physical environment of the classroom; instructional materials and activities; handling transition time; child and parent adjustment to a new school situation; handling negative child behavior. Required for Child Care students. Prerequisite: EDU 10.

EDU 25 Child Care Seminar II 3 rec 3 cr
A competency-based course. Continuation of EDU 24. Enables students to acquire teaching abilities. Play activities; devising activities to meet children's growth needs; involving parents in the school program; planning and conducting parent conferences and meetings; examining own feelings as they affect relationship with children and school personnel; working as part of a group; evaluation of own performance and of class performance; child care services and resources; and knowledge of useful references. Required for Child Care students. Prerequisite: EDU 24.

EDU 26 Human Relations in Urban Schools 3 rec 3 cr
A competency-based course. Norms, values, and roles; observation of human behavior; principles that govern human change; activities that aid social and emotional growth; effective principles and practices of communication through written messages, teacher-parent conferences, telephone calls, and group presentations; handling conflict and criticism; codes of ethics; and knowledge of useful references. Required of all Education Majors. Prerequisites: RDL 02 and ENG 02 or ESL 11 or equivalent.

EDU 30 Nature and Needs of the Handicapped 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Legal definitions of categories of the handicapped; representative programs and approaches in teaching the handicapped; medical, psychological, and sociological factors associated with being handicapped and their educational implications; services and resources for the educational treatment of the handicapped; current issues; problems, and research regarding the handicapped. An elective course. Prerequisite: EDU 10.
EDU 31 Introduction to Learning Problems 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Diagnostic-prescriptive teaching; learning modalities; organization and management of the learning environment; materials and procedures; evaluation of learning activities; and knowledge of useful references. Minimum of 20 hours of tutoring required. An elective course. Prerequisite: EDU 10.

EDU 40 Field Work Seminar 3 rec 3 cr
A competency-based field experience course. Individual and small-group teaching experiences under professional supervision in an accredited school or agency. Periodic meetings with BCC faculty supervisor. Students must demonstrate competencies as they pertain to general knowledge expected of those who completed the Education sequence: planning, execution, and evaluation of own teaching behaviors and skill; meeting individual needs of children; goals of education; curriculum views of John Dewey; national and local curricula; and teaching-learning principles. Required upon advisement. Prerequisite: Completion of all other required courses in the Education Specialization sequence.

EDU 50 Survey of Creative Experiences for the Early Childhood and Elementary Years 3 rec 3 cr
A competency-based course enabling students to acquire teaching abilities. Objectives: materials and activities; lesson planning; teaching a song; use of creative experiences in teaching the content subjects; organization of a systematic classroom environment; cultural resources for children’s visits; and knowledge of useful references. Required, depending on curriculum pattern. Prerequisite: EDU 10.

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**ELECTRONIC AND COMPUTER TECHNOLOGY**

Department of Engineering Technoloogies

ELC 10 Introduction to Electrical Technology 1 lect 2 lab 2 cr
A qualitative introduction to electrical potential, current, and resistance; basic electric circuit configurations; identification of electric and electronic parts; fabrication techniques used by engineering technicians in industry. Laboratory includes construction of selected electronic projects and testing of these units under supervision. Corequisite: MTH 02 or 03.

ELC 11 DC Circuit Analysis 3 rec 3 lab 4 cr
Relationship between voltage, current, resistance, power and energy in linear DC circuit elements. Concepts are extended to networks containing several branches and generators. Includes Thevenin’s theorem, introduction to capacitors, inductors, magnetic circuits. Use of basic test instruments. Corequisite: ELC 10, MTH 06.

ELC 12 Introduction to Digital Computers 1 rec 2 lab 2 cr and BASIC Programming
Brief introduction to the concept of electronic data processing, computer systems, and function of parts of typical computers. Use of the BASIC programming language. Scientific notation, significant figures and general formats for solving simple engineering technology problems. Laboratory consists of programming, debugging and operation of minicomputers that respond to commands in BASIC to solve simple problems. Corequisite: MTH 02 or 03.

ELC 20 Industrial Electricity and Electronics 1 rec 4 lab 3 cr
Study of electronics, simple electronic circuits, and electric machinery and distribution systems. Basic principles are applied to typical systems that might be encountered by mechanical engineering technicians: feedback control systems and automated machinery. Laboratory provides experience with electrical schematic drawings, equipment, measuring instruments, and electromechanical transducers and actuators. (For Mechanical Technology students only.) Prerequisite: ELC 10; corequisite: MTH 13.

ELC 21 AC Circuit Analysis 3 rec 3 lab 4 cr
Voltage, current, impedance, power and energy in linear AC circuit elements and networks. Introduction to networks, series resonance, and parallel resonance. Prerequisite: ELC 11; corequisite: MTH 13 and RDL 02 or ENG 02 if required.

ELC 25 Basic Electronics 3 rec 3 lab 4 cr
Semiconductor and vacuum tubes as physical devices and circuit elements; rectification, filtering and amplification. Emphasis on transistors. Laboratory: experiments include diode and triode characteristics (vacuum tube and semiconductors), power supplies and amplification. Prerequisite: ELC 11; corequisites: ELC 21, MTH 13.

ELC 35 Communication Electronics 3 rec 3 lab 4 cr
Continuation of ELC 25. Multistage amplifiers, power amplifiers including class of operation, frequency range and response, coupling methods and feedback conditions. Modulation, detection and heterodyning, with applications in radio broadcasting and high fidelity techniques. Experiments include frequency response, feedback, amplifiers, oscillators. Prerequisites: ELC 25, PHY 21; corequisite: MTH 15.

ELC 38 Electric Product Design and Measurements 4 lab 2 cr
ENGLISH

Department of English

All courses offered by the English Department include composition. In courses providing a fourth conf/rec hour, the fourth hour will be utilized by the instructor for instructional purposes.

The CUNY Writing Skills Assessment Test is required before registering for any English course.

ENG 01 Writing Laboratory I 4 rec 0 cr
Review and practice of basic principles of grammar and usage, with emphasis upon sentence structure and various mechanical aspects of writing. Concentrates on correction of severe writing problems; sentence fragments, sentence misconception, lack of subject-verb agreement, faulty use of pronouns, misspellings and inaccuracy in punctuation. For students with a combined score of 4 or less on CUNY Writing Skills Assessment Test.

ENG 02 Writing Laboratory II 4 rec 0 cr
Extensive writing practice with emphasis upon paragraph development and unity. Students learn to develop paragraphs through argument, narration, particular and details, comparison-contrast, process, cause and effect, etc. Helps the student to write effective paragraphs in preparation for ENG 13. For students with a combined score of 6 on the CUNY Writing Skills Assessment Test.

ENG 13 Fundamentals of 3 rec
Written Composition 1 conf/rec 3 cr
Fundamental principles of organization and grammar; practice in expository writing; selected readings; research paper techniques. Prerequisite: ENG 01 and/or ENG 02 if required, or a combined score of 8 or more on CUNY Writing Skills Assessment Test. ENG 13 is a prerequisite for all subsequent English courses.

ENG 14 Written Composition 3 rec
and Prose Fiction 1 conf/rec 3 cr
Continued emphasis on the writing of clear, effective expository prose based on readings in short stories and novels. Research paper required. Prerequisite: ENG 13.

ENG 15 Written Composition 3 rec
and Drama 1 conf/rec 3 cr
Continued emphasis on the writing of clear, effective expository prose based on readings in world drama. Research paper required. Prerequisite: ENG 13.

ENG 16 Written Composition 3 rec
and Poetry 1 conf/rec 3 cr
Continued emphasis on the writing of clear, effective expository prose based on readings in poetry. Research paper required. Prerequisite: ENG 13.

ENG 18 Advanced Composition 3 rec 3 cr
To improve skills in expository writing through writing articles, formal and informal essays, reviews, scholarly reports, according to individual interests and needs. Problems in rhetoric, semantics, style, and developing one’s own style. Prerequisite: ENG 13.
ENGLISH AS A SECOND LANGUAGE

Department of Special Educational Services

ESL 01 English as a Second Language—Basic 8 rec 0 cr
For students whose native language is not English. Intensive program for beginning level students for development of English language skills. Builds oral and written control of basic grammatical structures, and listening and reading comprehension. Registration only by placement on the 01 level.

ESL 02 English as a Second Language—Intermediate 6 rec 0 cr
For students whose native language is not English. Individualized program for intermediate level students for development of English oral and writing skills. Builds oral control of grammatical structures and conversation, listening comprehension, and the ability to write grammatically acceptable, well-constructed paragraphs. Prerequisite: ESL 01 or placement on the 02 level.

ESL 11 English as a Second Language 6 rec 3 cr
For students whose native language is not English. Builds control of advanced grammatical structures and develops ability to write various forms of expository compositions. Prerequisite: ESL 02 or placement on the 11 level.

FINANCE

Department of Business

FIN 31 Principles of Finance 3 rec 3 cr
American financial system; public and private financial institutions; financial problems of industrial and commercial firms. Procedures of business, foreign trade, and consumer financing; governmental policies and their effects on economic activities. Corequisite: ENG 02 or RDL 02 if required.

FIN 33 Grant-Writing and Fundraising 3 rec 3 cr
Introduction to the various states of grantsmanship, from initial research to submission of final proposal. How to prepare a budget; how much money to request; what sources are available from foundations, corporations or government; and a variety of fundraising techniques. Prerequisite: ENG 13.
FLORISTRY

Department of Biology

Enrollment in these courses is limited to students in the Ornamental Horticulture curricula with special permission of the department.

FLO 11 Basic Centerpieces and Arrangements 16 hr/sem 1 cr
Principles of design, color and harmony, mechanics of conditioning flowers, techniques of creating basic centerpieces and arrangements for the home, places of worship, parties and special occasions.

FLO 12 Holiday Arrangements, Decorations and Novelties 16 hr/sem 1 cr
Designs emphasizing seasonal themes and stressing the newest concepts and materials on the market; work with candles and other accessories. Creativity in design, mechanics and techniques.

FLO 13 Funeral Arrangements 16 hr/sem 1 cr
Arrangements such as altar pieces, blanket or casket sprays, casket pillows, easel spray, wreaths and hearts.

FLO 14 Practical House Plants 16 hr/sem 1 cr
Design for individuals whose primary interest is selling house plants. Topics include compatible plant groupings, suitable window and light exposures, maintenance, terrariums, dish gardens, hanging baskets and other decorative plantings.

FLO 15 Wedding Flowers 16 hr/sem 1 cr
Contemporary, colonial and period styling of bouquets, cascades, corsages, altar and pew arrangements, hoops, table centerpieces and decorative swags.

FLO 21 Ikebana for American Homes 16 hr/sem 1 cr
The art of Japanese flower arranging symbolism, styles and techniques. Emphasis on eight different types of Ikebana designs and ways they may be adapted by commercial florists for use in the home. Workshop course.

FLO 22 Period Styles of Flower Arranging 16 hr/sem 1 cr
Survey of period designs including New England Colonial, Williamsburg, French, Victorian, Japanese, Art Nouveau, Modern and Abstract; emphasis on color, forms and types of flowers appropriate for each setting. Workshop course.

FLO 41 Advanced Floral Design Seminars 35 hr/sem 2 cr
Seminars and lecture/demonstrations presented by outstanding designers and consultants in the field of commercial flower arranging and floriculture. Designed to update professionals on new techniques and designs.

FLO 42 The Festive Board 20 hr/sem 1 cr
Table centerpieces and buffet arrangements for festive dinners; classes organized around seasonal holidays. Workshop course.

FLO 61 Commercial Floristry Field Experience I 120 hr/sem 2 cr
Care, conditioning and cleaning flowers upon their arrival at the shop; greening up designs. Use of Mercury and other wire service equipment. General maintenance, attending clients, miscellaneous design work.

FLO 62 Commercial Floristry Field Experience II 240 hr/sem 4 cr
Greening up set pieces, learning pricing and marketing, picking and tubing flowers. Bow-making, use of equipment such as pick machines. Basic flower arrangements and preparation of wire-service orders. Prerequisite: FLO 61.

FLO 63 Commercial Floristry Field Experience III 240 hr/sem 4 cr
Taping, wiring, corsage, ribbon and bow work, cascades, boutonnieres. Working with customers, creating garden and party structures on the site, use of tools such as gluegun. Prerequisite: FLO 62.

FRENCH

Department of Modern Languages

FRN 11 Beginning French I 4 rec 4 cr
A conversation course that will enable the student to understand, read, write and speak simple everyday French. Audio laboratory practice.

FRN 12 Beginning French II 4 rec 4 cr
Continuation of FRN 11. Prerequisite: FRN 11 or placement test.

FRN 13 Intermediate French 4 rec 4 cr
Continuation of FRN 12. Prerequisite: FRN 12 or placement test.

FRN 21 Language and Civilization of France 4 rec 4 cr
Contemporary French culture and language. Color slides with accompanying tapes in French as well as reading material from modern literary masterpieces serve as basis for comprehension and conversation. Prerequisite: FRN 13 or placement test.

GARDENING

Department of Biology

Enrollment in these courses is limited to students in the Ornamental Horticulture curricula or with special permission of the department.

GAR 11 Horticultural Techniques I 18 hr/sem 1 cr
Workshop course in basic operations for landscape horticulture. Soil preparation and planting; pruning, staking, training; water and fertilization practices; plant protection. Selection of tools and equipment. Emphasis on techniques used in commercial horticulture.
GAR 12 Horticultural Techniques II 18 hr/sem 1 cr
Continuation of GAR 11, with emphasis on greenhouse growing techniques. Soils and other growth media, potting, irrigation, fertilization, control of pests and diseases. Use and care of greenhouse equipment. Prerequisite: GAR 11.

GAR 13 Pruning 12 hr/sem 1 cr
Workshop course on pruning ornamental trees, shrubs and vines. Training young stock; techniques for maintaining healthy plants; rejuvenation pruning. Selection use and care of pruning tools and equipment. Special pruning techniques: espalier, topiary, wall plants. Prerequisite: GAR 11.

GAR 21 Soil Science 12 hr/sem 1 cr
Soil formation, soil profiles, soil water, physical properties of soil, organic matter, acidity, liming, mulches, sterilization, irrigation and drainage, nutrients, sampling and testing. Prerequisite: CHM 15.

GAR 22 Soil Testing 8 hr/sem ½ cr
Continuation of GAR 21: Fertilizer recommendations; soil analysis; fertilization practices for greenhouses, nurseries, container-grown plants, home landscape materials; nutrient requirements of plants. Corequisite: GAR 21.

GAR 23 Fertilizers 8 hr/sem ½ cr
Fertilizer terminology; fertilizer programs for various crops; use of fertilizing equipment. Prerequisite: GAR 21.

GAR 31 Preparation for Pesticide Applicator Certification 30 hr/sem 2 cr
Safety practices; selection of pesticides; timing and scheduling of applications; environmental considerations; integrated pest management. Preparation for New York State Pesticide Applicator Certification examination, category 3 (Ornamentals and Turf). Prerequisites: BIO 11 and 12; CHM 15.

