



Queens College
City University of New York

1997-99 Graduate Bulletin

CollegeSource

Visit Career Guidance Foundation at <http://www.collegesource.org>

Copyright & Disclaimer Information

Copyright© 1994, 1995, 1996, 1997, 1998, 1999 Career Guidance Foundation

CollegeSource digital catalogs are derivative works owned and copyrighted by Career Guidance Foundation. Catalog content is owned and copyrighted by the appropriate school.

While the Career Guidance Foundation provides information as a service to the public, copyright is retained on all digital catalogs.

This means you may NOT:

- distribute the digital catalog files to others,
- “mirror” or include this material on an Internet (or Intranet) server, or
- modify or re-use digital files

without the express written consent of the Career Guidance Foundation and the appropriate school.

You may:

- print copies of the information for your own personal use,
- store the files on your own computer for personal use only, or
- reference this material from your own documents.

The Career Guidance Foundation reserves the right to revoke such authorization at any time, and any such use shall be discontinued immediately upon written notice from the Career Guidance Foundation.

Disclaimer

CollegeSource digital catalogs are converted from either the original printed catalog or electronic media supplied by each school. Although every attempt is made to ensure accurate conversion of data, the Career Guidance Foundation and the schools which provide the data do not guarantee that this information is accurate or correct. The information provided should be used only as reference and planning tools. Final decisions should be based and confirmed on data received directly from each school.

GRADUATE BULLETIN

1997-99

QUEENS COLLEGE OF THE CITY UNIVERSITY OF NEW YORK

FLUSHING, NEW YORK 11367-1597 • 718-997-5000 • WWW.QC.EDU

ALLEN LEE SESSOMS, PRESIDENT



A MESSAGE FROM THE PRESIDENT QUEENS COLLEGE, CUNY

Queens College is proud of its history as one of the campuses of the City University of New York entrusted with the mission of teaching, research, and public service on both the undergraduate and graduate levels. As a liberal arts and sciences institution, the College is a center for the region's intellectual and cultural life, as well as its social and economic development.

Graduate education and research are essential elements of Queens College's mission and important avenues to the global recognition to which we aspire. We are now poised to move the College forward and upward into the top rank of graduate schools. We are fortunate to have a distinguished faculty actively engaged in instruction and research in the national and international arenas. In recognition of their excellence, our faculty receives \$8.5 million annually in funded research.

Queens College offers Master's Degrees and Certificates in close to 50 disciplines, and is also a major participant in eight Ph.D. programs offered by the City University's Graduate Center. As an urban research center, Queens is one of only four City University campuses equipped with science laboratories. More than two hundred doctoral candidates do their research at Queens under the supervision of our faculty.

Graduate education thrives in the College's atmosphere of intellectual exchange. Here, disciplines are taught, examined, and advanced, as ideas are explored with both rigor and the illumination provided by our varied cultural perspectives. Our students acquire first-rate professional skills and, more importantly, the necessary intellectual and critical abilities to meet the challenges of tomorrow.

Allen Lee Sessoms
President

QUEENS COLLEGE OF THE CITY UNIVERSITY OF NEW YORK

Allen Lee Sessoms, B.S., M.S., M. Phil., Ph.D.

President

John A. Thorpe, B.S., M.A., Ph.D.

Provost and Senior Vice President for Academic Affairs

Hamid Shirvani, B.Arch., M.Arch., M.S., M.L.A., M.A., Ph.D.

Vice President for Graduate Studies and Research

Sherry Brabham, B.A., M.A.

Acting Vice President for Finance and Business

Burton Backner, B.A., Ph.D.

Dean of Students

Raymond Erickson, B.A., Ph.D.

Dean of the Faculty of the Division of Arts and Humanities

Norman L. Goldman, B.S., A.M., Ph.D.

Dean of the Faculty of the Division of Mathematics and Natural Sciences

Frederick Purnell, A.B., Ph.D.

Acting Associate Provost for Academic Planning and Programs

Sydney L. Schwartz, B.A., Ed.D.

Acting Dean of the School of Education

Donald M. Scott, B.A., M.S., Ph.D.

Dean of the Faculty of the Division of Social Sciences

Office of Graduate Studies and Research

Graduate Studies	718-997-5190
Graduate Admissions	718-997-5200
Research and Sponsored Programs	718-997-5400
Corporate and Foundation Relations	718-997-3929

CONTENTS

CALENDAR

3	A Message from the President
7	Graduate Studies at Queens College
8	Queens College Today
9	Degree & Certificate Offerings
12	Government, Services & Facilities
16	Admission, Retention & Graduation
20	Tuition, Fees & Financial Aid
24	Scholastic Standards
27	Regulations
35	Programs of Study
131	Administration
133	Transportation
138	Index

FALL 1997

September 1 - Monday:
Labor Day-College Closed

2 - Tuesday: First day of classes

October 1 - Wednesday: Follow Friday schedule

2-3 - Thursday-Friday: No classes or related events scheduled

11-12 - Saturday-Sunday: No classes or related events scheduled

13 - Monday: Columbus Day-- College Closed

November 25 - Tuesday: Follow Thursday schedule

27-30 - Thursday-Sunday: Thanksgiving Recess

December 15 - Monday: Last day of classes

16-23 - Tuesday-Tuesday: Fifteenth Week, including final exams

SPRING 1998

January 31 - Saturday: First day of classes

February 10 - Tuesday: Follow Thursday schedule

12 - Thursday: Lincoln's Birthday-college Closed

16 - Monday: Presidents' Day-- College Closed

April 8 - Wednesday: Follow Friday schedule

10-19 - Friday-Sunday: Spring Recess

May 20 -Wednesday: Last day of classes

21-29 - Thursday-Friday: Fifteenth Week, including final exams

25 - Monday: Memorial Day-- College Closed

June 4 - Thursday: Commencement

Important Notice of Possible Changes

The City University of New York reserves the right, because of changing conditions, to make modifications of any nature in the academic programs and requirements of the University and its constituent colleges without advance notice. Tuition and fees set forth in this publication are similarly subject to change by the Board of Trustees of the City University of New York. The University regrets any inconvenience this may cause.

GRADUATE STUDIES AT QUEENS COLLEGE

Many of you are now or soon will be deciding which graduate school is best for you. Queens College of the City University of New York, a selective public college with a long-standing commitment to graduate education, merits your close consideration.

The pages that follow set forth the variety of graduate offerings available to you at Queens. With a campus that includes students from 120 countries speaking 67 different native languages, Queens College is an exciting, cosmopolitan place in which to pursue your graduate education. I hope this *Bulletin* will help you to make an informed decision about graduate study, and I wish you every success in fulfilling your educational goals.

Founded in 1937, Queens College became part of the City University of New York in 1961. The University is made up of eleven four-year colleges, six community colleges, a law school, and an affiliated medical school. Queens participates extensively in the doctoral programs of the Graduate School and University Center, the unit of the City University offering graduate work at the doctoral level, and has offered Master's Degree and Advanced Certificate programs since 1948. The College is accredited by the Middle States Association of Colleges and Secondary Schools, is a member of the American Association of Colleges for Teacher Education, and has chapters of Phi Beta Kappa and Sigma Xi.

Queens College is fortunate to have a distinguished faculty that shares a deep commitment to teaching. Many faculty

members are national and international leaders in their fields, and recipients of numerous fellowships, awards, and research grants.

In recent years the 76-acre campus has undergone a major renovation. New facilities include the Benjamin S. Rosenthal Library, the centerpiece of the new campus; the Music Building, home to the Aaron Copland School of Music and LeFrak Concert Hall; and the Science Building, housing up-to-date computer and laboratory facilities. Currently, the campus is embarking on a major information technology plan that will bring the College's computing capacity to the state-of-the-art level.

The Queens College mission statement and its motto, *Discimus ut Serviamus* - "We learn in order that we may serve" - reflect the goals of the College: to provide affordable access to outstanding Master's Degree and Advanced Certificate programs; to maintain a learning environment that enriches intellectual development as it expands career opportunities; to contribute to the scholarly and scientific research that informs progress in society; to serve the larger community.

We invite you to review our Master's and Certificate offerings. Inquiries about the Graduate Division may be directed to the Office of Graduate Admissions, 718-997-5200, and the Office of Graduate Studies, 718-997-5190. Both offices are located in Powdermaker Hall, Room 100. We would welcome your visit to the campus.

Hamid Shirvani
Vice President for Graduate Studies and Research

QUEENS COLLEGE TODAY

Queens College first opened its doors in 1937, in the middle of the Great Depression, to students who were mostly immigrants or the children of immigrants. These people came to the College knowing that education was their surest road to a better life.

Today in a world that has grown both smaller and more complex, Queens College retains its international flavor with students from more than 120 nations attending classes here. And, just as before, Queens College is helping these students to be the best they can be and address the problems of a challenging time.

Queens College carries out its responsibilities by providing learning opportunities to the community, taking the word "community" in its broadest sense. The scholarly resources of our world-class faculty and facilities offer students a rich learning environment and a quality education at a reasonable cost. Through post-graduate study at Queens, students may expand their career opportunities by learning new professional skills, fulfill their intellectual needs, and participate in research and scholarship that enrich our society.

Queens College students have been the recipients of many fellowships and awards, and faculty have received numerous national and international fellowships, awards, and research grants.

Graduate programs are offered in the School of Education, the Graduate School of Library and Information Studies, the Aaron Copland School of Music, and all academic divisions. The departments and schools of the College are organized into the following divisions (the College's area code is 718):

Arts and Humanities Division 997-5790

Art 997-5770

Classical, Middle Eastern, and Asian Languages and Cultures
997-5570

English 997-4600

European Languages and Literatures
997-5980

Hispanic Languages and Literatures
997-5660

Linguistics and Communication Disorders 997-2870

Media Studies 997-2950

The Aaron Copland School of Music 997-3800

Mathematics and Natural Sciences Division 997-4105

Biology 997-3400

Chemistry and Biochemistry 997-4100

Computer Science 997-3500

Family, Nutrition, and Exercise Sciences 997-4150

Geology 997-3300

Mathematics 997-5800

Physics 997-3350

Psychology 997-3200

Social Sciences Division 997-5210

Economics 997-54400

History 997-5350

Philosophy 997-5270

Political Science 997-5470

Sociology 997-2800

Urban Studies 997-5130

The Graduate School of Library and Information Studies 997-3790

The School of Education 997-5220

Educational and Community Programs
997-5250

Elementary and Early Childhood Education and Services 997-5300

Secondary Education and Youth Services 997-5150

DEGREE & CERTIFICATE OFFERINGS

Degrees are offered in the following areas: the Master of Arts, the Master of Arts in Liberal Studies, the Master of Arts in the Social Sciences, the Master of Fine Arts, the Master of Library Science, and the Master of Science in Education. Certificates include the Advanced Certificate in Latin American Area Studies,* a Post-Master's Certificate in Library Science, a Specialist Diploma in School Administration and Supervision, a Professional Certificate in School Psychology, an Advanced Certificate in Marriage and Family Counseling,* and an Advanced Certificate in Educational and Learning Technologies.*

Post-baccalaureate Advanced Certificates leading to New York State provisional teacher certification are offered in Elementary Education and Secondary Education in English, French, General Science, Italian, Mathematics, Music, Social Studies, and Spanish. Bilingual certificates are offered in connection with Master's programs in Counselor Education, School Psychology, and Special Education.

B.A./M.A. Degrees

The Departments of Chemistry and Biochemistry, Computer Science, Philosophy, Physics, and Political Science, and the Aaron Copland School of Music offer to qualified undergraduate students the opportunity to receive combined Bachelor's and Master's degrees. Application to the B.A./M.A. program should be made in the upper sophomore or lower junior semester; admission is granted only in the junior year. Full details and application forms can be obtained from the Chair or Graduate Adviser of the department in question.

B.A./M.A. Degree programs are offi-

cially registered under the following HEGIS codes with the New York State Department of Education (Office of Higher Education & the Professions, Cultural Education Center, Rm. 5B28, Albany, NY 12230; 518-474-5851):

<i>Program</i>	<i>HEGIS Code</i>
Chemistry & Biochemistry	1905
Computer Science	0701
Music	1004
Philosophy	1509
Physics	1902
Political Science	2207

Students are advised that enrollment in other than registered or approved programs may jeopardize their eligibility for certain student aid awards.

Master's Degrees

Master's degrees are offered in these officially registered graduate programs, listed with their HEGIS code.

MASTER OF ARTS DEGREES

<i>Program</i>	<i>HEGIS Code</i>
Applied Linguistics	1505
Art History	1003
Audiology*	1220
Biology	0401
Chemistry & Biochemistry	1905
Computer Science	0701
Economics*	2204
English	1501
French	1102
Geology	1914
History	2205
Italian	1104
Latin Am. Area Studies*	0308
Mathematics	1701
Media Studies	0601
Music	1004
Physics	1902
Political Science & Govt.*	2207

Psychology	2001
Psychology: Clinical Behavioral Applications in Mental Health Settings	2099
Sociology	2208
Spanish	1105
Speech Pathology	1220
Urban Affairs	2214

MASTER OF ARTS IN LIBERAL STUDIES

4901

MASTER OF ARTS IN THE SOCIAL SCIENCES

2201

MASTER OF FINE ARTS

Studio Art 1002

MASTER OF LIBRARY SCIENCE

Library Science	1601
School Media Specialist-Library	0899.01

MASTER OF SCIENCE IN EDUCATION

<i>Program</i>	<i>HEGIS Code</i>
Art, K through 12	0831
Counselor Education	0826.01
Elementary Education N through 6	0802
Elementary Education with Specialization in Bilingual Education	0899
English, 7 through 12	1501.01
French, 7 through 12	1102.01
General Science Teaching Certificate Areas:	
Biology, 7 through 12	0401.01
Chemistry, 7 through 12	1905.01

*Applications for admission will not be accepted for the 1998-99 academic year.

Earth Sci., 7 through 12	1917.01
Physics, 7 through 12	1902.01
Home Ec., K through 12	1301.01
Italian, 7 through 12	1104.01
Mathematics, 7 through 12	1701.01
Music, K through 12	0832
Physical Ed., K through 12	0835
Reading Teacher	0830
School Psychologist	0826.02
Social Studies, 7 through 12	2201.01
Spanish, 7 through 12	1105.01
Special Education	0808
Teaching English to Speakers of Other Language	1508

Certificate Programs

The following certificate programs are offered.

Post-Baccalaureate Advanced Certificates

Elementary Education	
Pre-K through 6	0802.00
English 7 through 12	0803.00
Biology 7 through 12	0803.00
Chemistry 7 through 12	0803.00
Earth Science 7 through 12	0803.00
Physics 7 through 12	0803.00
Mathematics 7 through 12	0803.00
French 7 through 12	0803.00
Italian 7 through 12	0803.00
Spanish 7 through 12	0803.00
Social Studies 7 through 12	0803.00
Music K through 12	0832.00

School Administrator and Supervisor
Adv. Certif. Program 0828
(The specialist diploma in Administration and Supervision is offered at both the elementary and secondary school levels.)

School Psychology

Adv. Certif. Program 0826.02
(The professional certificate program in School Psychology is offered in conjunction with the Master of Science in Education Program.)

Librarianship

Post-Master's Certif. Program 1601

Doctoral Programs

Many members of the Queens College faculty participate in the doctoral programs of the City University of New York, which are coordinated through the Graduate School and University Center, located in midtown Manhattan. In addition to awarding the Ph.D. degree, the Graduate School offers many services for graduate students, including library and computer research facilities.

The following Ph.D. degrees are

offered: anthropology, art history, biochemistry, biology, biomedical sciences, business, chemistry, classics, comparative literature, computer science, criminal justice, earth and environmental sciences, economics, educational psychology, engineering, English, French, Germanic languages and literatures, Hispanic and Luso-Brazilian literatures, history, linguistics, mathematics, music, philosophy, physics, political science, psychology, sociology, speech and hearing sciences, and theatre. The Ph.D. and M.D./Ph.D. degrees are offered in biomedical sciences and the D.S.W. is offered in social welfare. The D.M.A. is offered in music performance. Advanced doctoral work in biochemistry, biology, chemistry, computer science, geology, physics, and psychology is given at Queens.

The first 30 credits of graduate work at the Master's level constitute the first year of the doctoral program in some departments. Financial assistance may also be available. For further information, contact the appropriate department at Queens or the Graduate Center, 33 W. 42 St., New York, NY 10036.

Requirements

Students are responsible for meeting degree requirements in force at the time of their first enrollment as matriculated students. Changes to the structure of a program will be applied in such a way as to avoid increasing the number of credits required of students who have started taking courses in the program. If degree requirements are changed following matriculation, the student has the option of satisfying original or new requirements.

Students who are dismissed for academic reasons may be subject to new regulations depending on how long after dismissal the student returns and such other factors as may be taken into account by the Graduate Scholastic Standards Committee.

Please consult the appropriate departmental listing in this *Bulletin* for specific degree and advanced certificate requirements, including number of semester hours required for the program, mandatory courses, etc.

General requirements are as follows:

Minimum Grade Average of B (3.0): All programs must be completed with a minimum average of at least B (3.0). At the completion of the total credits allotted to a program, if a student does not have a 3.0 average and wishes to regis-

ter for additional courses in order to attempt to raise the grade-point average, permission to do so must be obtained from the Office of Graduate Studies. Such courses must be taken at Queens College. For information on probationary status and dismissal, see page 25.

Time Limit: All programs must be completed within the time limits permitted for each degree and advanced certificate program. The time limit for completion of all requirements for the Master of Arts, Master of Arts in Liberal Studies, Master of Arts in the Social Sciences, Master of Fine Arts, or Master of Library Science degree is four years. The time limit for the Master of Science in Education degree is five years. For time limits for the certificate programs, consult the appropriate departmental listing in this *Bulletin*. Transfer credits or credits taken as a non-matriculant that have been approved by the department must have been taken within the time limit. Requests for extensions of time must be submitted to the Office of Graduate Studies.

Credit Requirement: The number of credits required for Master's degree programs varies by program and ranges from 30 to 60. The number of credits required for certificate and diploma programs also varies. Please consult the appropriate departmental listing in this *Bulletin* for the number of credits each program requires.

Thesis and/or Comprehensive Examination Requirement(s): Consult the appropriate departmental listing in this *Bulletin* to determine if a thesis and/or comprehensive examination constitutes part of the requirements for the degree or advanced certificate.

Summer Session

During the Summer the College offers a six-week graduate session during Summer Session II. Graduate courses also may be offered during the earlier four-week Summer Session I. All the College's academic, recreational, and cultural facilities are available during this time. For graduate courses and other information, see the *Summer Session Bulletin*, or write to Summer Session, Queens College, CUNY, Flushing, NY 11367-1597.

Transfer Credits and Permits

In most cases, a maximum of 12 credits of graduate work completed in other institutions *may* be accepted as transfer credit, if approved by the appropriate department(s) and taken within the time limit specified for the degree or certificate program. The credits may have been part of a completed degree program.