GAR 41 Plant Propagation I 12 hr/sem 1 cr
Theory and techniques of plant propagation. Seed and cutting propagation of both hardy and greenhouse plants. Structures, equipment and propagation materials; programs for both large and small scale propagation operations.

GAR 44 Commercial Greenhouse Management 12 hr/sem 1 cr

GAR 45 Nursery Management 12 hr/sem 1 cr
Principles of nursery management. Nursery site selection, arrangement and layout; growing nursery stock in the field and in containers; marketing.

GEO 10 Introduction to Human Geography 3 rec 3 cr
Introduces key geographical concepts both cultural and physical. Considers how such geographic factors as location, landforms, climate, soil, and natural resources have shaped cultures and civilizations, and the role played by people in gradually altering their environments through time. Such audiovisual materials as maps, photographs, slides, and films will be used extensively. Corequisite: RDL 01 or ENG 01 if required.

GEO 51 Turf and Ground Maintenance 12 hr/sem 1 cr
Professional management of ornamental plantings. Installation and maintenance of trees, shrubs, lawns and flower borders; pruning; pest control; winter protection; materials and equipment. Emphasis on efficient management of turf areas.

GEO 52 Urban Forestry 12 hr/sem 1 cr
Techniques and procedures of tree care. Pruning, common tree problems, spraying, cavity installations, lightning protection, transplanting, fertilization of trees under stress, and root problems.

GEO 61 Flower Gardening I 12 hr/sem 1 cr
Use of annuals, biennials, and bulbs to create an aesthetically pleasing garden. Emphasis on low-maintenance plantings.

GEO 62 Flower Gardening II 12 hr/sem 1 cr
Design and use of bulbs, perennials and annuals; color, composition, textures and design principles. Students design flower gardens to fit various exposures, sites and styles. Prerequisite: GAR 61.

GEO 63 Gardening with Annuals 12 hr/sem 1 cr
Annuals, frost-tender bulbs and tender perennials. Review of annuals commonly grown and those that are rarely cultivated; new horticultural varieties; planting and cultivation for different environmental situations.

GEO 64 Gardening with Bulbs 12 hr/sem 1 cr
Bulbs for forcing, bedding naturalizing and rock garden use. Botany of bulbs and related structures.

GEO 71 Vegetable Gardening 12 hr/sem 1 cr
Terrace, container and conventional gardening. French intensive technique; use of cloches.

GEO 81 Plants for Landscaping 16 hr/sem 1 cr
Use of plants in a successful landscape. Aspects of special landscape value such as size, texture, color, period of flower and fruit. Emphasis on trees, shrubs, ground-covers, annuals and perennials available for use in the metropolitan area.
GERMAN

Department of Modern Languages

GER 11  Beginning German I  4 rec 4 cr
Pronunciation; language structure; reading and translation of simple texts; dictation; conversation. Audio laboratory practice.

GER 12  Beginning German II  4 rec 4 cr
Continuation of GER 11 with emphasis on conversation. Prerequisite: GER 11 or placement test.

GER 13  Intermediate German  4 rec 4 cr
Advanced language structures: reading, translation and discussion of modern texts; composition; dictation. Emphasis on conversation. Prerequisite: GER 12 or placement test.

GER 21  Language and Civilization of Germany  4 rec 4 cr
Review of language structure; discussion; literary analysis, oral reports and composition based on a text treating historical development of the German people and its literary movements; simplified excerpts from works by 18th-century German authors. Prerequisite: GER 13 or placement test.

HEALTH

Department of Health and Physical Education

HLT 91  Critical Issues in Health  2 rec 2 cr
Intended to develop and encourage critical judgment in three vital areas of health: mental health, addictions and dependencies, human sexuality. Corequisite: ENG 02 or RDL 02 if required.

HLT 92  Self, Drugs and Alternate Highs*  3 rec 3 cr
Drug use and abuse; influence of environmental factors; exploration of alternate highs; physical activity, relaxation, yoga, martial arts, Tai Chi or dance. Students must become personally involved in alternative modes of stimulating a sense of well-being. Prerequisite: HLT 91.

HLT 93  Human Sexuality  3 rec 3 cr
Consideration of physical, sociological, and psychological aspects of human sexuality with emphasis on development of critical judgment in dealing with ethical controversies. Prerequisite: HLT 91.

HLT 94  Human Nutrition  3 rec 3 cr
Introduction to essentials of nutrition education and the relationship of food to the student’s personal goals and life experiences. Students as consumers find their choices and responsibilities emphasized by classroom experiments, self-examination and experiential learning. Weight control, changing food requirements in the life cycle, special diets, food labeling, additives, food economics in relationship to health are included. Prerequisite: HLT 91 and/or permission of instructor.

HLT 97  Field Work in Community  1 sem 5 hrs
Provides students with firsthand knowledge of the community, its health problems and the forces operating on them. It offers a unique opportunity to become involved in solving community problems. Prerequisite: HLT 91 and/or permission of instructor.

*Offered during Day Session, Spring Semester.

HISTORY

Department of History

HIS 10  History of the Modern World  3 rec 3 cr
Exploration of outstanding political, intellectual, philosophical, social and economic trends, movements and events from mid-19th century to the present. Analysis of forces that have shaped the modern world. Corequisite: RDL 02 or ENG 02 if required. HIS 10 is the prerequisite for all other history courses.

HIS 13  History of the Ancient World  3 rec 3 cr
Four major River Valley civilizations—Egypt, Mesopotamia, India, China; examination of the efflorescence and decline of Greek and Roman civilizations. Focus on significant achievements of each people, assessing the impact on their contemporary cultures as well as their legacy to ours. Readings from religious texts, poetry, drama, philosophy and architectural works. Prerequisite: HIS 10.

HIS 14  Europe in the Middle Ages  3 rec 3 cr
Effects of the major ideas, social and economic changes, as well as political concepts and their impacts upon the society of the West during the Middle Ages. Emphasis on interaction of these aspects within the cultural context of medieval Europe. Prerequisite: HIS 10.

HIS 15  Intellectual and Social History of Modern Europe*  3 rec 3 cr
Not offered 1984-86.

HIS 21  American History (1492-1865)  3 rec 3 cr
American history from colonial times through the Civil War; special attention to institutions and politics. Recent historical interpretations and examination of historical origins of current problems. Prerequisite: HIS 10.

HIS 22  American History II (1865 to present)  3 rec 3 cr
American history since the Civil War, with special attention to intellectual developments; reconstruction; political developments during the Gilded Age and Progressive Era; American involvement in both World Wars and resolution of the clash between isolation and world participation. Prerequisite: HIS 10.

*Offering during Day Session, Spring Semester.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HIS 23</td>
<td>Social and Intellectual History of Modern America*</td>
<td>3 rec  3 cr</td>
<td>HIS 10, Not offered 1984-86.</td>
</tr>
<tr>
<td>HIS 24</td>
<td>The History of American Foreign Relations*</td>
<td>3 rec  3 cr</td>
<td>HIS 10, Not offered 1984-86.</td>
</tr>
<tr>
<td>HIS 25</td>
<td>The Third World and the West: History of Modern Imperialism and Colonialism</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
</tr>
<tr>
<td>HIS 27</td>
<td>Modern History of the Far East*</td>
<td>3 rec  3 cr</td>
<td>HIS 10, Not offered 1984-86.</td>
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<tr>
<td>HIS 28</td>
<td>Women: The Historical Perspective</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
</tr>
<tr>
<td>HIS 31</td>
<td>Modern Latin American History*</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
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<tr>
<td>HIS 34</td>
<td>History of Science and Technology*</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
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<tr>
<td>HIS 35</td>
<td>History of Africa</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
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<tr>
<td>HIS 36</td>
<td>The History of Modern Russia</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
</tr>
<tr>
<td>HIS 37</td>
<td>Afro-American History</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
</tr>
<tr>
<td>HIS 38</td>
<td>Afro-American Intellectual History*</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
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<tr>
<td>HIS 39</td>
<td>History of Puerto Rico and the Caribbean</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
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<tr>
<td>HIS 40</td>
<td>Modern History of the Jewish People*</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
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<tr>
<td>HIS 50</td>
<td>American Urban History</td>
<td>3 rec  3 cr</td>
<td>HIS 10</td>
</tr>
<tr>
<td>HIS 51</td>
<td>History of the City of New York*</td>
<td>3 rec  3 cr</td>
<td>HIS 10, Not offered 1984-86.</td>
</tr>
</tbody>
</table>

**Horticulture**

Department of Biology

Enrollment in these courses is limited to students in the Ornamental Horticulture curricula or with special permission of the department.

<table>
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<tr>
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<tbody>
<tr>
<td>HRT 13</td>
<td>Turf and Ground Management</td>
<td>120 hr/sem 2 cr</td>
<td>HIS 10, Basic techniques of landscape maintenance, including tree and shrub planting and care, pruning, proper use of soil amendments and fertilizers. Pest control materials and equipment; mechanical and chemical methods of weed control. Maintenance of turf grass in landscape areas. Equipment use and care.</td>
</tr>
<tr>
<td>HRT 14</td>
<td>Arboriculture I</td>
<td>120 hr/sem 2 cr</td>
<td>HIS 10, Tree planting and maintenance. Tools and equipment; Climbing; safety precautions. Watering: fertilizer materials and application equipment; spraying. Pest and environmental problems; spray application equipment; tree repair.</td>
</tr>
<tr>
<td>HRT 15</td>
<td>Perennials and Flower Borders I</td>
<td>120 hr/sem 2 cr</td>
<td>HIS 10, Design, installation, planting and cultivation of flower borders. Care of annuals, perennials, bulbs, herbs, roses. Design of mixed borders and seasonal displays.</td>
</tr>
<tr>
<td>HRT 16</td>
<td>Greenhouse Operations I</td>
<td>120 hr/sem 2 cr</td>
<td>HIS 10, Introduction to greenhouse operation and management, including watering techniques, fertilizer application, preparation of growth media, pest and disease control. Cultural requirements, maintenance and propagation of flowering and foliage greenhouse plants.</td>
</tr>
<tr>
<td>HRT 22</td>
<td>Nursery Operations I</td>
<td>60 hr/sem 1 cr</td>
<td>HIS 10, Introduction to nursery plant production, including soil preparation, soil amendments, and transplanting. Fertilization treatments, planting techniques. Digging bare root and B&amp;B Stock. Top pruning, root pruning, training, staking. Pest and weed control.</td>
</tr>
</tbody>
</table>
HIT 46 Orchids 30 hr/sem 1 cr
Management II

HRT 47 Cacti and Succulents 30 hr/sem 1 cr
Care of cacti and succulents. Identification, propagation and special cultural requirements. By permission only.

HRT 34 Arboriculture II 60 hr/sem 1 cr

HRT 35 Perennials and Flower Borders II 60 hr/sem 1 cr

HRT 36 Greenhouse Operations II 60 hr/sem 1 cr

HRT 43 Rose Gardening 30 hr/sem 1/2 cr
Care and cultivation of roses—hybrid teas, shrub roses, climbers. Management of plants for landscape use and for exhibition bloom. By permission only.

HRT 44 Rock Gardening 30 hr/sem 1/2 cr
Design and care of rock gardens. Special cultural requirements of alpines and other rock-loving plants. By permission only.

HRT 45 Native Plant Gardening 30 hr/sem 1/2 cr
Care and cultivation of plants of the northeastern United States. Emphasis on design and planting in accordance with natural growth habits. By permission only.

HRT 46 Orchids 30 hr/sem 1/2 cr
Care of orchids, with emphasis on controlling greenhouse environment for optimum plant health and maximum bloom. By permission only.

HUMAN SERVICES

Department of Social Sciences

HSC 91 Field Work and Seminar in Human Services I 14 hrs field work 3 cr

HSC 92 Field Work and Seminar in Human Services II 14 hrs field work 3 cr
Supervised field work at a community social/health agency to provide practical human service skill development in the diagnosis, treatment and evaluation of individual, family, group and institutional problems. Weekly seminars to assure that skills and values are being appropriately integrated. Group discussion and analysis of individual field work experience. Prerequisite for HSC 91: PSY 11, SOC 11, SOC 35 and permission of department; for HSC 92: HSC 91 and permission of department.

INDEPENDENT STUDIES

Office of Academic Affairs

IND 21 Independent Study 1-3 cr
in a Specific Discipline
For students who wish to pursue a problem of special interest in a specific discipline. Students will devise projects that transcend traditional departmental offerings. Activities to be pursued and outside involvements, if any, are to be arranged in cooperation with the coordinator. Written reports or other evaluative instruments will be required of the student. This course is intended for elective credit only. A maximum number of 6 credits may be earned in either Independent or Interdisciplinary Study or a combination of both. Prerequisites: ENG 13, the successful completion of 30 college credits with a general cumulative index of 2.0, and 3.0 within the discipline and permission of the department chairperson. Granting of credit for any independent study and/or interdisciplinary study shall require the approval of the chairperson of the appropriate academic department(s).

INT 11 Interdisciplinary Independent Study 1-3 cr
Designed for students who wish to participate in an interdisciplinary project of their own planning. Supervised projects and studies combine subject areas. Students will arrange their own activities and/or agency involvements in cooperation with the course coordinator. Seminars and individual conferences included as appropriate. Students are allowed a maximum of 6 credits in either Independent or Interdisciplinary Study or a combination of both throughout their stay at BCC (30 hours of work = 1 credit). This course is for elective credits only. Prerequisites: ENG 13, the successful completion of 30 college credits with cumulative index of 2.0, and permission of the departmental chairperson. Granting of credit for any independent study and/or interdisciplinary study shall require the approval of the chairperson of the appropriate academic department(s).
INTOERI0R LANDSCAPING

Department of Biology

Enrollment in these courses is limited to students in the Ornamental Horticulture curricula or with special permission of the department.

INL 11 Introduction to Interior Landscaping 12 hr/sem 1 cr Use of plants in commercial and residential interiors, history of the interior including landscaping field, building design prerequisites for plants, environmental and cultural requirements, selection of plant varieties, planters, acclimation, installation, service techniques and the business aspects of interior landscaping. Exploration of the options open to the interior landscaper-design, sales, installations or service. Prerequisite: INL II.

INL 21 Commercial Plantscape Design 15 hr/sem 1 cr Fundamentals of designing interior landscapes for restaurants, offices, shopping malls and buildings. Topics include fitting plant materials to the decor, reading architects' plans, working with designers, budgeting, choosing materials, installing a project and maintaining the planting. Assignments and projects will be required. Prerequisite: INL 11.

INL 22 Decorating with Plants Indoors 12 hr/sem 1 cr Residential and small commercial interior plantscaping projects. Topics include principles of design, uses of plants as design elements, recent trends in the use of tropical foliage plants and potted flowers, client presentations, budgeting, and selection of plants and planters. Design project is required.