Matriculated students seeking transfer credit for graduate work taken at another institution must submit the request for evaluation of such transfer credit no later than the end of their second semester in attendance.

Only the following grades will be acceptable for transfer credit: A+, A, A-, B+, B, and B-. (In cases where a student obtained a P grade, and the P is equivalent to no lower than a B-, the grade may be transferred if approved by the appropriate department.) Transfer credit grades are not counted in the cumulative average, however. (See *Important Note* at end of this section.)

Please Note: Some graduate programs will not accept courses for credit where the grade is below B. Check the departmental listing in this *Bulletin*.

New graduate matriculants who wish to transfer credits must file a departmentally approved Advanced Standing Form in the Graduate Admissions Office, Powdermaker Hall, Room 100.

Currently enrolled matriculants who wish to take courses at another institution are urged to complete a Permit Form indicating departmental permission for the courses to be taken. The Permit Form acts as an agreement to allow a student to transfer a course or courses to Queens College. *There is no guarantee that courses taken at other institutions without prior approval will be accepted for credit.* Permit Forms are available in the Office of the Registrar, Jefferson Hall, Room 100.

To be eligible for a permit to enroll outside Queens College in a course or courses that pertain to a graduate degree or certificate program as either prerequisite(s) for the program, or as transfer credit, the student must:

1. be matriculated in a graduate degree or certificate program;
2. have obtained the approval of the departmental Graduate Adviser for the permit; and
3. have registered for and completed with a passing grade at least one undergraduate prerequisite course or one graduate course as part of the graduate program at Queens College; except

that, if the student is in the first semester of attendance, he or she must register in at least one graduate or undergraduate course at QC while simultaneously registering elsewhere for the permit course(s).

Students who wish to register for courses at other units of the City University of New York *must* complete a Permit Form and *must* register and pay for all City University tuition and fees at Queens College *in advance of registering at another unit of CUNY*. Please consult each semester's *Class Schedule* or the Office of Graduate Studies (Powdermaker 100K, 997-5190) for information on the proper procedure.

Students who have taken an entire semester's program on permit at an institution other than a CUNY college must pay a re-entry fee and file a graduate re-entry application.

Important Note: Grades for courses taken at other institutions and accepted as transfer or permit credit are *not* counted in the cumulative average computed for QC courses. No advanced standing or transfer credit may be posted to the QC record unless an official transcript certifying to the completion of the work has been submitted.

Thesis or Project

A student matriculated in a department that requires a Master's thesis or a research paper or other project must submit the manuscript in as many copies as required to the departmental adviser for approval. The title page of the manuscript must bear the following

description: "Submitted in partial fulfillment of the requirements for the degree of Master of Arts (or Master of Arts in Liberal Studies, or Master of Arts in the Social Sciences, or Master of Library Science, or Master of Science in Education) in (Department) in the Graduate Division of Queens College of the City University of New York, date."

After the manuscript has been approved, the student must arrange for binding. A \$15 binding fee, for which a receipt will be issued, is payable at the Bursar's window. The receipt and two copies of the manuscript must be taken to the Catalogue Department, Rosenthal Library, Room 201. One bound copy of the manuscript is retained by the Library and becomes part of its collection. A second bound copy is for the academic department. If desired, a third copy may be submitted, which, when bound, will become the property of the student.

Appeals

For relief from or waiver of regulations of the Graduate Division, students may petition the Office of Graduate Studies. Appeals from the decision of the Office may be directed to the Graduate Scholastic Standards Committee.

GOVERNMENT SERVICES & FACILITIES

Graduate students are encouraged to take advantage of the numerous services and facilities offered by Queens College. There is something for everyone: students can receive career and personal counseling; become involved in the governing of the College by joining the Academic Senate; attend musical and theatrical events; or simply enjoy a swim in the pool in FitzGerald Gymnasium.

STUDENT GOVERNMENT

Academic Senate

The Academic Senate is the chief legislative body of the College, responsible, subject to the Board of Trustees, for the formulation of policy relating to the admission and retention of students, curriculum, granting of degrees, campus life, and the nomination of full deans. It also establishes the rules governing the use of the College name by organizations and clubs.

The Academic Senate Charter, modified in Fall 1977, provides for a membership of 60 faculty and 30 students. In addition, there are *ex-officio* members, including the President and other administrative officers of the College, who have all the privileges of membership except voting and holding office.

Faculty representatives serve for two years; student representatives for one year. Elections take place during the Spring semester. Student representatives are elected by the student body from among undergraduate and graduate students, according to standards of eligibility as determined by the Academic Senate. All full-time members of the faculty with the rank of professor, associate professor, assistant professor, instructor, or lecturer may vote for the faculty representatives.

Much of the Senate's work is done by committees composed of an equal number of students and faculty. These committees prepare proposals for the Senate in such areas as curriculum, scholastic standards, and campus affairs. All students and the instructional staff may serve on these committees. Half the membership of each committee is elected yearly by the Senate at its regular December meeting. Among the Senate committees are the Graduate Scholastic Standards Committee and the Graduate Curriculum Committee.

Graduate Scholastic Standards Committee

The Committee is made up of faculty and graduate students representing each division of the College. It constitutes a board of final appeal for students requesting relief from scholastic regulations and requirements of the Graduate Division. Such requests initially must be directed to the Office of Graduate Studies.

Graduate Curriculum Committee

All proposals to change the present curriculum of the Graduate Division, including proposals for new programs, courses, changes in requirements and prerequisites, etc., must be presented to the Graduate Curriculum Committee for review and approval prior to submission to the Academic Senate. The Committee is composed of faculty and graduate students representing each division of the College.

STUDENT SERVICES

Graduate Student Association

Student Union, Room 3195; 263-1880

The Graduate Student Association (GSA) represents the interests of all graduate students at Queens College. The GSA government is divided into an executive branch (the GSA Executive

Board) and a legislative branch (the Graduate Student Congress), which is composed of one or more delegates from each department. News of interest to graduate students is published in the *GSA Newsletter*, which is mailed periodically to all graduate students. GSA offers free evening coffee service; social, academic, and professional gatherings; and free income tax return preparation help.

Graduate Student Organizations

The Graduate Student Association and Graduates United serve all students. Below are organizations of interest to students in specific fields:

Graduate Biology Club
Graduate Counselor Education Club
Graduate Education Administration and Supervision Club
Graduate Fine Arts Club
Graduate Family, Nutrition, and Exercise Sciences Association
Graduate Behavioral Psychology Club
Graduate Library and Information Studies Student Association
Graduate Media Club
Graduate Physics Beyond the Edge Club
Graduate School Psychology Club
Graduate Secondary Education Club
Master of Arts and Liberal Sciences

Graduate Awards

Two annual prizes, each of \$500, are awarded to recognize outstanding scholarship and exceptional research or accomplishment in the creative arts and humanities, and the mathematical, physical, biological, and social sciences. Students who are nominated by a faculty member and are graduating with a Master of Arts, Master of Arts in Liberal Studies, Master of Arts in the Social Sciences, Master of Fine Arts, Master of Library Science, or Master of Science in Education degree are eligible. Many departments also provide specialized awards for graduating students.

Queens College Foundation Graduate Fellowship Award

The College offers to qualified students the opportunity to apply for a fellowship award that is equivalent to all or half the cost of in-state tuition. Awards will be determined through an in-depth consideration of the following criteria:

1. Undergraduate grade-point average.
2. Two letters of recommendation.
3. A 250-word statement explaining why you believe you are qualified for the fellowship. Your statement should address items such as the quality and scope of your academic background, your specific areas of interest, and your experiences both in and out of school.

There is no residency requirement for the fellowship award.

A student selected to receive the award must be matriculated in a graduate degree or certificate program and must register for a minimum of 6 graduate credits in the semester the award is granted.

The statement and letters of recommendation must be submitted to the Office of Graduate Admissions, Powdermaker Hall, Room 100F no later than 5:00 pm on December 1. Material submitted by mail must be in an envelope postmarked no later than November 28. Failure to file by the deadlines specified will result in immediate disqualification.

Applications may be filed for the Spring and/or Fall semester.

Mary Jane Wochinger Graduate Fellowship Award

Beginning in 1998, a fellowship in honor of Mary Jane Wochinger - who for over a quarter century played a central role in the graduate program at the College - will be awarded. The fellowship will cover the first year of tuition for an outstanding full-time graduate student. To be considered, you must:

1. Have a minimum undergraduate academic average of 3.5 cumulatively or in your major.
2. Submit two letters of recommendation.
3. Write an essay of 300-500 words discussing your career plans and reasons for entering your field of study.

For more information, contact the Office of Graduate Studies in Powdermaker Hall 100K (997-5190).

Veterans and Military Service Information

Queens College is an approved training institution for veterans, disabled veterans, and children of deceased or totally and permanently disabled veterans.

Students who believe they are eligible for benefits can be certified to the Veterans Administration by going to Jefferson Hall, Room 100, at the time of registration. Students must notify the certifying official of all changes in their credit load to insure their eligibility for future benefits.

Career Development & Internships

Jefferson Hall 201

997-4465; Fax 997-4463

Hours: Monday-Thursday, 9:00 am to 4:00 pm; Friday, 9:00 am to 12 noon; Evening hours: Wed. until 7:30 pm when classes are in session; Summer evening hours by appointment

The Office of Career Development and Internships links students to academic, business, and professional worlds, providing a wealth of resources to help them choose a discipline for graduate study, plan a career, or search for a job. Services of the Office include:

- Career counseling
- Workshops on career exploration, resume writing, interview techniques, and job-search strategies
- Full-time, part-time, and summer job referrals and current job vacancy listings
- Credential Services where students can maintain a resume and recommendation letter file. For a modest fee, the Office will forward the file to schools and prospective employers.
- On-campus recruitment events for graduating students

Employer and career directories and information about recruiting organizations are among the resources available to students in the Office, which also is administrator for the Cooperative Education and Internships program.

Cooperative Education and Internships is a supervised education program administered in collaboration with those academic departments that sponsor internships. The program offers:

Cooperative Education: An integration of classroom learning and career-related work experience through which students earn degree credit and wages.

Internships: Field/work experience pertinent to the graduate discipline through which students earn degree credit.

Part of the Cooperative Education and Internships program consists of an individualized career exploration that utilizes the Office's many resources.

The Student Union

The Student Union is the hub of campus life. The building contains major

social, cultural, recreational, and educational facilities and services that add greatly to the student's enrichment, development, and pleasure. Over 45 student organizations call the Student Union home.

Various eating areas are available to suit every need. A cafeteria offering a full range of hot and cold meals is open for breakfast, lunch, and dinner. The Cafe, a full-service restaurant, is open for lunch. The Cellar Entertainment Lounge opens for lunch and remains open through the evening, offering pizza, snacks, soft drinks, and excellent entertainment.

Other services include a copy center, game room, an underground parking facility, and a 24-hour ATM. Catering facilities, meeting rooms, and concert halls for lectures, movies, music performances, conferences, and dinner and dancing are also available.

The Student Union is financed by Student Union fees and revenue-producing enterprises. It is operated by the QC Student Services Corporation.

Dining Hall

The Dining Hall contains cafeterias, a faculty club and lounge, committee luncheon rooms, and rooms for formal use.

FitzGerald Gymnasium

The FitzGerald Gymnasium offers many physical education facilities. The main gymnasium measures 225 feet by 194 feet. There are also an auxiliary gymnasium, individual sports areas, a swimming pool, classrooms, dance studios, and applied physiology research laboratories. Adjacent to the gymnasium are outdoor facilities, which include 18 composition tennis courts, a quarter-mile track, ball fields, and other teaching recreation facilities.

In 1991 the soccer fields, lacrosse field, and baseball field were upgraded as part of the construction of a parking facility. Plans are under way for the construction of an air-supported structure over six composition tennis courts.

Health Service Center

The Center, in FitzGerald Gym, Room 204 (997-2760), is open Monday through Friday for first aid, emergency care, consultations, and referrals.

Campus Ministry: Hillel, Protestant, Catholic, and Greek Orthodox

The Queens College Campus Ministers is an association of the Hillel Center for Jewish Life, Protestant, Catholic, and Greek Orthodox ministries on campus. Its purpose is to foster harmony among religious traditions and to join in cam-

pus efforts to promote spiritual and ethical growth. The campus ministers serve as a resource for religious and ethical information and insight for the academic and the wider Queens community.

The Hillel Center for Jewish Life (Student Union 206; 793-2222; e-mail: Hillel@qcvaxa.acc.qc.edu; fax 793-2252) provides religious, cultural, and social programming, counseling, and outreach for Jewish students, faculty, and staff.

The Protestant Center (Student Union 203; 261-1550) welcomes students, faculty, and staff from the various Protestant denominations for worship and Bible study, counseling, and a variety of programs.

The Catholic Newman Center (Student Union 207,208; 793-3130, 520-7823) provides a ministry of worship and pastoral outreach to the Catholic community on campus.

The Greek Orthodox Center (Student Union 209) provides religious, cultural, and social programming, counseling, and outreach for Greek Orthodox students, faculty, and staff. It also provides information on worship and Bible study. All are welcome to participate. For information on religious matters, call 263-8418. For other matters, call the Byzantine and Modern Greek Studies Office, Jefferson Hall 301, 997-4520.

FACILITIES

Colden Center for the Performing Arts

Colden Center contains the 476-seat Queens College Theatre and the 2,143-seat Colden Auditorium, a TV center, an academic wing - Karol Rathaus Hall (Drama, Theatre, and Dance) - and many other facilities for instruction, practice, production, and performance in the arts. A Concert Series, Dance Series, Contemporary Events, and Children's Theatre Events, featuring internationally renowned artists, are offered annually, as well as many special events.

The Music Building

The Music Building houses the Aaron Copland School of Music. This structure includes orchestral, ensemble, and choral rehearsal rooms and a professional-quality recording facility. Its 489-seat Samuel J. and Ethel LeFrak Concert Hall is designed for almost any musical performance.

Library

The Benjamin S. Rosenthal Library, which opened in the spring of 1988, is the centerpiece of the campus. The Library maintains a carefully selected collection of print and non-print materials. There are approximately 711,737

books and 2,600 journal subscriptions, as well as an extensive collection of microform material. In addition, the Library is a depository for many U. S. government publications. The reference area contains materials for research on a wide range of social science, humanities, education, and science topics.

The Art Library and Art Exhibition Center are on the sixth floor. In addition to books and periodicals, the Art Library has over 50,000 slides and pictures. The Music Library, located in the east wing of the Music Building, contains scores and audiorecordings as well as books and journals. The Libraries offer many services: reference, including electronic access to local and remote databases and the worldwide web (www); a web home page (at <http://www.qc.edu>); a reserve library; interlibrary loan; instructional services; multimedia center; educational curriculum center; disabled students services; and photocopying machines.

The Rosenthal Library also maintains an Archival Center that houses a selected group of legislative leader Benjamin S. Rosenthal's Congressional papers, New York State Assemblyman Saul Weprin's papers, other special collections, and College records dating from 1935. The Louis Armstrong Archives, which also are housed here, are open for scholarly consultation. Contact Michael Cogswell at 997-3670 for an appointment.

Office of Information Technology

The Office of Information Technology provides the College community with academic and administrative computing services, as well as multimedia facilities for in-house production and delivery of videotapes, slides, and motion pictures. OIT support areas include operation and maintenance of the campus-wide information and computing network (including several time-shared minicomputers) and five large general-access public computing labs and classrooms, totaling more than 300 seats. In addition, OIT supports academic departments in planning and operating more specialized discipline-specific computing facilities.

Via the College's microwave satellite facility, faculty and staff are encouraged to participate in professional development and distance learning by attending satellite teleconferences arranged throughout the year. Via seminar programs as well as other means, OIT is responsible for helping and training users to develop the skills they need to use the tools of information technology effectively. OIT offices are located in the I Building, the Dining Hall, and Kiely Hall, with user facilities

in I Building, Kiely Hall, the Science Building, and Rosenthal Library.

Computing Resources

Centralized time-shared computing facilities operated by OIT include a Digital Equipment Corporation VAX 6000-420 running the VMS operating system, and an AlphaServer 2100 4/275 running UNIX and providing web server functions. A wide range of academic programming languages, statistical packages, graphics software, and application software is available.

Major administrative systems include QUASAR, a City University-provided student information system; POS, a point-of-sale system that supports the Bursar's Office; and the Alumni/Development information system. Students can register by phone for classes using an interactive voice-response system. More than 800 QC administrative and academic user accounts are supported at the City University Computer Center in Manhattan. The University Computer Center (UCC) facility includes an IBM 3090 Model 600J with two vector processors running MVS/ESA with WYLBUR and JES3 on four of the six processors. The two remaining processors run VM/ESA, with CMS, RSCS, PVM, and VTAM.

Communications

OIT operates several data communications networks. The major on-campus Local Area Network (LAN) consists of over 25 interconnected 10 Megabit/sec ethernet subnets. More than 5,000 users access the LAN, using a mix of microcomputers and terminals. OIT provides users connected to the LAN with high-speed communications to all the facilities mentioned above, plus the ability to access the Internet in full graphics/multimedia mode. The College utilizes a high-speed 100 Megabit/sec FDDI (Fiber Distributed Data Interface) backbone interconnecting the 10MB ethernet subnets.

OIT supports more than 15 LAN server machines. These permit wide-band exchange of information between student labs, academic departments, administrative offices, and the Internet. The College provides communications with systems at academic institutions worldwide. NYSERNET (New York State Educational & Research Network) links universities, supercomputing facilities, and industrial research centers in the state, and serves as the College's high-speed gateway to the Internet and other national computing networks.

Web Server

OIT is responsible for operating and maintaining the College's web server (<http://www.qc.edu>). The College's home page provides up-to-date information about academic departments and programs, as well as admissions and other administrative information, including library, computing, and media services. On-line calendars of current College events, as well as other useful information, are also available.

Microcomputer Facilities

Extensive microcomputer laboratory facilities managed by OIT are located in the Science Building, the Library, the second floor of I Building, and Kiely Hall. In total, OIT facilities provide more than 300 IBM, IBM-compatible, and Apple Macintosh microcomputers for classroom and open laboratory use. Available equipment includes laser printers, text and graphic scanners, and CD-ROM readers. A wide range of software is available for full administrative and academic support.

The Learning Center in Kiely Hall 226 has interactive audio facilities and an advanced computer classroom, where students meet in class groups for instruction in such academic areas as foreign languages, English as a Second Language, accounting, sociology, and graduate library studies. The Learning Center also provides playback services for students who wish to review lectures and other materials that have been audio-taped or videotaped. A separate audio lab is available for self-paced learning.

Other Services

The College's Help Desk provides a variety of services to personal computer users, including pre-purchase consulting, installation assistance, and troubleshooting. The City University and Queens College have negotiated site licenses or volume purchasing agreements for a variety of software packages.