INL 31 Interior Plantscape Maintenance 8 hr/sem ½ cr Mechanics of maintenance contracting for interior planting. Types of maintenance contracts, including preparation and renewal; costs of replacement of plants and of labor; dealing with clients. Maintenance techniques: equipment, methods of plant care and replacement of plants. Corequisite: INL II.

INL 32 Plant Purchasing, 8 hr/sem ½ cr Acclimzation and Installation Principles involved in skilled plant purchasing and handling; how to select supplies, judge quality and transport plant materials. Special emphasis on installation practices and acclimatizations. Corequisite: INL 11.

INL 33 Installations of Interior Plantings 6 hr/sem ½ cr Installation of large interior landscapes in malls, building lobbies, or major office spaces. Site evaluation, purchasing, acclimatizations, and arrangements for shipping. Lighting requirements, soils, drainage materials and mulches for large installations; methods of installation, including actual mechanical techniques; coordinating the job with other building contractors. Prerequisite: INL 11.

INL 34 Bidding and Plant Specifications 6 hr/sem ½ cr for Interior Landscapes Overview of obtaining landscape jobs through either a bid or a sale process, with emphasis on the competitive bidding process. Importance of detailed specifications of materials and assembly of plants. Plant availability, industry standards for indoor plant specifications and acclimatization. Prerequisite: INL 11.

INL 35 Consultations 12 hr/sem 1 cr Business of advising commercial and residential clients on use of plants indoors. Topics include: selection of plants for specific sites, fitting plants into the interior design, determining problems with existing plants. Business aspects of consulting. Prerequisite: INL 11.

INL 51 Lighting for Interior Gardens 8 hr/sem ½ cr Types of indoor gardens in homes and commercial areas and methods of providing light needed by these plants. Information on plant selection and light requirements. Natural and artificial light sources; hardware for providing light requirements.

INL 61 Field Experience I 180 hr/sem 3 cr Introduction to full service, interior landscaping operations. Experience with foliage and flowering plant materials; use of planters and other accessories. Proper receiving techniques, acclimatization and in-facility plant care; dealing with wholesale nursery supplier and preparation of orders.

INL 62 Field Experience II 210 hr/sem 3½ cr Horticultural and aesthetic procedures for maintaining interior planting on actual accounts. Complete cultural requirements of all commonly used foliage and flowering plants. Cosmetic techniques of pruning, trimming, dusting, misting. Identification, prevention and treatment measures for insect and disease problems. Methods of plant care, record keeping, plant replacement. Business aspects of customer relations and maintenance contract requirements. Prerequisite: INL 61.

INL 63 Field Experience III 210 hr/sem 3½ cr Selection of plant materials for plant quality and environmental considerations. Order preparation and shipping. Design, execution and interpretation of seasonal flowering displays and specimen foliage installations; replacements on maintenance plantings. Prerequisite: INL 62.
ITALIAN

Department of Modern Languages

ITL 11 Beginning Italian I 4 rec 4 cr
Pronunciation; language structure; conversation; reading of simple texts; dictation. Audio laboratory practice.

ITL 12 Beginning Italian II 4 rec 4 cr
Continuation of ITL 11. Language structure; conversation; reading of elementary literary texts; dictation. Prerequisite: ITL 11 or placement test.

ITL 13 Intermediate Italian 4 rec 4 cr
Advanced language structures; conversation; reading; translation and discussion of modern texts; composition. Prerequisite: ITL 12 or placement test.

ITL 15 Beginning Italian Conversation 4 rec 4 cr
Intensive conversation course emphasizing practical and relevant everyday situations. Fundamental language structures are used as a basis for drilling in oral use and understanding of the language. Audio laboratory practice.

ITL 21 Language and Civilization of Italy 4 rec 4 cr
Review of language structures; conversation; oral reports; composition and oral analysis of literary texts in Italian. Prerequisite: ITL 13 or placement test.

LANGUAGE

Department of Modern Languages

LAN 11 French, German and Italian Diction 2 rec 2 cr
Not offered 1984-86.

LAN 15 Comparative Grammar for Native Spanish Speakers 4 rec 3 cr*
An introductory program designed for beginning ESL students in basic similarities and differences between Spanish and English. The purpose of the course is to strengthen the student's knowledge of Spanish as an aid in learning English. Prerequisite: Registration only by department placement.

*Landing approval.

LAW

Department of Business

LAW 17 Introduction to Law Office Management 1 rec 1 cr
Survey of principal areas of law office management, docket control, calendar monitoring, bookkeeping/accounting systems for timekeeping, functions of a law library, filing, office equipment and physical facilities. Corequisite: ENG 02 or RDL 02 if required.

LAW 18 Computers and the Law 1 rec 1 cr
A practical approach to computers in the law office and in the law. Its objectives are to give the paralegal an understanding of computers, operating systems and programming; basic use of computers in the modern law office; overview of other computer applications for lawyers and paralegals; survey of developments in computer law, such as patent law and consumer protection. Students learn to evaluate hardware and software tailored for law office applications. Corequisite: RDL 02 or ENG 02 if required.
LAW 41 Business Law 3 rec 3 cr
Survey of American legal system; principles of law and application of Uniform Commercial Code involved in contracts; application of principles to typical business problems. Corequisite: ENG 02 or RDL 02 if required.

LAW 45 Medical Law 3 rec 3 cr
Law as it affects work of medical secretarial assistants including medical practice acts, legal relationship of physician and patient, professional liability, types of medical practice; preparation of reports for workmen's compensation, court litigation. Corequisite: ENG 02 or RDL 02 if required.

LAW 47 Legal Procedures 3 rec 3 cr
Common, statutory and constitutional law; the judicial system; proceedings, civil and criminal, from initiation to enforcement and judgment. Role of the paralegal. Corequisite: ENG 02 or RDL 02 if required.

LAW 52 Business Organizations 3 rec 3 cr
Introduction to law relating to business organizations: agency; sole proprietorships; partnerships; corporations; government regulation; drafting and research practice; functions of the lawyer and paralegal assistant. Corequisite: RDL 02 or ENG 02 if required.

LAW 62 Family Law 3 rec 3 cr
Focus on legal aspects of marriage, custody and visitation, economic and social aspects of divorce, separation, annulment, antinuptial agreements, contractual relations among members of the family, family court procedures, criminal jurisdiction over minors; drafting and research practice; functions of the lawyer and paralegal assistant. Aspects of criminal, statutory and constitutional law as it affects the juvenile offender. Corequisite: RDL 02 or ENG 02 if required.

LAW 65 Criminal Law and Procedures 3 rec 3 cr
Provides understanding of basic distinctions between criminal and civil law; familiarization with criminal justice system; major stages of a criminal case. Corequisite: ENG 02 or RDL 02 if required.

LAW 72 Real Property 3 rec 3 cr
Law of real property and real estate transactions. Analysis of sales, obligations of the real estate broker, surveys, recordings, closings and title searches, mortgages, assignments, consolidation agreements, and mortgage foreclosures. Law of landlord and tenant will be extensively reviewed. Corequisite: RDL 02 or ENG 02 if required.

LAW 82 Insurance and Torts 3 rec 3 cr
Survey of the law of insurance and the law of torts, especially as they relate to each other: nature and types of insurance, indemnity and subrogation; the insurance contract; defenses against payment to the insured; government regulation; tort liability; intentional torts; negligent torts, litigation; drafting and research practice; functions of the lawyer and paralegal assistant. Corequisite: RDL 02 or ENG 02 if required.

LAW 89 Legal Advocacy 3 rec 3 cr
Administrative law and advocacy, agency advocacy, preparation and conduct of administrative hearings, due process rights, and basics of evidence. Procedural rights in public benefit entitlement programs and the rights of the handicapped, mentally handicapped and the elderly are included; also procedural rights in housing programs and overview of landlord and tenant law; administrative advocacy and trial advocacy. Corequisite: ENG 02 or RDL 02 if required.

LAW 92 Estates, Trusts and Wills 3 rec 3 cr
Requirements, formalities, drafting and execution of wills and trusts, probating wills, intestacy law, administration of wills and estates, preparation of federal estate and inheritance tax returns; transfer tax proceedings under the law of New York State; estate planning. Corequisite: RDL 02 or ENG 02 if required.

LAW 95 Legal Research and Writing 3 rec 3 cr
How to research legal questions and to present results to supervising attorney. Role of legal research in the process of legal advocacy; historical development and present organization of the Anglo-American legal system; organization and procedures of the New York courts; various tools of legal research and how to use them; skill in researching and answering legal questions in an active law office; skill in organizing and writing legal memoranda. Prerequisite: ENG 13.

LAW 96 Advanced Legal Research and Writing 3 rec 3 cr
Advanced legal research and writing course dealing with drafting of pleadings and business agreements; law office memoranda; memoranda of law in support of motions; pre-trial and memoraanda of law; appellate briefs; and the use of computer research tools such as WESTLAW or LEXIS. Substantive aspects, with emphasis on the conduct of practical exercises in research and writing. The art of oral advocacy is introduced. Prerequisite: LAW 95 or departmental permission.

MARKETING MANAGEMENT AND SALES

Department of Business

Before registering for advanced marketing courses, see the curriculum coordinator.

MKT 11 Marketing 3 rec 3 cr
Principles of marketing goods and methods of distribution from producer or manufacturer to consumer. Types, functions, practices of wholesalers and retailers; efficient marketing techniques. Prerequisite or corequisite: ENG 13.

MKT 13 Textiles 4 rec 4 cr
Characteristics and uses of major textile fibers and fabrics—cotton, wool, linen, silk, rayon, acetate, nylon, polyesters, acrylics, spandex and other synthetics. Processes of weaving, dyeing, printing, finishing; identification of fibers, weaves and fabric finishes. Corequisite: ENG 02 or RDL 02 if required.
MKT 17 Consumer Problems and Personal Finance
Introduction to consumers' problems in purchasing services and goods, including housing, medical services, insurance, social security, credit, and the detection of fraud relating to these purchases. Money management, taxes, savings, loans, investments, and estate planning. Prerequisite or corequisite: ENG 13.

MKT 18 Consumer Behavior 3 rec 3 cr
Introduction to basic characteristics of consumers that affect choices in the marketplace; techniques of marketing agencies and advertisers to optimize sales and profits. Study of consumer behavioral patterns of independent and group travelers related to travel operators. Prerequisite or corequisite: ENG 13.

MKT 35 Retail Merchandising 4 rec 4 cr
Theories and principles of merchandising and its applications to the basic profit elements: mathematics of markup, markdown, gross margin, turnover, stock planning, sales planning, the merchandise plan, pricing techniques, open-to-buy, and the retail method of inventory procedure. Prerequisites: ACC 11 and BUS 11; corequisite: MKT 33.

MKT 41 Management of Retail Operations 3 rec 3 cr
Organization and operation of retail stores; layouts, budgeting, credit procedures, maintenance, personnel employment, training and management; receiving and marking procedures; security; public relations. Prerequisite or corequisite: ENG 13.

MKT 43 Advertising and Sales Promotion 3 rec 3 cr
Advertising department organization and procedure; planning, preparation and coordination of external and internal methods of various types of advertising; evaluation and selection of media; development and integration of sales promotion techniques and advertising plans. Prerequisite or corequisite: ENG 13.

MKT 70 International Marketing 3 rec 3 cr
Introduction to international marketing with emphasis on the empirical dimensions of world economy, business enterprises in international trade, research on world markets, advertising, financing, foreign legal and cultural restrictions, and role of government in fostering international business. Prerequisite or corequisite: ENG 13.

MATH 01 Fundamental Concepts and Skills in Arithmetic and Algebra 3 rec 0 cr
Topics selected from basic operations in arithmetic, verbal problems whose solutions involve arithmetic processes, generalizations of the principles of arithmetic leading to the fundamental concepts of algebra, algebraic operations, polynomials; exponents and logarithms, and problems involving algebraic solutions. For students scoring below 14 on the first 20 questions of the CUNY Placement Exam.

MTH 02 Basic Concepts of Mathematics I 6 rec 0 cr
Topics selected from elements of arithmetic, elementary algebra and geometry, including operations with rational numbers, numerical geometry, equations, polynomials, rational algebraic expressions, graphing. For students scoring below 14 on first 20 questions on the CUNY Placement Exam.

MTH 03 Selected Topics in Elementary Algebra 4 rec 0 cr
Topics selected from elementary algebra, geometry, operations with polynomials, graphing, verbal problems, linear equations. Prerequisite: Placement or R in MTH 02. For students scoring above 13 on first 20 questions and below 14 on the second 20 questions of the CUNY Placement Exam.

MTH 04 Selected Topics in 11th Year Mathematics 4 rec 0 cr
Topics selected from relations and functions, quadratic equations, systems of equations, right triangle, trigonometry, coordinate geometry, radicals.

MTH 06 Basic Concepts of Mathematics II 6 rec 0 cr
Topics selected from real and complex numbers, function concept, coordinate geometry, linear and quadratic equations, systems of equations, elements of trigonometry. Prerequisite: MTH 02 or 03 or two years of high school mathematics consisting of algebra and geometry.

Any course numbered 12 through 15 is, with some modification, recommended only for those students enrolled in two-year career programs. MTH 12 is not recommended for transfer curricula, and will not be accepted for credit in the Liberal Arts curricula.

MTH 12 Introduction to Mathematical Thought 3 rec 3 cr
Topics selected from probability, statistics, logic, set theory, geometry, matrices, number system structures. Not acceptable for credit in the Liberal Arts curriculum. Prerequisite: 1 year of elementary algebra or its equivalent; corequisite: ENG 02.
# MATHEMATICS COURSE SEQUENCE

To assist in the selection of courses in Mathematics, find your professional or vocational objective (left column); look under high school preparation (A,B,C, or D). Unless otherwise specified, the course on the left is a prerequisite for the course on the right.

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Note: MTH 12 is not recommended toward transfer degrees, and will not be accepted for credit in the Liberal Arts curricula.

* Suggested elective.

** Recommended for Nursing students.
MTH 13 Trigonometry and College Algebra 4 rec 3 cr
Topics selected from vectors, trigonometry, variation, logarithms, complex numbers and DeMoivre's theorem, theory of equations, and system of equations. Prerequisite: MTH 06 or equivalent.

MTH 14 College Algebra and Introduction to Calculus 3 rec 3 cr
Analytic geometry, inequalities and absolute value, limits and derivative, application of derivative. Prerequisite: MTH 14 or equivalent.

MTH 15 Calculus 3 rec 3 cr
Integrals, application of integrals, differentiation of trigonometry and logarithm function, methods of integration, power series and Fourier series. Prerequisite: MTH 14 or equivalent.

MTH 21, 22, and 23 are nonsequential courses primarily for Liberal Arts students enrolled in non-science transfer programs. MTH 21 and MTH 22 are recommended for Liberal Arts students and as electives for students in other curricula. MTH 23 is recommended for students in such social sciences as economics, political science, psychology, and sociology.