Center for Molecular and Cellular Biology

Luc Montagnier, Salick Professor and **Director**

Emily Carrow, Assistant to the Director
In 1997 Queens College established the Center for Molecular and Cellular Biology, which is dedicated to finding a vaccine for HIV/AIDS, as well as developing therapeutics for HIV infection and other chronic infectious diseases. World-renowned virologist Dr. Luc Montagnier, the first scientist to isolate the AIDS virus, heads the Center. He is the Bernard and Gloria Salick Professor of Molecular and Cellular Biology,

which is the first endowed chair in the College's history.

Many hospitals and research centers in New York City are already collaborating with the Center on a number of projects, as is the World Foundation for AIDS Research and Prevention. Besides its research efforts, the Center also runs an educational campaign about HIV/AIDS and other diseases, and attempts to mobilize private and public initiatives to combat and overcome the AIDS epidemic.

The Center currently occupies 5,000 square feet of laboratory space in Remsen Hall. Plans are under way to open a new 25,000-square-foot facility by the Fall of 1999. Funding for this \$30 million project has come from both public and private sources. When completed, the Center for Molecular and Cellular Biology will have several dozen researchers working in six laboratories on vaccines, drug development, and other projects.

Laboratories

The College's laboratory facilities house up-to-date instruments for research in biology, chemistry and biochemistry, family, nutrition, and exercise sciences, geology, physics, and psychology.

Speech-Language-Hearing Center

The Speech-Language-Hearing Center (Gertz Building, 997-2930), directed by Professor Joel Stark, is a unit of the Department of Linguistics and Communication Disorders. Among the services extended are diagnostic speech, language and hearing evaluations, and speech and language therapy. The Center's facilities are used for research and to provide clinical practice experience for students in speech-language pathology and audiology.

The facility includes the Morton Roberts Center for Augmentative Communication, as well as a new program to study and modify developmental language disabilities in children.

Funds are contributed by friends of the College who have organized the Queens Speech and Hearing Service Center, Inc. These funds are used primarily to provide scholarships for anyone unable to afford the established fees.

Campus Store

The Campus Store sells books, stationery supplies, College apparel, and other items. Hours (posted inside and outside the store) are increased during registration and the first two weeks of classes for the convenience of students.

Housing

The College has no residence facilities.

College/Community Services

All of the following activities are open to the general public as well as the student body and contribute to the cultural life of the campus and community.

Colden Center for the Performing Arts provides a variety of concerts, operas, ballets, and modern dance performances by students and faculty as well as by internationally known artists. It is available for rental to community organizations and private businesses who wish to sponsor a concert or fundraising event.

The QC Choral Society, under the direction of Lawrence Eisman, makes accessible to the public the cultural benefits of participating in the performance of great works of choral music. There are two concerts annually: one in Winter and one in Spring. In these performances the Choral Society is assisted by the QC Orchestra. Rehearsals are held every Wednesday evening the College is in session. Admission by audition or interview. College credit is available.

The Aaron Copland School of Music presents concerts by its faculty, students, and ensembles, including the College orchestra, choir, opera studio, collegium, etc. Concerts are held during the Monday, Wednesday, and Thursday free hours, and on Friday afternoons. In addition, concerts are occasionally given on Tuesday and Thursday afternoons. There are also recitals and concerts by guest artists or ensembles in residence (the Lyric Piano Quartet at present), lectures, and master classes.

The Department of Drama, Theatre, and Dance presents major productions in the Goldstein Theatre during the academic year. Presentations include a musical, modern and classic plays, and a dance presentation.

The Godwin-Ternbach Museum in Klapper Hall is a teaching museum with a permanent collection of 2,500 works of art in all media from antiquity to the present. The museum presents three to five exhibitions a year and holds lectures, workshops, and tours.

Emergency Closings

Should some emergency necessitate the closing of the College, every effort will be made to provide a timely announcement over the following radio stations:

WINS - 1010 AM
WCBS - 880 AM, 101.1 FM
WBLS - 107.5 FM
WLIB - 1190 AM
WFAS - 1230 AM, 104 FM
WADO - 1280 AM

ADMISSION, RETENTION & GRADUATION

Openings for admission in all departments will be filled on a competitive basis; admission cannot be guaranteed to all who meet the stated requirements. This section will cover the general admission requirements for matriculated and non-matriculated students and the special requirements of certain departments. Information concerning admission procedures for international students is also included.

General Requirements

Applicants to the Graduate Division should refer to the appropriate departmental listing in this *Bulletin* for specific admission requirements, including minimum hours of undergraduate preparation, submission of compositions and portfolios, or audition performances.

All students applying for admission as Master's matriculants must have a Bachelor's degree from an accredited college or university, or the foreign equivalent, with an undergraduate record indicating good preparation for the proposed area of graduate study. Good preparation is generally interpreted to mean a minimum academic average of *B* in undergraduate work considered by the department and the Office of Graduate Studies to be relevant to the proposed area of study. If ten years have elapsed since completion of undergraduate work, additional undergraduate courses may be required as a condition of admission.

For admission to the Graduate Division, individuals must show evidence of good character and those personal traits necessary to fulfill course and

certification requirements. Interviews, letters of recommendation, and prior academic records may be determinative.

Applicants must submit a 500-word essay explaining their objectives in pursuing graduate study. Applicants to the School of Library and Information Studies should consult the School for additional instructions.

Where appropriate, the College will require students to submit medical reports attesting to their ability to enter and complete a program.

Immunization Requirements

If you were born on or after January 1, 1957, New York State law requires that you be immunized against measles, mumps, and rubella before you start school. Students are required to file a QC Immunization Form at the Health Service Center (FitzGerald Gym, Room 204, 997-2760). Failure to file will jeopardize the student's continuation in the graduate program.

Application Requirements

*Students who apply for the Master of Arts, Master of Arts in Liberal Studies, Master of Arts in the Social Sciences, Master of Fine Arts, or Master of Library Science Degree, or for the Certificate Program in Librarianship, * must also meet the following requirements:*

1. Three letters of recommendation must be submitted; at least two letters must be from instructors who are in a position to attest to the applicant's capacity to complete successfully a program of graduate studies.

2. The applicant may be required to submit test results for the Graduate Record Examination. Students should

refer to the application packet issued by the Office of Graduate Admissions or seek advice from the appropriate department Chair or Graduate Adviser. The institutional code number of Queens College is 2750.

Students who apply for the Master of Science in Education Degree must also meet the following requirements:

1. Most programs require completion of an undergraduate education sequence; however, special transitional programs are available in some programs for students whose undergraduate preparation lacks this sequence.

2. The submission of letters of recommendation is required for most programs in Education. Applicants should refer to the application packet issued by the Office of Graduate Admissions for information regarding this requirement.

3. Queens College Master of Science degree programs in Teacher Education and diploma programs in Teacher Education meet New York State academic and field requirements for certification.⁺ However, in order to be eligible for a Permanent Certificate, a candidate must be employed full-time for two years in the area in which he or she is seeking certification in addition to achieving the Master of Science degree and/or diploma. The candidate must apply directly to the New York State Education Department for permanent certification.

Applicants should bear in mind that while the College recommends for New York State teacher certification those students who successfully complete an approved program in Teacher Education, the College itself does not issue

*Master's Degree required.

⁺See the footnote on page 51 for the M.S. in Ed. programs that do not lead to State certification.

teaching licenses or certificates. New York City issues teaching licenses and New York State issues teaching certificates. Requirements are subject to change. It is the student's responsibility to determine whether the course of study will meet in full the licensing and certification requirements for New York City and New York State, and, where relevant, for states other than New York. The Queens College library contains relevant materials, and assistance is provided by Graduate Advisers and the Office of Educational Placement (997-5545).

Students applying for Certificate and Diploma Programs:

Please consult the appropriate departmental listing in this *Bulletin* for additional admission requirements.

Internationally Educated Students

Queens College strongly affirms the benefits of an international student body on its campus and invites internationally educated students to apply for admission to its graduate programs.

These students must meet all admission requirements for the program they wish to enter. Official transcripts should be mailed directly from the international institution to the Queens College Office of Graduate Admissions in accordance with instructions in the application packet. If the transcripts are in a language other than English, official translations must be provided.

Students on temporary visas must submit with the application packet financial information confirming the funds that will be available to meet expenses for each year of enrollment. A financial information and certification form is included in the application packet mailed by the Office of Graduate Admissions. Support for students on temporary visas is provided by the International Student Services Office, Jefferson Hall 105, 997-4440.

English Proficiency and the TOEFL

Proof of proficiency in the English language is required of all applicants:

1. whose first language is not English, and
2. who were educated in a country where English is not the official language.

This requirement is *not* based upon country of citizenship or permanent residency, but on the two stated conditions.

Applicants who meet these conditions must submit scores for the Test of

English as a Foreign Language (TOEFL). The minimum acceptable TOEFL score is 500 except for those programs noted below. Admitted students with a proficiency level below 500 should consider attending an intensive English program, such as the Queens College English Language Institute, prior to applying for admission. Applications and information regarding the TOEFL may be obtained from: TOEFL Services, P. O. Box 6151, Princeton, NJ 08541-6151, USA, phone 609-771-7100. Students whose TOEFL score is in the 500-599 range will be required to take a course in English as a Second Language (GESL). The course bears no credit, but will count in determining full-time status for visa purposes.

Minimum Score Program

650	Applied Linguistics*
600	Biology
600	Education: All Teacher Education Programs except TESOL
600	English: Creative Writing
600	English: Literature
600	Fine Arts
575	History
550	Library Science: All Programs
550	Media Studies
600	Psychology
600	Psychology: Clinical Behavioral Applications in Mental Health Settings
650	Speech-Language Pathology
650	Teaching English to Speakers of Other Languages* (TESOL). Scores MUST Be Enclosed with Application
500	All Programs Not Listed Here

Admission to Matriculation

Applications for matriculated admission to the Graduate Division are considered on a semesterly basis. (Some programs admit only in the Fall semester.) Applicants who are admitted to matriculation in one semester and fail to register in that semester must re-activate their applications, which may be re-reviewed. Admission to matriculation in one semester does not guarantee admission in a subsequent semester. Applicants admitted for one semester who fail to register and who subsequently are admitted and register in a later semester must fulfill the degree or certificate requirements in effect in the semester of registration.

*Please see departmental listing for special instructions regarding TOEFL.

Admission Procedures

The procedure for applying to matriculate in the Graduate Division is self-managed. Complete instructions are included in the application packet, which is obtainable from the Office of Graduate Admissions, Powdermaker Hall 100, Queens College, CUNY, Flushing, NY 11367; 997-5200; e-mail address:

Graduate_admissions@QC.edu

Office hours are 11 am to 5 pm, Monday through Thursday; 11 am to 7 pm, Wednesday, when classes are in session.

Applicants must submit their completed application packets to the Office of Graduate Admissions by the following deadlines:

For Fall admission

Applicants with international education credentials	March 1
Applicants for the MFA	March 15
Applicants for the Speech-Language Pathology M.A. [†]	February 1
All others	April 1

For Spring admission

Applicants with international education credentials	October 1
Applicants for the MFA	October 15
All others	November 1

[†]Applications accepted for Fall only.

Students accepted for admission in the Fall are eligible to start in the preceding Summer Session if acceptance is granted prior to Summer Session registration. Students who wish to start in the Summer should check with departments to see if courses are available.

A nonrefundable \$40 fee is payable at time of filing the application for admission.

Individual departments may require special admission procedures, such as interviews and the submission of written materials.

Acceptance for Matriculation with Conditions

A student whose undergraduate preparation is less than fully adequate may be admitted to matriculation with conditions, which take effect in the student's first semester of attendance. Unless otherwise indicated, these conditions must be removed within one year, or before proceeding beyond 12 credits of graduate work, whichever comes sooner. Under certain circumstances, students with an undergraduate average marginally below *B* may be matriculated with the condition of "Pro-

bation." A student admitted on probation must achieve a B (3.0) average in the first 12 credits of graduate work. Students admitted on probation who fail to attain fully matriculated status after completing 12 graduate credits will not be permitted to continue.

Non-Matriculated Status

A special application is required for admission as a non-matriculated student. A non-refundable fee of \$40 is payable at the time of filing the application. The application must be accompanied by proof of receipt of the Bachelor's degree and must have the signed approval of the Graduate Adviser of the program in which the applicant wishes to take courses. The application form may be obtained at the Office of Graduate Admissions. The deadlines for Fall and Spring admission are five business days before registration.

Applicants on student or exchange visitor visas (F-1 or J-1) are not eligible to apply for non-matriculated status.

Registration in Courses for Non-Matriculants

Acceptance to non-matriculant status does not guarantee admittance to courses. Class sections may be filled early during registration; many courses have prerequisites; some courses and programs are not open to non-matriculants. Applicants for non-matriculated status must confer with the appropriate Graduate Adviser and/or class instructor *prior to filing their application for admission* in order to determine their eligibility for the course and the likelihood of their being able to register for it, and to get the Adviser's signed approval on the admissions application.

Non-matriculated students must obtain permission from the Graduate Adviser *each semester* before registering for courses.

- Graduate non-matriculants, except for those who have a Master's or higher degree, or those who are Cooperating Teachers with tuition waivers, may take no more than 12 credits at Queens College in that status.

Non-matriculants who wish to matriculate must meet *all* requirements for admission to the particular program as listed in this *Bulletin*. Students should bear in mind that admission to non-matriculant status does not guarantee subsequent acceptance for matriculation, nor that courses taken as a non-matriculant will be credited toward the degree.

Non-matriculants who have not achieved a B average after completing

12 credits will not be permitted to matriculate or continue at the College.

Full-Time/Part-Time Status

Students who are registered for 12 credits of course work, or the equivalent, are considered full time. To meet requirements of the Immigration and Naturalization Service for F-1 visa students, full-time status is defined by the College as enrollment in 9 credits. Full-time graduate students may take a maximum of 15 credits a semester. Students in the Teacher Education program with full-time employment may take a maximum of 6 credits in any semester. Students who want to exceed these limits must receive the permission of both their academic department and the Office of Graduate Studies.

Continuous Registration, Inactive Status, and Reentry

There is no official leave of absence classification for graduate students; students who do not register for a semester are considered inactive. Such status is not noted on student records and does not extend the time limit for the degree or certificate. For extensions, see the sections on *Time Limits*, page 10.

Inactive students who wish to return to the College within the same program must file an Application to Reenter with the Office of Graduate Admissions, Powder-maker Hall 100, by the following dates:

July 1 for Fall admission
December 1 for Spring admission
May 1 for Summer admission

A nonrefundable application fee of \$10 is required. Inactive students whose graduate programs began eight or more years before the semester of reentry must also appeal to the Graduate Scholastic Standards Committee, Powdermaker Hall, Room 100, for readmission. Information on appeals procedures may be obtained from the Office of Graduate Studies (997-5190).

It is advisable for reentering students to inform their departments and make an appointment with the Graduate Adviser prior to registration.

Graduation Procedures and Maintenance of Matriculation

The procedure whereby a student receives a degree or certificate *must be initiated by the student*, who declares his or her candidacy by filing a diploma card with the Office of the Registrar in accordance with the following deadlines:

For graduation in February: on or before November 15

For graduation in May: on or before March 15

For graduation in September: on or before July 1

Diploma cards may be obtained at the Office of the Registrar, Jefferson Hall, Room 100. Candidates are encouraged to file diploma cards at the time they register for their last semester.

A diploma card should be filed as long as the student is reasonably certain that all degree requirements will be satisfied by the end of the semester preceding the graduation date. If the student does not graduate, a new diploma card must be filed. Diploma cards received after the deadlines listed above will be processed for the following graduation date.

Important Note: Maintenance of Matriculation. CUNY regulations require students to be registered in the semester in which the degree is awarded. If all course work was completed before the graduation semester and no courses are being taken, students must register for *maintenance of matriculation*.

Current (1997-98 academic year) fees for maintenance of matriculation are \$250 for New York State residents and \$403 for out-of-state students. Registration for maintenance of matriculation is *not* required for any semester other than the semester preceding the graduation date. Students may also fulfill the requirement to be registered by enrolling in undergraduate or extra graduate courses.

Enrollment Following Graduation

A student who, after having received a Queens College Master's degree, wishes to continue registering for courses, must file a non-matriculant application form with the Office of Graduate Admissions by the appropriate deadline date.

TUITION, FEES & FINANCIAL AID

All tuition and other fees listed in this *Graduate Bulletin* and in any registration material issued by the College are subject to change. In the event of any increase in 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 of payment. Class schedules should be checked prior to registration for fee changes.

Payment of Tuition and Fees

In planning to register for courses, students must be prepared to pay all fees associated with that registration. These include tuition, the activity fee, material and transportation charges, and other fees.

Students registering during the early registration period will receive a bill in the mail. This must be paid by the Payment Due Date printed on the bill. If payment is not received or postmarked by the due date on the bill, the student's entire registration will be canceled by the College.

Students registering during the regular and late registration periods will be required to pick up a bill at the Bursar's Office. All payments must be made in the Bursar's Office on the day the student picks up the bill.

If a student pays by check or money order, the student's address must be written on the check or money order. A student who receives a *zero* Balance Due bill will not be required to have it validated at the Bursar's Office. A student who issues a bad check will be liable for tuition and fees in addition to a reprocessing fee. A Stop Payment on a student's check does *not* cancel registration. The student must withdraw officially.

Activity Fee

All students are required to pay an activity fee that covers student activities, Public Interest Research Group (PIRG), Student Union, and the like. It does not cover service fees that a student may incur individually, such as fees for program changes, late registration, transcripts, special examinations, or parking. Unless changed after printing of this *Bulletin*, the activity fee for full-time and part-time graduate students is \$57.10 each session of attendance. The breakdown of the fee is shown on page 21.

The activity fee or any part thereof is not refundable at any time, nor can it be waived unless the College cancels all courses for which a student has registered or the student formally withdraws from all classes *prior to* the official first day of classes. Exception is made as follows:

1. If a student is placed on active military service, partial refunds may be made. Students who are so notified should get in touch with the Registrar's Office immediately.

2. The \$3 PIRG fee portion of the activity fee is refundable if application is made to the Queens College PIRG Office, Student Union B22, within three weeks after commencement of classes.

Tuition Fees - Matriculated and Non-Matriculated

New York State Residents
\$185 per credit plus
\$65 per additional contact hour
Maximum of \$2175

Out-of-State Students
\$320 per credit plus
\$85 per additional contact hour
Maximum of \$3800

Graduate students who take undergraduate courses and receive undergraduate credit for them are charged undergraduate tuition for those courses and the graduate activity fee.

Material/Film and Transportation/Field Charges*

Biology	614	\$25
Biology	617	50
Biology	621	50
EECE	555	5
EECE	720	10
EECE	750	10
EECE	751	5
EECE	753	5
EECE	754	5
EECE	755	5
EECE	780	7
EECE	781	7
EECE	782	7
EECE	783	7
ECPAS	887	10
ECPRE	783	5
ECPRE	784	5
ECPRE	787	5
ECPRE	788	5
FNES	708	30
FNES	771	30
Psychology	761	25
Psychology	764	25
SEYS	562	5
SEYS	711	5
SEYS	712	5
SEYS	773	5

Material and transportation charges of other courses will be shown in the *Class Schedule*, issued just before registration.