MTH 21 Survey of Mathematics I 3 rec 3 cr
Designed for non-science liberal arts students. Emphasis on key concepts and structure of mathematics. Topics selected from decimal notation, computation in other bases, groups, sets, logic, elementary number theory, development of real number system, analytic geometry, linear programming networks, complex numbers. Prerequisite: Intermediate Algebra or MTH 04.

MTH 22 Survey of Mathematics II 3 rec 3 cr
Topics selected from geometry, algebra, graphs, functions, linear programming, game theory, mathematical induction, permutations, combinations, probability, logic, euclidean, non-euclidean, projective, finite, and coordinate geometries, groups, matrices. Prerequisite: MTH 04 or Intermediate Algebra.

MTH 23 Probability and Statistics 3 rec 3 cr
Topics selected from permutations, combinations, probability, sets, finite sample spaces, probabilities as areas, basic statistical concepts, the normal distribution, central limit theorem. Prerequisite: Intermediate Algebra or MTH 04.

MTH 26 Mathematics in the Modern World 2 rec 2 lab 3 cr
For Liberal Arts students with a minimum mathematical background. Topics selected from BASIC computer language; mathematical simulation of problems from diverse fields including water pollution, population studies, political polls, and artificial intelligence; mathematical algorithms and interpretation of graphs. Prerequisite: Intermediate Algebra or MTH 04.

MTH 30 through 35 are designed for students majoring in mathematics, physics, biology, chemistry, engineering science, computer science, medicine, and dentistry; and are recommended for those in other curricula with advanced preparation.

MTH 30 Pre-Calculus Mathematics 4 rec 4 cr
Topics selected from sets, relations, function concept, special functions, rational and irrational functions, binomial theorem, complex numbers, DeMoivre's theorem, trigonometric functions, mathematical induction. Prerequisite: MTH 06 or trigonometry.

MTH 31 Analytic Geometry and Calculus I 6 rec 4 cr
Limits, rates of change, differentiation and anti-differentiation of algebraic functions, applications, integrals, curve sketching. For Engineering Science students or for Liberal Arts and Sciences students planning to major in mathematics or physical science. Prerequisites: MTH 30 or equivalent.

MTH 32 Analytic Geometry and Calculus II 6 rec 5 cr
Differentiation and integration of transcendental functions, hyperbolic functions, applications of the definite integral; parametric equations, theorem of mean value, polar coordinates, plane analytic geometry, determinants. Prerequisite: MTH 31.

MTH 33 Analytic Geometry and Calculus III 5 rec 5 cr
Vectors, applications of vectors to analytic geometry and calculus, partial differentiation, multiple integrals, volumes and surface area, infinite series, applications. Prerequisite: MTH 32.

MTH 34 Differential Equations and Selected 4 rec 4 cr
Topics in Advanced Calculus
Methods of solving ordinary differential equations; selected topics from among the following: hyperbolic functions, power series, Fourier series, gamma functions, Bessel functions, problems of motion, electric circuits, damped and forced vibrations, Laplace transform. Prerequisite: MTH 33.

MTH 35 Selected Topics in Advanced 4 rec 4 cr
Calculus and Linear Algebra
Matrices, introduction to linear algebra and vector analysis, integral theorems of Gauss, Green and Stokes, applications. Prerequisite or corequisite: MTH 34.
Mathematics courses in the 40 series are required for those students majoring in computer science but may be taken for elective credit by students in Liberal Arts curricula.

MTH 45 Discrete Mathematical Systems 3 rec 3 cr
Topics selected from logic, sets, induction, Boolean algebra, number systems, combinatorial analysis, game theory, number theory, vectors and matrices, special topics in algebra. Prerequisite: MTH 31.

MECHANICAL TECHNOLOGY
Department of Engineering Technologies

MEC 10 Introduction to Mechanical 1 lect/dem 3 lab
Equipment and Systems 2½ cr
Overview of basic mechanical equipment and systems and insight into modern mechanical technology. Topics include engineering design, blueprint reading, production processes and equipment, space conditioning, automotive systems, engineering materials and testing.

MEC 11 Basic Engineering Graphics 1 lect 4 lab 2 cr
Fundamental engineering drawing and industrial drafting room practice. Lettering, orthographic projection, auxiliary views, sections and conventions, pictorials, threads and fasteners, tolerances, detail drawing, dimensioning and electrical drawings; introduction to computer-aided graphics. Prerequisite or corequisite: MTH 02.

MEC 12 Applied Engineering Graphics 1 lect 3 lab 2 cr
Introduction to engineering drawing practices in specific fields. Such selected specialties as gears, cams, piping, welding structural and architectural drawing. Prerequisite: MEC 11, corequisite: RDL 02 or ENG 02 if required.

MEC 21 Engineering 1 lect 3 lab 2 cr
Manufacturing Processes
Basic engineering processes and unit production measurements. Fabrication of mechanical products in small quantities. Processes included are casting, forging, welding, drilling, lathe work, milling, woodworking, forming of plastics and sheet metal, and heat treating. Laboratory practice with hand and machine tools. Corequisite: RDL 02 or ENG 02 if required.

MEC 25 Production Processes 2 rec 3 lab 3 cr
and Numerical Control
Industrial mass production and measurement techniques. Including automation, numerical control, and quality control; product design and fabrication methods. Precision layout, measurement and gauging procedures. Laboratory practice with hand and machine tools, precision measuring equipment, and numerically controlled machining center. Projects include design and fabrication of jigs, fixtures, simple dies, and volume production. Prerequisites: MEC 11, MEC 21; corequisite: MTH 13.

MEC 27 Mechanics and Introduction 4 rec 0 lab 4 cr
to Strength of Materials
Application of principles of statics, dynamics and strength of materials. Types of loading; relationships between externally applied forces and internally induced stresses in various types of structural and machine members. Prerequisite: PHY 21; corequisite: MTH 14.

MEC 28 Strength of Materials 2 lect 3 lab 3 cr
Analysis and solution of practical strength of materials problems. Laboratory: destructive and nondestructive tests of materials, machine members and structures using industrial equipment and ASTM standard procedures. Prerequisite: MEC 27.

MEC 31 Machine Design 2 lect 2 lab 3 cr
Principles of kinematics, mechanics and strength of materials in analysis and design of typical machine members. Machine kinematics, theories of failure, basic mechanisms and power transmission, linkage mechanism, cams, shafting, power screws, gears and gear trains and application of digital computer. Prerequisite: MEC 12; corequisite: MEC 28.

MEC 33 Thermodynamics and Fluid Dynamics 2 rec 3 lab 3 cr

MEC 41 Metallurgy and 2 rec 2 lab 3 cr
Engineering Materials
Physical metallurgy, properties of ferrous and nonferrous metals, as well as non-metallic materials and plastics. Laboratory: preparation of samples, metallographic examination of metals, and tests for various properties of metallic and nonmetallic materials. Prerequisites: MEC 21, MEC 27, CHM 13.

MEC 45 Mechanical Projects Laboratory 3 lab 1 cr
Application of mechanical engineering theory to the solution of practical laboratory problems. Projects include the design, fabrication and testing of prototype mechanical or electromechanical equipment. Students work as technicians under direction of instructor who acts as project engineer. Prerequisite: MEC 25.

MEC 61 Advanced Machine Design 2 rec 2 lab 3 cr
MEC 62 Tool Design 2 rec 2 lab 3 cr
MEC 63 Refrigeration and 2 rec 2 lab 3 cr
Air Conditioning
MEC 64 Heating and Ventilating 2 rec 2 lab 3 cr
MEC 65 Industrial Management 2 rec 2 lab 3 cr
MEC 67 Instrumentation and 2 rec 2 lab 3 cr
Control Systems
Not offered 1984-86.
MUS 10 Music Survey 2 rec 1 cr
Introduction to the vast symphonic and chamber music literature; opera from Baroque to the contemporary period. Attendance at five concerts required. Not open to students taking MUS 11 or MUS 12. Corequisite: ENG 02 or RDL 02 if required.

MUS 11 Introduction to Music 3 rec 3 cr
Nature of music expression; elements of music, including tempo, meter, rhythm, melodic and harmonic material and structure, tone color, texture, form examined in instrumental and vocal "forms." History of development of musical styles and forms. Audio laboratory, written assignments. Attendance at five concerts required. Corequisite: ENG 02 or RDL 02 if required.

MUS 12 Introduction to Music, with emphasis on Non-Western Cultures 3 rec 3 cr
Nature of music expression; elements of music, including tempo, meter, rhythm, melodic and harmonic material and structure, tone color, form examined in instrumental and vocal "forms"; examples drawn from non-western cultures. Audio laboratory, written assignments. Attendance at five concerts required. (May be taken in fulfillment of MUS 11 requirement.) Corequisite: ENG 02 or RDL 02 if required.

MUS 17 Songwriting 3 rec 2 cr
Classroom instruction in songwriting stressing the development of individual talent and ability through analysis, listening, ear training, keyboard awareness, creative writing and performance.

MUS 18 Introduction to Jazz 2 rec 2 cr
Study of jazz, its history and influence on 20th-century American culture. Outside readings; audio laboratory and attendance at five concerts required. Corequisite: ENG 02 or RDL 02 if required.

MUS 19 Introduction to Jazz Improvisation 2 rec 2 cr
Development of the skills of improvisation and stylization necessary to this form of music. Ear training and sight-reading; listening and analysis of music; evaluation of individual performances. Open to singers and instrumentalists. Prerequisite: Placement examination given by the department.

MUS 21, Choral Performance 3 rec 1 cr each
22,23,24 The study and presentation of standard and contemporary choral literature. Choral training and performances at concerts, college ceremonies and functions. Registration only with permission of department.

MUS 25 Voice Class 2 rec 1 cr
Classroom vocal instruction stressing individual skills, proper tone production, breath control, diction, musicianship, style, interpretation and performance.

MUS 31, Orchestral Performance 3 rec 1 cr each
32,33,34 The study and presentation of standard and contemporary orchestral literature. Orchestral training and performance at concerts, college ceremonies and functions. Registration only with permission of department.

MUS 37 Instrumental Class 1 rec 1 cr
Instruction in the Recorder
Basic instruction in playing a musical instrument, the recorder, for both solo and group use. No previous musical training necessary.

MUS 40 Fundamentals of Music 2 rec 2 cr
Basic reading skills, including treble and bass clefs, key signatures, major and minor scales, some elementary sight-reading techniques, rhythms, simple harmony.

MUS 41 Theory I 3 rec 2 cr
Introduction to chord construction and movement. Analysis of two-voice writing. Prerequisite: MUS 40 or permission of department.

MUS 42 Theory II 3 rec 2 cr
Introduction to diatonic four-part harmony, Chordal movement and realization of figured basses. Analysis of compositions from traditional literature. Prerequisite: MUS 41.

MUS 43 Theory III 3 rec 2 cr
Continuation of the study of diatonic harmony. Introduction to seventh chords and the secondary dominant. Practice of simple modulation. Harmonization of melodies and basses; realization of figured basses. Prerequisite: MUS 42.

MUS 44 Theory IV 3 rec 2 cr
Study of chromatic harmony including use of augmented sixth chords. Modulation through chromaticism. Harmonization of melodies and basses; realization of figured basses. Prerequisite: MUS 43.

MUS 50 Basic Musicianship 2 rec 1 cr
Development of basic aural perceptions of pitch, duration, intensity, timbre, melody, and rhythm through listening exercises, singing, and the playing of simple musical instruments.
MUS 51 Ear Training I 2 cr
MUS 52 Ear Training II 2 cr
Development of ability to sing melodies at sight and to notate melodies and chords. Elementary sight singing and dictation. Prerequisite: For MUS 51: MUS 40 or permission of department; for MUS 52: MUS 51.

MUS 53 Ear Training III 2 cr
MUS 54 Ear Training IV 2 cr
Continuation of Ear Training I and II. Prerequisite: For MUS 53: MUS 52; for MUS 54: MUS 53.

MUS 61 Keyboard I 2 cr
MUS 62 Keyboard II 2 cr
Development of keyboard skills through study of intervals, diatonic and chromatic progressions, harmonization of melodies, and realization of figured basses. Non-Music majors may register only with permission of department. Prerequisite: Ability to read music; for MUS 61: MUS 72 or permission of department; for MUS 62: MUS 61.

MUS 65 Beginning Guitar Class I 2 cr
Basic classroom instruction in guitar and electric bass. Course designed especially for beginners. Students must provide their own instrument or rent one through the College.

MUS 66 Guitar Class II 2 cr
Continuation of classroom instruction in guitar and electric bass. Prerequisite: MUS 65 or permission of instructor.

MUS 67 Beginning Brass Class 2 cr
Not offered 1984-86.

MUS 70 Piano Class for Beginners 2 cr
Introduction to basic piano techniques, harmonization and transposition of simple melodies, sight-reading at the keyboard, simple accompanying techniques for folk songs, easy piano literature from all stylistic eras. Practice facilities available.

MUS 71 Secondary Piano I 2 cr
MUS 72 Secondary Piano II 2 cr
Class instruction to attain an elementary facility at the piano. Taken by all Music majors except pianists. Registration only with permission of department. Prerequisite for MUS 71: MUS 40 or placement examination; for MUS 72: MUS 71.

MUS 81 Recital Performance 2 cr
Study and performance of standard and contemporary music emphasizing recital techniques. Registration only with permission of department.

MUS 83, Private Instruction I, II, III, IV, 84, 85, 86 2 cr
Private instruction in a major instrument, voice, or composition. Registration only with permission of department. Open only to Music majors. Prerequisite for MUS 84: a grade of C or higher in MUS 83; for MUS 85: a grade of C or higher in MUS 84; for MUS 86: a grade of C or higher in MUS 85.

MUS 91 Instrumental Ensemble I 2 cr
MUS 92 Instrumental Ensemble II 2 cr
(Latin-Jazz Ensemble)
Study and performance of standard and contemporary chamber music. Taken by all instrumentalists. Prerequisite for MUS 91: permission of instructor.

MUS 95 Chamber Chorus I 2 cr
MUS 96 Chamber Chorus II 2 cr
Study and performance of standard and contemporary chamber choral music. Taken by all vocalists. Prerequisite for MUS 95: permission of instructor.

NUCLEAR MEDICINE TECHNOLOGY

Department of Physics

The following courses will be given at the Albert Einstein College of Medicine or at the hospitals affiliated with them.

NMT 81 Orientation in Clinical Nuclear Medicine
Orientation to the hospital environment and to various phases of Nuclear Medicine Technology; hospital administration and procedures. Prerequisite: Completion of Pre-NMT Sequence.

NMT 82 Radio-Pharmaceutical Chemistry 3 cr
Preparation and use of radio-pharmaceuticals, uptake of various organs of radioactive chemicals, time-dependent effects dilutions and separation analyses. Prerequisites: BIO 23, CHM 18, RAD 71, NMT 81.