A student who drops a course that has charges before classes begin will receive a refund.

*Subject to change. See the *Class Schedule* for current charges.

Special Fees

The following fees will also be charged:

1. All students are required to pay a non-refundable fee of \$40 at the time of filing application for either matriculant or non-matriculant status in a Master's degree or certificate program.

2. A re-entry fee of \$10 is payable by matriculated students who want to re-enter the College after an absence of one or more semesters.

3. A charge of \$15 is made for late registration after the regularly scheduled registration period.

4. A charge of \$10 is assessed for students who change their schedules and add courses. There is no charge for students who only drop courses when changing their schedules.

5. Breakage fees are assessed to cover the cost of equipment damaged in the course of laboratory work. There is no charge for total breakage under \$1.

6. A charge at list price is made for replacement of any issued physical education equipment that may be missing from the student's gym locker at the end of a semester.

7. A fee of \$15 is payable when a make-up examination is given and \$5 is charged for each additional examination, up to a maximum of \$25 per semester.

8. A fee of \$125 per year, including 6% New York City parking tax, is charged for campus parking, if granted. (See Campus Parking, page 27.)

9. Duplicate Records fees are: a) duplicate I.D. card: \$5; b) duplicate diploma: \$15; c) each transcript of record: \$4 (waived when the transcript is to be forwarded to another unit of the City University); d) other duplicate records: \$5.

10. A fee of \$15 is charged for the binding of the Master's thesis.

11. The per-semester fees for maintenance of matriculation are: \$250 for NYS residents; \$403 for out-of-state students.

12. A \$15 non-payment service fee is charged whenever a student does not pay any bill by its due date. It applies to students who receive hardship deferrals and who are declared eligible for financial aid as well as to those not receiving deferrals or aid.

13. A payment reprocessing fee of \$15 is charged when a check tendered to the College by a student is not honored by the bank upon which the check is drawn. A separate fee will be charged for each check that requires reprocessing. In the event that the return of the check resulted from a bank error and the bank acknowledges the error in

Activity Fee

	Total	Stud Govt.	Coll. Assoc.	Student Serv. Corp.	Disabled Students Fee	PIRG Fee	Univ. Govt. Fee	Special Instructional Fee	Non-Instructional Fee
Full-time	\$52.10	\$2.45	\$4.55	\$40	\$1.25	\$3	\$.85	-0-	-0-
Part-time	52.10	\$2.45	\$4.55	\$40	\$1.25	\$3	\$.85	-0-	-0-
Cooperating teacher	25.00	-0-	-0-	-0-	-0-	-0-	-0-	\$25	

All students will be charged a Consolidated Service Fee of \$5 for each semester or session.

writing, the reprocessing fee may be waived.

Payment of service fees, fines, and miscellaneous charges may be made at the Bursar's windows in Jefferson Hall. Information about payment of registration fees can be found in the *Registration Guide and Schedule of Classes* published each semester.

The Bursar's Office is open Monday through Thursday from 10 am to 4 pm, Friday from 10 am to 1 pm, and Tuesdays and Wednesdays from 5:30 to 7:00 pm when classes are in session.

Refund of Tuition Fees

To receive a 100% refund of tuition, students must drop course(s) in the Registrar's Office in Jefferson Hall, Room 100, before the official opening day of classes. Students who cannot appear in person may make their request in writing. However, the envelope must be postmarked before the official opening day of classes.

Refunds will be made in accordance with the following schedule. Students should refer to each semester's *Class Schedule* for specific calendar dates.

Withdrawal from course before the official scheduled opening date of the semester	Refund
Withdrawal within one week after the official scheduled opening date of the semester	100%
Withdrawal during second week after the official scheduled opening date of the semester	75%
Withdrawal during third week after the official scheduled opening date of the semester	50%
Withdrawal after completion of third week after the official scheduled opening date of the semester	25%
Withdrawal after completion of third week after the official scheduled opening date of the semester	None

Application for tuition refunds for extenuating circumstances should be made in writing to the Bursar's Office

(Jefferson Hall, Room 200).

Except as otherwise noted, no other fees are refundable.

Checks Returned to the College by the Bank

If your check is returned by the bank to Queens College, your registration will be processed in the following manner:

1. *Stop Payments:* A stop payment on your check will *not* result in cancellation of your registration. In order to cancel your registration, you must notify the Registrar in person or in writing *prior* to the official opening day of classes - of your intention not to attend. In such case, you will receive a 100% refund of tuition and fees. As stated in 13 above, a stop payment order will result only in a reprocessing fee of \$15.

2. *Other:* If your check is returned by the bank as not presentable for collection (NG), you will be liable for all tuition and fees in addition to a reprocessing fee.

Holds

Students who have debts (for any tuition, fees, parking violations, breakage, emergency loans, etc.) that are past due will have holds placed on registration, transcripts, and diplomas.

Financial Aid Programs

Students seeking information on costs, resources, and eligibility criteria for financial aid should contact the Financial Aid Office (Powdermaker Hall 127, 997-5100). The office is open from 9:30 am to 4:00 pm, Monday through Thursday, 9:30 am to 2:00 pm on Friday, and from 5:00 to 7:00 pm, Tuesday and Wednesday, when classes are in session.

If available resources are not sufficient to cover the cost of your attendance, you should look into financial aid. Financial assistance, provided through the College, is intended for eligible students who need help in meeting costs. The College does not provide financial assistance for students who attend on less than a half-time basis.

The following is a listing of financial aid programs available to graduate students:

New York State Programs
Tuition Assistance Programs (TAP)

- Federal Programs*
- Federal Perkins Loans
- Federal Direct Loans
- Federal Work-Study Program
- Veterans Administration Educational Benefits

Queens College Programs
Emergency Loan Funds
Adele Fox Book Loan Fund
Tuition Waivers

Financial aid programs are subject to change. Additional state and federal assistance may be available to limited numbers of students. For more information, contact the Financial Aid Office.

NEW YORK STATE PROGRAMS

Note: Where a question of eligibility exists, contact the Financial Aid Office for information and assistance.

Tuition Assistance Program (TAP)
Application Procedures
Applicants must apply annually to the New York State Higher Education Services Corporation (HESC), Tower Building, Empire State Plaza, Albany, NY 12230. The application deadline for the 1998-99 academic year is May 1, 1999. Applications are available in the Financial Aid Office.

The first step is to complete the Federal FAFSA application. CUNY then mails you a TAP application.

The Higher Education Services Corporation determines your eligibility and mails an award certificate directly to you indicating the amount of your grant. Present the Institutional Copy of the award certificate at the time you pay tuition. The College may defer tuition payment on the basis of receipt of the award certificate.

Selection of Recipients

TAP is an entitlement program. There is neither a qualifying examination nor a limited number of awards. You must:

1. be a New York State resident for one year and a U.S. citizen, permanent resident alien, or paroled refugee;
2. be enrolled full-time and matriculated;
3. have, if dependent, a family net taxable income below \$20,001, or if independent and single with no tax

dependents, a net taxable income below \$5,667;

4. be charged a tuition of at least \$200 a year;

5. be in good academic standing. Applicants will be excluded from this program if they are in default in the repayment of a student loan.

The maximum TAP award for graduate students is \$550 per year, the minimum \$75. Graduate students may receive TAP for eight semesters.

Academic Standing

Students who received their first TAP award in 1981-82 or thereafter, must meet the program pursuit and academic progress requirements to be considered in good academic standing. The penalty for loss of good standing is suspension of the award.

Waiver

A graduate student may be granted a waiver of the TAP pursuit and progress requirements once. If a waiver is granted, the student can continue to be eligible for TAP for that semester only and must then meet the requirements to be eligible for further payments.

FEDERAL PROGRAMS

To be eligible for the federal Title IV student financial aid programs (Perkins, Federal Direct Loans, and FWS), a student must:

1. be enrolled at least half-time as a matriculated student;
2. be a U.S. citizen or an eligible noncitizen;
3. show evidence of need;
4. be making satisfactory academic progress toward a degree;
5. not be in default on any student loan, or owe a repayment of a PELL or Supplemental Educational Opportunity Grant.

Satisfactory Progress Standard

In order to be making satisfactory progress toward a degree, for purposes of receipt of Title IV Federal Student Assistance, a graduate student must meet Graduate Division requirements concerning grade-point average, as explained in the section *Required Grade Average, Probation, and Dismissal* (page 25) and have accumulated credits toward the degree greater than or equal to two-thirds the cumulative credits attempted at the College AND not have attempted more than 150% of the credits normally required for completion of the degree.

Students will be measured against the satisfactory progress standard at the end of the Spring term to determine their eligibility for receipt of funds for the upcoming year.

Students who fail to meet the standard may appeal their status in the Graduate Studies Office, PH 100.

TAP PROGRAM PURSUIT

<i>To Be Eligible for TAP Payment No. *</i>	<i>Minimum Credits You Must Complete in Prior Payment Semester</i>
2	6
3	6
4	9
5	9
6 to 16	12

Academic Progress for Students in Graduate Programs

<i>To Be Eligible for TAP Payment No.</i>	<i>Minimum Cumulative Credits Earned Through Last Semester of Attendance</i>	<i>Minimum Grade-Point Average Through Last Semester of Attendance</i>
2	6	2.2
3	12	2.5
4	21	2.75
5	30	3.0
6	45	3.0
7	60	3.0
8	75	3.0

* This includes successful completion of credit-equivalent work. The number of payments includes undergraduate payments, if any.

Federal Perkins Loan Program

Application Procedures

Application is made through Queens College. For the 1998-99 year, a student enrolled at Queens College can apply for a loan by completing a Free Application for Federal Student Aid (FAFSA), which is available in the Financial Aid Office.