NMT 83 Clinical Nuclear Medicine 2 cr
Practicum I
Rationale for applications of radio-pharmaceuticals for in vivo and in vitro procedures; principles in biochemistry and radiation biology; static and dynamic radionuclide procedures on patients; interpretations of radionuclide scans and gamma-camera images; nuclear medicine instrumentation. Prerequisite: RAD 71; corequisite: NMT 82.

NMT 84 Clinical Nuclear Medicine 2 cr
Practicum II
Discussion of individual organ systems, physiology, morphology variants and localization of agents; competitive protein binding agents, radio-immunoassay principles and procedures. Prerequisite: NMT 83.
NURSING*

Department of Nursing

NTR 11 Nutrition in Physical and Emotional Disorders
Basic course in therapeutic nutrition that focuses upon major health problems in western society and influence of diet on their causes and cures. Traditional and controversial nutritional approaches are presented. Nursing care in selected situations is emphasized. Prerequisite: NUR 31, 32 and 33 or by permission of instructor. Also open to RN's and LPN's.

Admission to all Nursing courses is based on the approved priority list which is on file in the Nursing Department.*

NUR 31 The Essential Process of Nursing: Interaction†
The nurse's interaction with the healthy and the sick. Covers interpersonal development and physical growth and development from infancy to old age, communication, the helping process, effects of illness on interpersonal behavior and communications, and the inquiry process (including general assessment of client characteristics). Extensive use of small groups and labs; limited use of clinical facilities, most of which occur in the latter part of the course. Prerequisites: ENG 13, PSY 11, CMS 11, BIO 23; corequisites: BIO 24, MTH 12 or CHM 17.

NUR 32 Major Health Problems and Clinical Nursing Activities I (Relatedness)†
Focuses on understanding the nurse needs in order to function effectively with clients who have major problems in the area of mental health. Prerequisites: NUR 31, MTH 12 or CHM 17; corequisite: NUR 33.

NUR 33 Foundations of Nursing Skills/Critical Situations†
Provides background knowledge of common acute life-threatening health problems, then focuses on general assessment skills in terms of client's functional abilities, assessment skills in critical and/or emergency nursing situations, and intervention skills in specified emergency situations. Designed to develop competency in assessment and comfort in meeting emergency needs to enable the nurse to ascertain better the more comprehensive needs of clients (which are the focus of the later nursing courses). Prerequisites: NUR 31, MTH 12 or CHM 17, BIO 24; corequisites: NUR 32, BIO 28.

NUR 34 Major Health Problems and Clinical Nursing Activities II (Long-Term Problems — Motor and Neurological)†
Major health problems in our society are organized in relation to the necessary activities and regulatory needs of people. Focus is on nursing care of clients with surgical, mobility and neurological problems. Prerequisites: NUR 32, NUR 33, BIO 28.

NUR 35 Major Health Problems and Clinical Nursing Activities III (Reproduction and the Young Family)†
Organized around families and their development especially during the reproductive cycle. Focus is on the nurse's responsibility in meeting and promoting health needs in beginning and expanding families, in community health agencies, clinics and hospitals. Prerequisites: NUR 32, NUR 33; corequisite: NUR 34.

NUR 36 Major Health Problems: Medical and Surgical Problems of Adults and Children†
Focuses on certain major health problems related to activities and regulatory needs of people of all ages. Categories of a Medical-Surgical nature include intrinsic and extrinsic chemical balance, circulation, oxygenation, nutrition and cell growth, intact skin and elimination. Clinical practice includes hospitalized children and adults. Prerequisites: NUR 34, NUR 35; corequisite: NUR 37.

NUR 37 Clinical Nursing Activities: Medical and Surgical Problems of Adults and Children†
Focuses on clinical nursing activities designed to meet needs of clients of all ages with major health problems. Emphasis on the nurse's role in assessment and restorative functions. Clinical practice includes hospitalized children and adults. Prerequisites: NUR 34, NUR 35; corequisite: NUR 36.

NUR 38 Management in Nursing, Health Promotion†
Health agency-based learning experience designed to help students learn nursing team membership roles, functions, evaluation, peer review, shared leadership, and delegation; nursing management of small groups of clients; standards, policies and legislation; teaching-learning responsibilities; participation with health teams. NUR 38 must be taken in the final semester. All nursing curriculum requirements must be completed or be in the process of completion by the end of the semester in which NUR 38 is taken. Students must have a 1.95 G.P.A. to enter the final semester of Nursing.

*NUR courses are open only to students with full matriculation status in the Nursing Curriculum.

**Priority into NUR 31 will be given to students who have achieved a scale score of 17 or more on the CUNY Reading Assessment Test (12th grade level).

†The minimum acceptable grade in each semester in the Nursing major is C. Grades of D must be repeated if the student wishes to receive a degree in Nursing. Grades of D may be repeated subject to the following conditions:
1. The course must be repeated before the next higher level course is taken.
2. Both grades received in the same course will be used to calculate the student's cumulative index.
3. The credit for the course may be applied only once toward graduation.
4. A Nursing student may only attempt (registered in the course for at least 3 weeks, appeared on the roster and received a grade on the roster sheet) a given Nursing course twice, e.g., grades of D and W in NUR 31, no further attempt may be made.
5. A Nursing student may only repeat two different Nursing courses, e.g., grades of D and C in NUR 31, grades of D and C in NUR 32, grade of D in NUR 33, no further attempt may be made.
6. If a failing grade is received twice for the same comparable Nursing course, the student is not eligible to make a further attempt.
PHM 10 Pharmacology Computations  2 rec  2 cr
Symbols, weights and measures, equipment, metric and apothecary systems, preparation of solutions, intravenous fluid administration of drugs and computation of dosages required of nursing personnel. Computer Center modules are an integral adjunct to the course. Prerequisite: MTH 02; also available to R.N., P.N. and pre-pharmacy students.

PHM 11 Pharmacology as it Applies to Health Sciences  3 rec  3 cr
Current major drugs utilized in nursing today; need, therapeutic action, mode of administration, common side effects, toxicity, normal range of dosage, drug interactions and contraindications; nursing implications including patient teaching are stressed. Prerequisite: Students need to complete all remediation for admission to nursing; recommended that students complete NUR 33; also available to R.N., P.N., pre-pharmacy and health workers authorized to administer medications.

ORIENTATION

Department of Student Development

OCD 01 Orientation and Career Development  1 rec  0 cr
Course enables student to develop basic college survival skills in areas of academic life, setting career goals, time management, analysis of classroom behavior, assessment of instructor demands and utilization of library and other college resources. Emphasis on students' understanding of academic environment and its demands on their developing successful coping and achievement behavior.

OCD 11 Career Development  2 rec  1 cr*
A comprehensive examination of the career decision-making process involving relevant information about self and the world of work. Exploration of values, skills, abilities, and interests, and their relationship to the job market. Development of career knowledge and awareness including training requirements, life style, and employment opportunities. Self-marketing and job hunting skills. Prerequisite: ENG 01, RDL 01, completion of 30 credits (remedial courses included).

*Pending approval.

Department of Secretarial Studies

ORI 43 Secretarial Senior Orientation  1 rec  0 cr
For students in Secretarial curricula. Seminar on continuing education; career planning; survey of employment opportunities and techniques of job seeking.

PHILOSOPHY

Department of Social Science

PHL 11 Introduction to Philosophy  3 rec  3 cr
Fundamental questions of human experience; and basic problems of philosophy; survey of major philosophers, classical and modern. Corequisite: ENG 02 or RDL 02 if required.

PHL 31 Philosophy, Science and Human Values  3 rec  3 cr
The crisis of values in modern technological cultures. Relationship to values and nature of physical and human sciences. Analysis of major formative movements that have pervaded and characterized contemporary cultures: Positivism, Marxism, Freudianism, Existentialism, and Neo-Christainity. Corequisite: ENG 02 or RDL 02 if required.

PHL 90 Introduction to Religion  3 rec  3 cr
Humanistic and academic orientation to study of religion, treating each of the major world religions systematically. Course includes both historical and contemporary material. Corequisite: ENG 02 or RDL 02 if required.

PHL 91 Philosophy of Religion  3 rec  3 cr
Religion, a human phenomenon, is central concern of this introductory philosophy course. The core of religion—the numinous experience—is defined and analyzed. Conceptualization of the divine, supposed proofs of God's existence, doubt, and various religious attitudes toward the self, nature, and the meaning of life are explored. Corequisite: PHL 11 or PHL 90.

PHYSICAL EDUCATION

Department of Health and Physical Education

A medical examination is required every two years on the College Medical Form, which can be secured in any of the Health Service offices. Students unable to participate in any activity course for medical reasons must make an appointment to see the College nurse upon admission to the College.

PEA 11 Foundations for Fitness  2 rec  1 cr
Designed to assist students in evaluating their present level of fitness and to provide opportunities for self-improvement. Selection from the following aerobic activities: weight training, jogging, fitness games, rope jumping, and gymnastics.

PEA 12 Elementary Hatha Yoga  2 rec  1 cr
Progressive exercises designed to improve flexibility, develop efficient breathing and apply relaxation techniques. History of yoga; physiological benefits, nutritional aspects and body awareness are interwoven to emphasize the integral nature of body and mind.
PEA 13 Fundamentals of Women’s Gymnastics 2 rec 1 cr
Basic gymnastic movements and beginning level skills on the apparatus to develop physical fitness in all dimensions, including strength, flexibility, balance, endurance and motor coordination. Focus on aesthetic awareness of the beauty of human motion as a foundation for recreational or competitive pursuits.

PEA 21 Beginning Swimming Level 2 rec 1 cr
Basic water safety skills and knowledge to make an individual reasonably safe while in, on, or about the water. Registration limited to non-swimmers.

PEA 22 Intermediate Swimming Level 2 rec 1 cr
Basic elements of good swimming; includes swimming techniques with emphasis upon mastering form and endurance in the front crawl, back crawl, elementary backstroke and deep water survival skills. Prerequisite: PEA 21 or the ability to swim at least 25 yards using a crawl and/or backstroke.

PEA 23 Swimming 2 rec 1 cr
Intended for students beyond the intermediate swimming level. Emphasis on mastering form and endurance in crawl, back crawl, breaststroke, butterfly and sidestroke. Also covers competitive techniques of swimming, survival skills, and basic water safety. Prerequisite: PEA 22 or ability to swim at least 50 yards, using a crawl stroke and/or backstroke in deep water.

PEA 24 Advanced Lifesaving and Water Safety 2 rec 1 cr
The development of skills and knowledge essential to insure personal safety and to help save the lives of others. American Red Cross Lifesaving Certification. Prerequisite: PEA 23 or the ability to swim 200 yards, employing front crawl, sidestroke, breaststroke and backstroke.

PEA 25 Water Safety Instructor* 1 lect 2 rec 2 cr
Course prepares the student to teach the American Red Cross Water Safety Program. Operation of pool filters, and organization of basic synchronized swimming program. Successful completion of this course qualifies the student for an American Red Cross Water Safety Instructor certificate. Prerequisite: Student must be at least 17 years of age and hold current Red Cross Advanced Lifesaving Certificate.

PEA 26 Synchronized Swimming 2 rec 1 cr
Basic techniques of synchronized swimming; includes modified swimming strokes, fundamental sculling movement, basic stunts, figures, and pattern formations, the understanding and appreciation of music and musical accompaniment leading to formation of a musical routine. Prerequisite: Ability to swim 25 yards.

PEA 27 Basic Skin Diving and Scuba Diving 2 rec 1 cr
Selection, usage, and care of equipment; basic principles of skin diving and scuba diving. Strong emphasis on safety in all aspects of diving. Includes optional open water dive for national certification. Prerequisite: Ability to swim 100 yards continuously without fins, and to stay afloat or tread water for ten minutes without accessories. All equipment provided by the College.

PEA 31 Fundamentals of Volleyball and Basketball 2 rec 1 cr
Basketball—Basic skills of passing, dribbling, shooting, rebonding, post play, zone defense, zone press and patterns of team play in order to more fully appreciate the game. Volleyball—Fundamentals of passing, serving, spiking, blocking offense and defense.

PEA 32 Golf and Tennis* 2 rec 1 cr
Spring: Tennis—Fundamentals of the forehand stroke, backhand stroke, serve, and gain strategy. Golf—Fundamentals of golf grip, stance, swing, woods, irons, putting, chipping and pitching, rules and golf etiquette.

PEA 33 Beginning Tennis 4 rec 7½ wks 1 cr
Fall semester first 7½ weeks; spring semester last 7½ weeks. Students will be notified of starting date. For beginning players. Skills include the forehand, backhand and serve plus elementary singles and doubles strategy. All equipment furnished by College. Meets two times a week, 2 rec. per session for 7½ weeks.

PEA 34 Intermediate Tennis 4 rec 7½ wks 1 cr
Fall semester first 7½ weeks; spring semester last 7½ weeks. Students will be notified of starting date. For advanced beginner and intermediate players. Skills include the forehand, backhand, serve, volley, lob, overhead and special techniques. More advanced tactics and concepts in singles and doubles strategy. Meets two times a week, 2 rec. per session for 7½ weeks. Prerequisite: PEA 33 or permission of instructor.
PEA 35 Bowling I  
Basic skills, different types of delivery, bowling errors and corrections. Students should expect to spend approximately $1.50 per session to cover the cost of bowling.

PEA 36 Archery and Badminton  
Basic skills of archery and badminton. Archery: shooting fundamentals, type of shooting, rules and regulations. Badminton: fundamental skills of serving, overhead clear, forehand and backhand drive, drop shot, and smash shot; singles and doubles strategy.

PEA 37 Golf  
Skills taught are grip, stances, swing, woods, irons, chipping, pitching, putting, rules and etiquette. Students are required to play a round of golf and go to a driving range. Approximate cost for the course is $8.

PEA 38 Softball  
Introduction and development of basic skills of slow and fast pitch softball, including batting, fielding, baserunning, catching and pitching. Fundamentals of team offensive and defensive strategies and concepts.

PEA 39 Soccer  
Basic skills related to soccer: kicking, shooting, ball control, dribbling, passing, heading and tackling. Basic offensive and defensive strategy, terminology and rules.

PEA 41 Techniques of Modern Dance I  
Basic skills of modern dance; development of physical strength, flexibility, endurance, and freedom of movement. Explorations and improvisations leading to basic choreographic skills and appreciation of dance as a means of self-expression and communication.

PEA 42 Techniques of Modern Dance II  
Advanced beginning and intermediate techniques of movement. Elements of compositional form, and the development and execution of compositional studies. Prerequisite: PEA 41 and/or permission of instructor.

PEA 44 International Folk and American Square Dance  
Explores in-depth skills in international folk and American square dance; develops locomotor skills through dance formations and patterns; designed to foster understanding of other countries through their music and cultural heritage as reflected in their dances.

PEA 46 African, Caribbean and Black Dance Forms  
The study of African and Caribbean dance reflecting the customs and heritage of each; explores transitions and relationships of African dance to Caribbean and other Black dance forms.

PEA 71, 72, 73 Varsity Athletics  
Students may enroll in one or more of the following intercollegiate athletic courses and receive up to three credits for work in such courses. Admission to each course, which is based on tryouts and permission of the instructor, may be used to fulfill the PEA requirement. Students opting to receive credit are required to participate in games, scrimmages, conditioning programs, practices, ongoing individual and team analysis, post-season tournament play, written assignments, team and individual statistics and a final examination. Students who wish to participate without course credit may do so.

Baseball (Men)  
Basketball (Men & Women)  
Indoor Track & Field (Co-ed)  
Outdoor Track & Field (Co-ed)  
Soccer (Men)  
Softball (Women)  
Tennis (Men & Women)  
Volleyball (Women)  
Wrestling (Men)

PEA 81 Techniques of Self-Defense  
Introduction to the skills and techniques of martial arts; judo, karate, jiu-jitsu and aikido for the purpose of understanding their value for self-defense.

PEA 82 Introduction to Tai Chi Chuan  
Basic movements and beginner level forms of the Yang School of Tai Chi Chuan, ancient Chinese exercise system consisting of slow, rhythmic movements engaged in for health, meditation and self-defense by men and women of all ages. The movements are non-strenuous, easy to do and are intended to bring greater harmony to mind and body.

REC 95 Program Planning and Leadership in Recreation*  
Survey of community agencies providing recreational opportunities. View of program areas associated with recreation, with attention to the recreation interests and needs of participants. Leadership application and practical knowledge of group situations. Corequisite: ENG 13.

*Offered during Day Session, Spring Semester.
**Offered during Day Session and Saturdays.
PHYSICS

Department of Physics

PHY 01 Introduction to College Physics 4 rec 0 cr
Fundamental laws and principles of classical physics; vectors, Newton's Laws, conservation principles, laws of thermodynamics. (Recommended for Engineering Science and Physics majors who have not had high school physics.) Prerequisite: MTH 06 or equivalent; corequisite: RDL 02 if required.

PHY 11 College Physics I* 2 lect 1 rec 2 lab 4 cr
Introduction to principles and methods of physics. Topics include Newton's Laws of Motion, mechanics, heat, and sound. (Recommended for Liberal Arts and life science majors, including biology, dentistry, medicine, pharmacy, and psychology.) Prerequisite: Intermediate algebra or MTH 06; corequisite: ENG 02 or RDL 02 if required.

PHY 12 College Physics II** 2 lect 1 rec 2 lab 4 cr
Elements of electric circuits; electromagnetic theory; light; selected topics in atomic and nuclear physics, relativity, and quantum theory. Prerequisite: PHY 11.

PHY 15 Ideas of Contemporary Physics 3 rec 2 lab 4 cr
Not offered 1984-86.

PHY 21 Physics for Engineering Technology I 2 lect 1 rec 2 lab 4 cr
Statics; kinematics, dynamics, work and energy, circular motion, and simple harmonic motion with special applications to problems in technology. Prerequisite: Intermediate Algebra or MTH 06; corequisite: ENG 02 or RDL 02 if required.

PHY 22 Physics for Engineering Technology II 1 lect 1 rec 2 lab 3 cr
Fluid dynamics, thermodynamics, electricity and magnetism, optics, applied nuclear technology. Prerequisite: PHY 21.

PHY 31 Physics I 2 lect 2 rec 2 lab 4 cr
Statics and dynamics of particles and rigid bodies; force and motion; energy and momentum; rotational motion; elasticity and simple harmonic motion. First semester of a three-semester sequence for students in Engineering or Computer Science (PHY 31, 32, and 33). Also recommended for Science or Mathematics majors in a Liberal Arts and Sciences transfer program. Corequisite: MTH 31 and ENG 02 or RDL 02 if required.

PHY 32 Physics II 2 lect 2 rec 2 lab 4 cr
Hydrostatics and hydrodynamics; properties of gases; thermodynamics and kinetic theory of matter; wave motion; sound; electrostatics. Prerequisite: PHY 31; corequisite: MTH 32.

PHY 33 Physics III 3 lect 2 rec 3 lab 1 alt wks 4 cr
Electromagnetic theory; direct and alternating currents; electromagnetic waves; geometrical and physical optics; modern physics. Prerequisite: PHY 32; corequisite: MTH 33.

PHY 34 Engineering Mechanics 1 lect 3 rec 4 cr
Principles of mechanics and development of logical procedures of analysis in problem solving. Statics and kinematics of rigid bodies, dynamics of particles and rigid bodies, and mechanical vibrations. Prerequisites or corequisites: PHY 33 MTH 33.

PHY 40 Physics of Photography and Optics 2 rec 2 lab 3 cr
The physical nature of light, optics, and photochemistry are discussed to acquaint students with principles of photography and optics. Access to a camera with a variable shutter, diaphragm and interchangeable optical systems is provided. Prerequisite: MTH 02 or 03; corequisite: ENG 02 or RDL 02 if required.

PHY 41 Electricity and Magnetism 2 lect 2 rec 3 cr
Electrostatics and magnetostatics; Maxwell's equations; basic principles of stationary and moving electric and magnetic fields and their effect on charged particles. (Recommended for students planning to major in Electrical Engineering or Physics.) Prerequisites: PHY 33, MTH 33; corequisite: MTH 34.

PHY 51 Modern Physics 3 lect 2 lab 3 cr
Elementary quantum theory, quantum numbers, atomic shell structures and the periodic table; structure of solids, band theory of metals, insulators, semiconductors; x-rays and gamma radiation; relativity; nuclear physics. (Required for students in Engineering Science.) Prerequisite: PHY 33; corequisite: MTH 34.

PHY 61 Computer Methods and Programming for Applied Scientific Purposes 2 lect 2 lab 3 cr
Algorithms; introduction to computer systems and computer logic; programming languages (e.g., FORTRAN); data representation; computer solutions to problems in Engineering Science, Physics, and Mathematics, using numerical methods to include numerical integration, numerical differentiation, method of least squares, random number generation and probability. Required for students in Engineering or Computer Science. Prerequisites: MTH 15 or MTH 31 and one semester of college physics, or permission of the department.

*Offered Fall Semester only.
**Offered Spring Semester only.
POLITICAL SCIENCE

Department of Social Sciences

POL 11 American National Government 3 rec 3 cr
Survey of structure and activities of the national government: bases of present political system, pressure groups, political parties, elections, Congress, the President, the Supreme Court, and the protection and deprivation of individual rights. Corequisite: ENG 02 or RDL 02 if required.

POL 31 Comparative Government 3 rec 3 cr
A study of the governments and politics of some important political systems in the modern world, especially those of Great Britain, the Soviet Union and the non-western world. Prerequisite: POL 11, or HIS 10, or SOC 11, or permission of department.

POL 41 The National Government & Civil Rights since 1954 3 rec 3 cr
Analysis of roles played by the three branches of the national government in enacting and enforcing civil rights laws. Focus on governmental activity concerning Black rights in voting and desegregation of schools from 1954 to the present, and other areas of civil rights concerning Puerto Ricans, Chicanos, and American Indians. Prerequisite: POL 11, or SOC 11, or permission of department.

POL 42 Civil Rights Throughout the World 3 rec 3 cr
Past and present comparison of governmental civil rights activities throughout the world, including civil rights and color (Blacks, Latins and Indians in the U.S., West Indians in Great Britain, Eastern Jews in Israel, and Blacks in South Africa); civil rights and religion (Catholics and Protestants in Northern Ireland, Moslems and Hindus in India, and Moslems and Jews in Israel); women's rights in various countries. Prerequisite: POL 11, or HIS 10, or SOC 11, or permission of department.

POL 51 Urban Politics 3 rec 3 cr
Politics and government of the American city: municipal political institutions, suburban and metropolitan government, relations with the state and federal governments, racial and ethnic politics, planning, crime and the police, public education. Prerequisite: POL 11, or SOC 11, or permission of department.

POL 61 Solving Social Problems Through the Political Process 3 rec 3 cr
Practical course showing how to work through existing channels for a more meaningful life. Focus on formal and informal responsibilities of officials in all levels of government. How to solve social problems and use of political channels. Prerequisite: POL 11, or SOC 11, or permission of department.

POL 71 Politics of Developing Areas 3 rec 3 cr
Introduction to the politics and government of developing areas of the world. Study of modernization and political development, influences of internal and external forces on political evolution, social bases of political life, national political institutions and processes, political thought and ideology, regional and international institutions and politics, and foreign policy problems. Prerequisite: POL 11, SOC 11 or HIS 10.

POL 72 International Politics 3 rec 3 cr
Introduction to the field of international politics. Explores foundations of modern international politics, relationship between domestic and international politics, various means for the pursuit of foreign policy goals by states, role of non-governmental organizations on the international scene, and some approaches to problems of war and peace. Prerequisite: POL 11 or SOC 11 or HIS 10, or permission of the department.

POL 81 Field Work and Seminar in Political Science 3 rec 3 cr
6 hrs field work
Supervised field work in local government agencies and in offices of local legislators. Related seminars develop understanding of political and governmental problems of urban communities. Prerequisites: 9 credits in the social sciences, including POL 11, and/or permission of the department.

PSYCHOLOGY

Department of Social Sciences

PSY 11 Psychology 3 rec 3 cr
Scientific method in the understanding of human behavior. Introductory study of growth and development, motivation, emotions and mental health, learning, intelligence and personality evaluation. Corequisite: ENG 02 or RDL 02 if required.

PSY 22 Social Psychology 3 rec 3 cr
Introduction to social psychology, focusing upon the nature of aggression and violent behavior; role of social influence in determination of deviant and conformist behavior; attitude change and decision making, affiliation, primary and group relationships, social norms and interrelationship of personality and culture. Prerequisite: PSY 11.

PSY 31 Abnormal Psychology 3 rec 3 cr
Major forms of psychological disorders, such as neuroses, psychoses, psychosomatic disturbances and character disorders; their origin, development and treatment. Prerequisite: PSY 11.
PSY 35 Dynamics of Human Motivation
Introduction to complex human motivation; emphasis on interaction of conscious and unconscious motives, inner conflict, and adaptive and maladaptive coping techniques. Applications to relevant contemporary problems, such as child rearing, psychotherapy, education and drug addiction. Prerequisite: PSY 11.

PSY 36 Workshop in Interpretation of Human Motivations
Explores the underlying reasons for human behavior as they emerge in actual and/or simulated life situations. Introduction to methods for detecting conflicts, unconscious thought process, and "games people play," as signaled by verbal and nonverbal communications in everyday situations, e.g., husband-wife interaction, parent-child interactions, dating behavior, approaches to school learning. Prerequisite: PSY 11.

PSY 41 Psychology of Infancy and Childhood
Major factors in psychological development from infancy through childhood; influence of the family. Biological, cultural, and socio-economic factors in producing normal and abnormal intellectual and emotional growth. Prerequisite: PSY 11.

PSY 42 Psychology of Adolescence and Adulthood
Study of development from adolescence to adulthood with regard to implications for self-realization, love, marriage, vocation, parenthood, retirement and aging. Changing attitudes and values about sex, drugs, aging and politics are explored in regard to different stages of adult development. Prerequisite: PSY 11.

PSY 43 Psychological Development During Maturity and Aging
Normal and abnormal psychological development during adulthood and old age. Emphasis on dynamics of the life cycle; theories of the mature personality; forces affecting continuing growth of the adult personality and intellect; biological, social and cultural determinants of aging, and influence of normal and abnormal aging processes on perception, psychomotor skills, learning, intelligence, and personality. Prerequisite: PSY 11.

PSY 44 Psychology of Women
Development, personality characteristics, and needs of women; similarities to and differences from men. Psychological aspects of uniquely feminine experiences. Issues are examined from a theoretical as well as an empirical perspective. Prerequisite: PSY 11.

PSY 45 Religion and the Psychology of Women
Impact of religion on the image and role of women. Encompasses prehistoric and early historic periods as well as major world religions and philosophical systems, all in relationship to an understanding of their impact on women. Prerequisite: PSY 90 or PSY 44.

PSY 51 Principles of Group Dynamics
Introduction to theory of group behavior, including analysis of the psychological structure of groups, cohesive and disruptive forces, conflict and adjustment in group relationships and relationship of groups to society. Prerequisite: PSY 11.

PSY 52 Workshop in Group Dynamics: Leadership Training
Focus upon developing skills needed to lead or direct group interaction within human services settings. Channeling psychodynamics of group process toward constructive ends. Techniques for facilitating group interaction and insight. Application of role-playing, psychodrama, etc., in a variety of settings. Prerequisite: PSY 11.

PSY 61 Laboratory in Group Experience for Applied Settings
Student's interaction within groups studied as a means of increasing effectiveness in human service, educational, and industrial settings. Effects of role changes (such as going from student-in-class to authority-in-institution). Impact of subtle group pressures in various structures: authority conflicts among professionals in a school, hospital or office. Role-playing, field reports and class interaction. Prerequisite: PSY 11.

PSY 62 Workshop in Group Interaction: Personal Growth Group Settings
Class members analyze their interactions as a group to facilitate self-understanding and enhance effectiveness in personal life situations. Operation of the unconscious, use of psychological defenses, and strategies for dealing with various conflicts. Prerequisite: PSY 11.

PSY 71 Clinical Techniques of Assessment: The Interview
Interpersonal approach in assessing psychological problems of individuals and minigroups. Practical experience with clinical interview techniques; psychological evaluation of data and case history write-ups. Methods of referral to appropriate professional and community resources are discussed. Prerequisite: PSY 11.

PSY 72 Clinical Techniques of Assessment: Psychological Testing
Basic concepts of psychological tests and testing procedures. Introduction to objective and projective instruments to measure cognitive, intellectual and personality characteristics. Administration and interpretation of test data and the writing of psychological protocols. Prerequisite: PSY 11.

PSY 81 Field Work and Seminar in Psychology I
Supervised field work or independent research. Required seminar integrates practical experience with course work. Prerequisites: 9 credits in the social sciences (Economics, Political Science, Psychology, Sociology) and/or permission of the department. 6 of these credits must be in Psychology.

104 course descriptions
PSY 82 Field Work and 3 rec 6 hrs field work
Seminar in Psychology II 3 cr
Continuation of supervised field work or independent research for an additional semester at either the same or a different facility. Prerequisites: PSY 81 and/or permission of the department.

RADIATION

Department of Physics

RAD 71 Radiation Physics 2 rec 2 lab 3 cr
and Dosimetry I Elements of atomic and nuclear physics; interaction of radiation with matter; radioactivity, half-life; Geiger counter; elements of health physics. Prerequisite: PHY 22.

RAD 72 Radiation Physics and 2 rec 2 lab 3 cr
Dosimetry II Elements of nuclear physics, the conservation laws, alpha, beta, and gamma decay; the neutrino; elements of health physics; the roentgen, REM, RFP, and RAD; maximum safe human exposure to radiation; regulations governing exposure. Prerequisite: RAD 71.

READING

Department of Special Educational Services

RDL 01 Basic Reading Skills 5 rec 0 cr
Individualized program in fundamental reading skills with emphasis on phonics and syllabication, word structure, and sentence and paragraph analysis on student's instructional level. Required for those students with a scaled score of 1-7 on the CUNY Reading Assessment Test.

RDL 02 Reading and 5 rec 0 cr
Study Skills Individualized program designed to develop reading and study skills necessary for success in college-level work. Vocabulary development, comprehension skills, textbook techniques, and library and research techniques. Prerequisite: RDL 01 or a scaled score of 8-14 on the CUNY Reading Assessment Test.

RDL 05 Basic Reading for ESL Students 3 rec 0 cr
An introductory program designed to help beginning ESL students expand their reading knowledge of English through extensive and intensive reading practice. Development of techniques to facilitate comprehension of words, sentences, and paragraphs for increased reading speed and improved comprehension. Prerequisite: Registration only by Department placement.

RDL 11 College Reading and 2 rec 2 cr
Study Skills* Elective course to increase proficiency in reading and study skills. Student and instructor jointly develop an individual program based on the student's expressed interests and diagnosed needs. The program might focus on any combination of the following: rate of reading, test-taking techniques, reading in the content areas, textbook reading and study techniques, critical and interpretive reading. Prerequisite: RDL 02 or a reading grade level at or above the exit reading grade level for RDL 02.

RDL 21 Reading in the Sciences 3 rec 3 cr
and Technologies Advanced reading and study skills to obtain, utilize, and retain information from texts in the sciences and technologies. Application of scientific and technical vocabulary, critical and interpretive comprehension, and study and test taking skills will be related to students' curriculum needs and interests. Prerequisite: RDL 02, if required.

*R course not recommended for students who do not have fluency in reading English.

RELIGION (see Philosophy)

Department of Social Sciences

SECRETARIAL STUDIES

Department of Secretarial Studies

COM 31 Business Communications 3 rec 3 cr
Effective listening, reading, speaking, and writing in and for business, including composition at the typewriter of memoranda, letters, and reports, research necessary for such writing. Prerequisites: ENG 13 and TYP 12; corequisite: TYP 13.

SEC 34 Medical Office 4 rec 2 cr
Practice and Management I

SEC 35 Medical Office 4 rec 2 cr
Practice and Management II Efficient management of offices of physicians, hospitals, and medical laboratories. Cultivation of desirable personal traits and attitudes of the medical office assistant. Office projects include case records, medical reports, special filing systems, and record keeping. Development of skill in the use of transcribing equipment. Prerequisites for SEC 34: BIO 18, BIO 22; corequisites: COM 31, TYP 13, BIO 46. Prerequisite for SEC 35: SEC 34; corequisites: BIO 47, LAW 45.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEC 37</td>
<td>Medical Office Communication</td>
<td>3 cr</td>
<td>Development of effective written communication skills for the medical secretarial assistant. Composition of medical case records from X-ray reports, laboratory analyses, and doctors' diagnoses; letters and reports to patients, private health agencies and others; editing and rewriting medical reports and manuscripts. Prerequisites: ENG 13 and TYP 12; corequisite: TYP 13.</td>
<td></td>
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<tr>
<td>SEC 41</td>
<td>Secretarial Practice</td>
<td>4 cr</td>
<td>Integration of secretarial skills and cultivation of desirable personal traits and attitudes of the executive secretary. Realistic secretarial office assignments, including theory and practice of filing; operation of transcription equipment. Prerequisites: COM 31, TYP 13.</td>
<td></td>
</tr>
<tr>
<td>SEC 45</td>
<td>School Records and Accounts</td>
<td>2 cr</td>
<td>Responsibilities of the school secretary; preparation of accident reports, organization and payroll; records of school personnel, supplies and textbooks; accounts of school monies; school headquarter forms; filing. Corequisite: ENG 02 or RDL 02 if required.</td>
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</tr>
<tr>
<td>SEC 47</td>
<td>Educational Problems of School Secretaries I</td>
<td>2 cr</td>
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<tr>
<td>SEC 48</td>
<td>Educational Problems of School Secretaries II</td>
<td>2 cr</td>
<td>Public relations in modern public education; organization of New York City school system according to by-laws, manuals, directives; problems related to mental hygiene, student welfare and public guidance, health and safety; simple methods of research and educational statistics. Corequisite: ENG 02 or RDL 02 if required.</td>
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<tr>
<td>SHO 01</td>
<td>Refresher Shorthand (Gregg)</td>
<td>3 cr</td>
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<tr>
<td>SHO 02</td>
<td>Refresher Shorthand (Pitman)</td>
<td>3 cr</td>
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<tr>
<td>SHO 11</td>
<td>Shorthand I (Gregg)</td>
<td>5 cr</td>
<td>Principles of shorthand theory and development of skill to take dictation of simple materials at a speed of 60 words per minute. Corequisite: TYP 11.</td>
<td></td>
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<tr>
<td>SHO 12</td>
<td>Shorthand II (Gregg)</td>
<td>4 cr</td>
<td>Dictation, including a systematic review of theory and expansion of vocabulary. Sustained dictation of business materials at a speed of 80 words per minute. Pre-transcription training. Prerequisites: SHO 11, TYP 11; corequisite: TYP 12.</td>
<td></td>
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<tr>
<td>SHO 13</td>
<td>Shorthand III (Gregg)</td>
<td>4 cr</td>
<td>Building extensive business vocabulary. Development of fluency in taking high-speed and sustained dictation at a speed of 100 words per minute. Transmission techniques. Prerequisites: SHO 12 or placement examination, TYP 12; corequisites: TYP 13 and ENG 13.</td>
<td></td>
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<tr>
<td>SHO 14</td>
<td>Shorthand IV (Gregg)</td>
<td>4 cr</td>
<td>Development of expert dictation skill at a speed of 120 words per minute. Integration of office-style dictation. High-speed transcription according to office standards. Prerequisites: SHO 13 or 17, TYP 13, and ENG 13.</td>
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<tr>
<td>SHO 18</td>
<td>Shorthand IV (Pitman)</td>
<td>4 cr</td>
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<tr>
<td>SHO 31</td>
<td>Legal Shorthand I (Gregg or Pitman)</td>
<td>4 cr</td>
<td>Dictation and transcription of nonlitigation materials with attention to development of legal shorthand vocabulary. Speed of 100 words per minute. Prerequisites: SHO 12 or placement examination, TYP 12; corequisites: SHO 13 or 17, TYP 13, LAW 41 and LAW 47.</td>
<td></td>
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<tr>
<td>SHO 32</td>
<td>Legal Shorthand II (Gregg or Pitman)</td>
<td>6 cr</td>
<td>High-speed dictation and rapid transcription of litigation papers and materials — pleadings, orders, judgments, stipulation, ETBs, appeals. Speed of 120 words per minute. Prerequisites: TYP 13, SHO 31.</td>
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</tr>
<tr>
<td>SOC 11</td>
<td>Sociology</td>
<td>3 cr</td>
<td>Introduction to the scientific study of human life as group life. Culture and personality; courtship, marriage and family; religious behavior; education and communication; theories of social stratification and social change. Corequisite: ENG 02 or RDL 02 if required.</td>
<td></td>
</tr>
<tr>
<td>SOC 31</td>
<td>Race and Ethnic Relations</td>
<td>3 cr</td>
<td>Characteristics of American ethnic minorities and religious groups, including theories explaining prejudice and discrimination. Intergroup relations, with particular reference to the New York metropolitan area, and techniques for relieving and eliminating problems in this field of human relations. Prerequisite: SOC 11.</td>
<td></td>
</tr>
</tbody>
</table>
SOC 32 The Sociology of the City 3 rec 3 cr
Sociological concepts of urbanism and community; current patterns of urban stratification and group life. History, spatial patterning, and social organization of urban areas related to different groups making up the city and its suburbs and to the processes and impact of change affecting them. Effect of urban living on personality and culture. Prerequisite: SOC 11.

SOC 33 Marriage and the Family 3 rec 3 cr
Introduction to the study of the family as a social institution. Evolution of the form and functions of the family and how its structure is shaped by forces in society. Significance of the family as a socialization agent, courtship and the romantic love complex, women's roles and changing family structure, minority culture families in American society and consideration of the future of the family. Prerequisite: SOC 11.

SOC 34 Social Deviance 3 rec 3 cr
Explores what is regarded as deviant within a society, with emphasis on criminality and mental illness. Deviance from the perspective of the deviant, e.g., the process by which his initial deviance becomes a career or master status. Deviance from the perspective of society, its social structure, norms and sanctions relevant to deviance, and functions or dysfunctions served by those committing acts of deviance. Prerequisite: SOC 11.

SOC 35 Introduction to Social Work 3 rec 3 cr
Nature of social work and its functions; family casework, child welfare, psychiatric and medical social work, correctional services, public welfare and community welfare organizations. Prerequisite: SOC 11 or PSY 11 or permission of instructor.

SOC 36 Sociology of Women 3 rec 3 cr
The nature of women's and men's participation in the family, at school, at work, at play, and in government. Comparative study of various classes and races of contemporary American women and their historical and international counterparts. Analysis of the impact of the sexual revolution and the movement for sexual equality. Prerequisite: SOC 11.

SOC 37 Class and Power in American Society 3 rec 3 cr
Introduction to the issue and prevalence of social inequality in various societies; documentation of economic, political and status differences and preview of theories of social stratification; examination of key issues such as the consequences of inequality, education and social mobility, and inequality and race; analysis of historical and contemporary changes in stratification systems. Prerequisite: SOC 11.

SOC 38 Social Advocacy 3 rec 3 cr
Introduction to the roles and problems of advocates in the social services system; the nature, need and processes of advocacy; legal and administrative aspects of social services programs (social security, welfare, family court); advocating the rights of special groups (handicapped, poor, youth, aged). Prerequisite: POL 11 or SOC 11 or department permission.

SOC 81 Field Work and Seminar in Sociology 3 cr
Supervised field work in community agencies. Related seminars develop understanding of social problems of urban communities as well as rudimentary skills in sociological research. Prerequisites: 9 credits in the social sciences, including SOC 11, and/or permission of the department.

SOC 92 Religion and Society 3 rec 3 cr
Social origins and phenomena of religion including its meaning for the individual and what functions it serves for society. Examination of religion and religious ideology in America and other societies, historically and cross-culturally, and current religious movements. Prerequisite: SOC 11 or PHL 90.

SPANISH

Department of Modern Languages

SPN 11 Beginning Spanish I 4 rec 4 cr
Pronunciation, language structure, conversation and reading of simple texts; dictation. Audio laboratory practice.

SPN 12 Beginning Spanish II 4 rec 4 cr
Continuation of SPN 11. Language structure, conversation; reading of elementary literary texts; dictation. Prerequisite: SPN 11 or placement test.

SPN 13 Intermediate Spanish 4 rec 4 cr
Advanced language structures; conversation; reading, translation and discussion of modern texts; composition. Prerequisite: SPN 12 or placement test.

SPN 15 Spanish for Urban Conversation and Careers I 4 rec 4 cr
For non-Spanish speaking students. Intensive conversation course emphasizing practical and realistic situations including the business, community and civil service areas. Use of Audio lab required.
SPN 16 Spanish for Urban Conversation 4 rec 4 cr
and Careers II
Continuation of SPN 15. Conversation based on social and work situations. Use of Audio lab required. Prerequisite: SPN 15 or placement test.

SPN 17 Advanced Spanish Conversation 4 rec 4 cr
Continuation of SPN 16. Students participate in dialogues and conversations related to contemporary problems and everyday situations to improve conversational skill. Course conducted in Spanish. Prerequisite: SPN 13 or 16 or placement test.

SPN 18 Elementary Spanish for Nurses and Hospital Personnel I
Intended for non-Spanish-speaking students. 
Basic Spanish pronunciation, intonation and sentence structure; relevant medical terminology; idiomatic and colloquial expressions. Model dialogues on taking medical history, routine medical examination, diet and nutrition, nursing care, treatment instructions, pediatrics, cardiology, and others. Additional vocabulary according to the student’s interests and field of medical specialization.

SPN 19 Elementary Spanish for Nurses and Hospital Personnel II
Review and continuation at a higher level of pronunciation, speaking and understanding. Additional vocabulary in new medical situations, such as admissions, X-rays, and pregnancy. Prerequisite: SPN 18 or placement test.

SPN 20 Advanced Spanish Composition and Creative Writing
Style illustrations with literary texts, text analysis, reading for comprehension, paragraph construction, imitation of models, expository writing, translation of literary texts, thematic discussions, stylistic discussions, written reports on research. Prerequisite: SPN 13 or 17 or placement test.

SPN 21 Spanish Language and Culture 4 rec 4 cr
A literary and historical study of Spanish culture; develops basic language skills. Class discussions on social, historical and artistic values of Spain, past and present. Course conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

SPN 22 Latin-American Language and Culture
Readings in Latin-American literature. Representative texts on Latin-American and Caribbean culture, civilization, history and tradition. Conversations; literary analysis and interpretation. Course conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

SPN 23 19th-Century Spanish Literature: Romanticism and Realism 3 rec 3 cr
Literary analysis of selections from representative Spanish authors. Oral discussion and reports. Outside readings to be assigned. Course conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

SPN 24 Don Quijote and Other Cervantes Masterpieces 3 rec 3 cr
Reading, discussion, analysis and written reports on selections from the original text. Selections from Cervantes’ Novelas Ejemplares. Course conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

SPN 25 Generation of ‘98 3 rec 3 cr
Literary analysis of selections from the principal writers of the movement. Reading, discussion, oral and written reports. Course conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

SPN 28 Interpreting and Translation Skills for Legal Personnel 3 rec 3 cr
Basic skills required for bilingual personnel serving the Hispanic community in the Metropolitan area. Advanced Spanish course which emphasizes translating and interpreting for legal personnel. Students should be bilingual, fluent in both English and Spanish. Prerequisite: RDL 02 or ENG 02 B required, and SPN 13 or placement.

SPN 30 Puerto Rican Literature and Culture I 4 rec 4 cr
Survey of Puerto Rican history, culture, and literature to 1880. Reading, discussion, oral and written reports based on representative Puerto Rican authors. Course conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

SPN 31 Puerto Rican Literature and Culture II 4 rec 4 cr
Continuation on SPN 30. Survey of Puerto Rican history, culture, and literature from 1880 to the present. Reading, discussion, oral and written reports based on representative Puerto Rican authors. Course is conducted in Spanish. Prerequisite: SPN 13 or 17 or placement test.

TAXATION
Department of Business

TAX 11 Introduction to Taxation 3 rec 3 cr
Study of the current Federal, New York State and New York City income tax laws and regulations: concepts of taxable gross and net income, deductions and exemptions as applied to various classes of individual taxpayers. Preparation of individual income tax returns on government forms. Prerequisites: BUS 11 and ACC 11 or permission of the department.
TYPING

Department of Secretarial Studies

KEY 10 Keyboarding for Computers

For non-secretarial majors

A keyboarding course for computers for non-secretarial majors. Students develop an alphabetic, number, and symbol touch keyboarding skill which primarily applies to keyboard inputting. Microcomputer terminals are used to reinforce each keyboarding operational function. Minimum speed standard is 20 words per minute.

TYP 01 Refresher Typing

3 rec 0 cr

Designed to develop typing techniques and skills. Extensive drill sessions to build speed and accuracy. Required for those students who have studied typewriting and who do not reach designated level on a typing placement examination.

TYP 11 Typing I

5 rec 2 cr

Development of basic skills in the use of the typewriter. Letter writing, tabulation problems and report writing. Speed of 35 words a minute.

TYP 12 Typing II

4 rec 2 cr

Development of speed and control. Advanced letter writing problems, letter production, manuscript writing and tabulation. Speed of 50 words per minute. Prerequisite: TYP 11; corequisite: ENG 02 or RDL 02 if required.

TYP 13 Typing III

4 rec 2 cr

Typing skill at the expert level according to office standards. Basic magnetic keyboard technology. Emphasis on the operation of electronic typewriting equipment and application of office projects. Development of high speed techniques. Speed of 60 words per minute. Prerequisite: TYP 12; corequisite: ENG 13.

TYP 14 Electronic Keyboarding

3 rec 3 cr

Magnetic keyboard technology and advanced operation of electronic keyboarding equipment. Emphasis on preparing high-level production work both in content and design for input into the system and ultimate retrieval. Prerequisite: TYP 13.

WORD PROCESSING

Department of Secretarial Studies

WPR 11 Machine Transcription I

5 rec 3 cr

Development of the ability to operate and transcribe simple dictated material from transcription machines in preparation for employment as a machine transcriber. Minimum level of performance is 14 words per minute on mailable copy. Prerequisite: TYP 11; corequisites: TYP 12, ENG 13.

WPR 12 Machine Transcription II

5 rec 3 cr

Development of the ability to transcribe complex dictated material for extended time periods in preparation for employment as a correspondence secretary. Minimum level of performance is 20 words per minute on mailable copy. Prerequisites: TYP 12, WPR 11 or SHO 12; corequisite: TYP 13.

WPR 21 Word Processing Administration

3 rec 3 cr

Administrative processes involved in the operation of a word processing center. Emphasis on understanding the work flow and multiple tasks required in a word processing center. Prerequisites or corequisites: TYP 13, WPR 11 or SHO 12.

WPR 22 Word Processing Office Simulation

3 rec 3 cr

Application of the knowledge learned in WPR 21 in a word processing center which simulates an actual business operation. Each student will perform a particular role and experience various positions, thereby learning the total operation of a word processing center and its function in business or professional organizations. Prerequisites: WPR 21, WPR 11 or SHO 12; corequisites: TYP 14, WPR 12.
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M.A., Brooklyn College

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Communication Arts and Sciences
B.A., Western Michigan University;
M.A., Wayne State University

Michele Stern, Associate Professor,
Health and Physical Education
B.A., Hunter College;
M.S., Brooklyn College
Michael Steuerman, Professor, Health and Physical Education
B.S., The City College;
M.A., Columbia University

John O. Stevenson, Jr., Associate Dean of Academic Affairs;
Higher Education Officer
B.A., Fordham University;
M.S., Ph.D., Polytechnic Institute of New York

Manuel Stillerma, Professor, Engineering Technologies
B.S.E.E., M.S.E.E., University of Michigan;
B.M.E., The Cooper Union;
Ph.D., New York University;
P.E., State of New York

Douglas A. Strauss, Director of Financial Aid;
Higher Education Associate
B.A., Fordham University;
M.A., University of Chicago;
Ph.D., Fielding Institute

H. Reid Strieby, Assistant Professor, Social Sciences
B.A., Bradley University;
M.A., University of Chicago;
Ph.D., Fielding Institute

Jacqueline B. Stuchin, Professor,
Special Educational Services
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M.A., Columbia University;
Ed.D., New York University

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B.A., Alabama College;
M.B.A., St. John's University;
M.A., New York University

Kazuye Takei, Professor, Secretarial Studies
B.A., M.Ed., University of Washington

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M.A., Teachers College, Columbia University

Joan Tarsney, Assistant Professor, Nursing
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M.A., Teachers College, Columbia University

Rosa H. Tate, Associate Professor, Nursing
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Higher Education Assistant, Student Development
A.A.S., Bronx Community College;
B.A., Herbert H. Lehman College

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B.A., University of Puerto Rico;
M.A., Teachers College, Columbia University

Francis D. Terrell, Assistant Professor, Business
B.S., University of Toledo;
J.D., Columbia University Law School

Edwin W. Terry, Professor, Library and Learning Resources
B.A., M.A., Brooklyn College;
B.S., M.A., Columbia University;
Ph.D., St. John's University

Ronald F. Thomas, Professor,
Biology and Medical Laboratory Technology
B.S., St. Francis College;
M.S., Long Island University;
Ph.D., New York University

Robert M. Thompson, Assistant Director, Safety and Security;
Assistant to Higher Education Officer
B.S., New York Institute of Technology

Regina M. Tobin, Associate Registrar
B.A., Mercy College

Miroslav M. Todorovich, Department Chairperson;
Associate Professor, Physics
B.S., Belgrade University (Yugoslavia);
M.A., Columbia University

James Trent, Instructor, Mathematics
B.A., Columbia University

Philip Tucker, Associate Professor, Business
B.B.A., The City College;
M.B.A., Baruch College;
CPA, State of New York

Susanne Turk, Assistant Registrar
A.B., University of Pennsylvania;
M.A., New York University

Herbert I. Tyson, Department Chairperson;
Professor, Engineering Technologies
B.S.C.E., Columbia University;
M.A., New York University;
M.A., Teachers College, Columbia University;
P.E., State of New York, State of New Jersey

William S. Wahlin, Associate Professor, Social Sciences (Psychology)
B.A., University of Wisconsin;
M.A., University of Kansas;
Ph.D., Columbia University

Marilyn Walsh, Associate Professor, Nursing
B.S., Teachers College, Columbia University;
M.S., St. John's University

Merlin F. Walwyn, Assistant Professor, Business
B.S., Oakwood College;
M.B.A., Long Island University

Henry Weiman, Associate Professor, Business
B.B.A., M.B.A., The City College

Emanuel Weiss, Associate Professor, Physics
B.A., Brooklyn College;
M.S., Polytechnic Institute of Brooklyn

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M.S., Teachers College, Columbia University

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B.S., The City College;
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Student Development
B.A., University of California at Berkeley;
M.S., Columbia University

Joseph W. Wieczerek, Professor, History
B.A., Brooklyn College;
M.A., Ph.D., New York University

Howard Wiener, Systems Analysis and Design Manager;
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B.S., The City College;
M.A., University of Wisconsin
Salomon Wilkofsky, Assistant Professor, Modern Languages (Spanish) 
B.A., The City College; M.A., Columbia University

Barbara T. Wilson, Lecturer, Special Educational Services 
B.E., National College of Education; M.S., The City College

Hans Winterfeldt, Professor, Modern Languages (German, Spanish) 
B.A., The City College; Ph.D., New York University

Marian Wise, Associate Professor, Secretarial Studies 
B.A., Hunter College; M.A., Teachers College, Columbia University

Bernard L. Witlieb, Professor, English 
B.A., The City College; M.A., Ph.D., New York University

Allan Wolk, Professor, Social Sciences (Political Science) 
B.A., M.A., The City College; Ph.D., New York University

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B.S., M.S., The City College

Margaret M. Yuen, Assistant Professor, Nursing 
B.S., Simmons College; M.A., New York University

William M. Zalkin, Assistant Professor, English 
B.A., Columbia University

Isaak Zimmerman, Professor, Chemistry and Chemical Technology 
B.S., The City College; M.S., Ph.D., New York University

Stephen M. Zimmerman, Assistant Professor, English 
B.A., Union College; M.A., Columbia University

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COLLEGE LABORATORY TECHNICIANS

Rudolph Arroyo, Senior College Laboratory Technician, Physics A.A.S., Bronx Community College; B.E.M.E., The City College

Joseph Bossone, College Laboratory Technician, Engineering Technologies

Joseph Cagner, Senior College Laboratory Technician, Chemistry A.A.S., Bronx Community College

Frances Caruso-Haralam, Senior College Laboratory Technician, Biology A.A.S., Bronx Community College

Arthur DeMatteo, Senior College Laboratory Technician, Library B.A., Fairleigh Dickinson University

Richard Fucci, College Laboratory Technician, Library

Nikolai Lopuchin, Senior College Laboratory Technician, Engineering Technologies

Ann McPartland, College Laboratory Technician, Secretarial Studies

Alice Netburn, College Laboratory Technician, Chemistry

Armstead Ransom, College Laboratory Technician, Health and Physical Education

Leonard Rinaldi, College Laboratory Technician, Biology A.A.S., Bronx Community College

Angelina Scimia, Senior College Laboratory Technician, Biology A.A.S., Bronx Community College

Leonard S. Silverman, College Laboratory Technician, Library

John Tiffany, College Laboratory Technician, Chemistry

Umberto Trentin, College Laboratory Technician, Library

Neville Trotman, College Laboratory Technician, Engineering Technologies

FACULTY EMERITI

Frederick J. Berger, M.E.E., Professor Emeritus of Engineering Technologies

Bernard P. Corbman, Ed.D., Professor Emeritus of Business; Dean of Academic Affairs

Milton Doroshkin, Ph.D., Professor Emeritus of Social Sciences

Mark D. Hirsch, Ph.D., Professor Emeritus of History

Gloria L. Hobbs, Ph.D., Professor Emeritus of Modern Languages; Associate Dean of Students

Richard L. Loughlin, Ph.D., Professor Emeritus of English

Martin K. May, M.B.A., Professor Emeritus of Business

Daniel S. McGrath, Jr., M.A., Professor Emeritus of Health and Physical Education; Dean of Administration

Vera F. Minkin, Ed.D., Professor Emeritus of Student Development; Dean of Students

Teta Moehs, Ph.D., Professor Emeritus of History

Charles R. Monticone, Ph.D., Professor Emeritus of Modern Languages

Burton R. Pollin, Ph.D., Professor Emeritus of English

Kalman B. Pomeranz, M.A., Professor Emeritus of Physics

Samuel Ress, J.D., Professor Emeritus of Business

Clement M. Thompson, Ph.D., Professor Emeritus of Student Development; Dean of Students

Jacob Tversky, Ph.D., Professor Emeritus of History

Henry F. White, Ph.D., Professor Emeritus of Biology
BRONX COMMUNITY COLLEGE AND THE COMMUNITY

Bronx Community College is vitally concerned with its community. To foster greater cooperation and interaction with neighboring community agencies, the College enjoys the support and participation of the Bronx Community College Advisory Committee, which includes representatives of community organizations, local business groups, civic leaders, and sister educational institutions. The committee promotes and encourages cultural and civic programs aimed at greater articulation of the mission of the College. Its activities have benefited students in many areas, including job placement, scholarship contributions and the support of recruitment efforts.

Bronx Community College, in expanding the traditional role of community relations, is one of the many promoters of community revitalization throughout the Bronx. The College works with such organizations as the Bronx Chamber of Commerce, Bronx Council on the Arts, Fordham Road Development Corporation, Fordham Road Merchants Association, South Bronx Overall Development Corporation, and Burnside Area Merchants Association to assist Bronx citizen groups in building stronger social institutions and improving services in the borough.

The College has sponsored conferences and seminars focusing on issues of concern to students, faculty and the community. With the cooperation of community business institutions, the College annually hosts an economic development conference which addresses practical approaches to enhancing the economic vitality of the Bronx.

In addition, seminars such as one on domestic violence co-sponsored by Bronx-Lebanon Hospital provide important information to community residents.

The College has taken a direct interest in the needs of its immediate neighborhood by founding and sponsoring the University Heights Development Corporation, a public non-profit corporation in partnership with community and College representatives. The corporation recently opened the Hall of Fame Towers, a residence for neighborhood senior citizens, adjacent to the College. Through the UHDC, Bronx Community College has created an effective model for positive intervention for other colleges and institutions to emulate.

Recognizing its commitment to the agencies serving the community, Bronx Community College has provided office space and services to the North Bronx Family Service Center, a church-sponsored agency, and Community Planning Board No. 5, sponsored by the City of New York. The College also maintains a close working relationship with political representatives in all levels of government to keep them aware of the needs and opinions of BCC, its students and its community.
CULTURAL PROGRAMS

A diversified program of cultural activities is sponsored by the College as a supplement to the educational programs of the College, as well as a service to residents of the community. Merging the efforts of the College, community, and professional artists, BCC endeavors to promote cultural activities that are artistically diversified and multifaceted.

The College's Lecturers Series include speakers in the fields of science, humanities, and the social sciences, and special seminars on contemporary subjects. These have included James Baldwin, James Earl Jones, Maya Angelou, Marv Albert, Piri Thomas, Felipe Luciano, Andrew Young, Rosalyn Yalow, Ozzie Davis and Ruby Dee.

Professional performing arts span orchestral and choral concerts, opera, ballet, modern or ethnic dance, jazz and folk music. Dramatic events are produced by both campus groups and professional theatre companies. Phyllis Hyman, Murray Louis Dance Company, Mongo Santamaria, Ray Baretto and his Orchestra, Tito Puente, Ballet Hispanico, and the Latin American Dance Theatre have all performed here recently for the pleasure of students and the community.

The College operates a small but elegant emporium co-sponsored by the Friends of Bronx Community Art Gallery.

The Bronx Community and College Symphony Orchestra is composed of students, faculty members, and members of the community. Since its inception in 1964, under the direction of Professor Louis F. Simon, the orchestra has become a major force in the cultural life of the Bronx, having already established a reputation for performing far above the norm.

The Bronx Community and College Choir includes BCC students and interested singers of the community. Under the direction of Professor John C. Hamell, the choir presents three major concerts a year at the College, and also performs in the greater metropolitan area.
Bronx Community College
University Heights Campus
University Avenue and West 181 Street
Bronx, New York 10453
(212) 220-6450

Directions to the College
IRT Jerome-Woodlawn No. 4 train to Burnside Ave. or 183rd St.
IND Sixth Ave. “D” train to 183rd St.
No. 3 University Ave. bus to 181st St.
No. 40 Tremont Ave. Crosstown or No. 36 180th St. Crosstown to University Ave.
No. 12 Fordham Road Crosstown stops at University Ave. where it connects with the No. 3.