Selection of Recipients

Loans are available to matriculated students enrolled at least half-time who meet the eligibility criteria listed above.

Awards

Amounts that may be awarded by CUNY for an academic year range from \$300 to \$3800.

The maximum amount that may be borrowed under the Federal Perkins Loan Program is \$18,000 for graduate study, which includes any amount borrowed for undergraduate study.

The current interest rate, payable during the repayment period, is 5% on the unpaid principal. Repayment begins nine months after you graduate, leave school, or are enrolled less than half-time, and may extend over a period of 10 years. If you received a Perkins loan prior to July 1, 1987, repayment begins six months after you graduate, leave, or drop below half-time attendance.

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

Federal Direct Loans Program

Application Procedures

The first step is to file the FAFSA. After the FAFSA is processed, fill out the Queens College Direct Loan Application.

A pre-loan interview is required.

Selection of Recipients

To be eligible for a Federal Direct Loan, you must meet the eligibility requirements listed above. All students must complete a FAFSA to determine need for the loan.

Loan Schedule

A graduate student may borrow up to \$8,500 per academic year under the Federal Direct Loans Program, up to a combined total of \$138,500 including any loan for undergraduate study. The amount you borrow is limited to the cost of education at Queens College minus other financial aid you may receive and your expected family contribution.

The interest rate on Federal Direct Loans is variable, but may not exceed 8.25%. Students are responsible for an origination fee of 4%, which is deducted from the payment(s).

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

Federal Work-Study Program (FWS)

Application Procedures

Application is made through Queens College on the FAFSA.

Selection of Recipients

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

Awards

The College arranges jobs on and off campus, with public or private nonprofit agencies, such as hospitals, for up to 20 hours per week during the academic year and 35 hours per week during the Summer.

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

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

Veterans Administration (VA)

Educational Benefits

Application Procedures

Application forms are available at all VA Offices, active duty stations, and American embassies. Forms completed by the Registrar's Office are submitted to the regional VA Office.

Educational benefits are available through the Veterans Administration under the following programs:

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

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

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

Dependents Educational Assistance Benefits (Chapter 35): For spouses and

children of veterans whose death or total, permanent disability was service connected.

QUEENS COLLEGE PROGRAMS

Emergency Student Loan Funds
Students may borrow small amounts to cover emergencies for a short time and pay no interest. In general, loans are limited to \$100 and are to be repaid within 30 days. Apply in person at the Financial Aid Office. Approved loans usually may be obtained in two days.

Adele Fox Book Loan

Students may borrow up to \$300 per semester to purchase books at the Queens College Bookstore to be repaid from their financial aid award.

Graduate Partial Tuition Waiver
Matriculated graduate students carrying six or more graduate credits a term may be awarded a partial tuition waiver based on financial need. Students must complete the FAFSA. Funds are limited.

SCHOLASTIC STANDARDS

Full-time graduate students may take a maximum of 15 credits a semester. Students in the Teacher Education program with full-time employment may take a maximum of six credits in any semester. Students who want to exceed these limits must receive the permission of both their academic department and the Office of Graduate Studies.

Grades

The following grades are used in the Graduate Division of Queens College:

A+, A, A-, B+, B, B-, C+, C, C-, F.

To ensure uniformity of grading standards, the Committee on Graduate Scholastic Standards has approved the following table of equivalents:

A+ 97-100	B- 80-82
A 93-96	c+ 77-79
A- 90-92	C 73-76
B+ 87-89	C- 70-72
B 83-86	F 0-69

The following special grades are also used in the Graduate Division:

W (Withdrawn Passing): Given when a student withdraws formally from the fourth through the eighth week, or after the eighth week of the semester with a passing grade in the course work completed.

WF (Withdrawn Failing): Given when a student withdraws formally after the eighth week of the semester with a failing grade in the course work completed.

WU (Withdrawn Unofficially): Given when the student ceases to attend classes without formally withdrawing from the course. *WU* is equivalent to a failure.

WA (Administrative Withdrawal):

Given when the student fails to comply with New York State Public Health Law 2165 (Immunization).

P is a passing grade that is valid *only* in those few courses that are designated as permitting this grade.

Z is a temporary grade assigned when an instructor does not submit a grade.

Audit (Aud.) indicates that a student registered and paid for a course and attended classes, but was not required to do course work and will receive no credit for the course. Courses that have been audited may not later be repeated for credit, nor will credit be granted for an audited course.

Withdrawal Procedure

Withdrawals from courses during the first eight weeks of the semester require no special approval. Beginning with the first day of the ninth week of the semester, graduate students must complete a Request for Permission to Withdraw from a Course. This form is obtainable from the Office of the Registrar and the Office of Graduate Studies. It must be signed by the course instructor and by the student's Graduate Adviser and filed in the Registrar's Office.

Beginning with the fourteenth week of the semester, the approval of the Office of Graduate Studies is also required. In both cases, the instructor must indicate whether the student is passing or failing as of the date of the withdrawal. An indication of failure results in the grade of *WF*, which has the same effect on the student's grade-point average as an *F*. Course withdrawals at the graduate level are allowable up to the *official* last day of classes.

A course (or courses) dropped during the first *three* weeks of the semester may result in a refund of some portion

of the tuition fee. The activity fee is not refundable unless the student has formally withdrawn from classes prior to the first official day of classes.

Incomplete Work

Incomplete (Inc.): This grade, which must be requested by the student prior to the end of the semester, is given by the instructor to indicate that a student has made a satisfactory record in course work but, *for good and sufficient reason*, is unable to complete the course. A graduate student receiving this grade must complete the work of the course by the end of the next two regular semesters. Requests for extensions of time may be addressed to the Office of Graduate Studies. If the work of the course is *not* completed, the grade remains on the transcript without penalty. Students preparing to complete a course in which the grade is *Incomplete* must not register for the course a second time.

Absent

Absent (Abs.): This is a temporary grade indicating that the student missed the final examination, which was the *only work in the course that was not completed*. The *Absent* grade is given only when it is expected that the student will be able to achieve a passing grade in the course by taking a make-up examination. A graduate student receiving this grade is required, with the permission of the departmental adviser, to take a make-up final examination by the end of the next two regular semesters. A fee of \$15 is charged when a special examination is given. (See number 7 under *Special Fees*, page 21.)

Note: Students may not graduate with an unresolved grade of *Abs.* on the record.

Important Note Regarding Completion of Courses

Full-time graduate students who were eligible to receive New York State Tuition Assistance Program (TAP) awards for the first time in Fall 1981 or thereafter should be aware that in order to receive their awards they must have completed 12 credits in the semester of the award. For graduate students, the grades *W*, *WF*, *WU*, *Inc.*, and *Abs.* are counted as "not complete" and may jeopardize eligibility for the TAP award.

Advisement

Matriculated students are urged to consult with their Graduate Adviser before registering for courses. New matriculants and non-matriculated students are required to obtain permission from the Graduate Adviser each semester prior to registering for courses. Instructors have the right to dismiss from class any non-matriculated student who did not obtain permission to enroll.

Grade-Point Average

The grade-point average, which is a numerical index of the student's academic record at Queens College, is computed in the following manner:

1. Multiply the total number of credits earned at Queens College with each specific grade (*A+* to *C-* and *F*) by the numerical values of these grades.
2. Add the number of credits taken at Queens College. This sum includes credits for courses failed (*WU*, *WF*, or *F*) as well as courses passed with grades *A+* to *C-*. Credits completed with a grade of *P* are not included in this sum. (See also the *Important Note* below.)
3. Divide the result obtained in step 1 by the result obtained in step 2. This result becomes the grade-point average, which is indicated by three decimal places.

Important Note: Grades for courses transferred from other institutions are not included in the computation of the grade-point average, which is based only on grades received in Queens College courses.

Grade Replacement Policy

As of September 1, 1996, graduate students are entitled to the following grade replacement policy, which is limited to graduate courses: With the exception of courses that are designated as repeatable for credit, graduate students may repeat a graduate course and have the last grade received replace the previous grade in the cumulative grade-point

average. No more than four credits may be replaced.

Transcripts

There is a fee of \$4 to order a copy of your Queens College record. (However, there is no fee for transcripts to be sent to any other branch of CUNY for purposes of admission.) To order a transcript, go first to the Bursar on the second floor of Jefferson Hall. When you pay your fee, you will be given a voucher to bring to the Office of the Registrar, Jefferson 100. You must give the Registrar's representative the Registrar's copy of the voucher and complete a transcript request form. Be sure to sign the request. Return both copies of the form to the Registrar's Office. Allow two to three weeks for delivery.

If you want to request a transcript by mail, ask for a form from Queens College, Attention: Transcripts, Jefferson Hall, Room 100, Flushing, NY 11367-1597. Fill out the form completely and return it to the above address. Include a check or money order (*send no cash*) that lists your address and social security number. The fee, which must be received in order to process the request, covers one complete transcript for all divisions attended. You will be notified if a "hold" has been placed on your record. Requests for transcripts will not be honored until the "hold" has been cleared.

Required Grade Average, probation, and Dismissal

All programs must be completed with a minimum average of at least *B* (3.0). A matriculated graduate student whose

grade-point average falls below 3.0 during the course of the program will be placed on probation. The student will then have up to 12 graduate credits within which to raise the grade-point average to 3.0. If this is not achieved, the student will be dismissed.

A matriculated graduate student who is dismissed must remain out of the College for at least one semester. To return, the student must file a formal application for reentry and pay a non-refundable reentry fee by the appropriate deadline (see page 19). The student must also petition the Office of Graduate Studies for permission to reenter. Requests for reentry will be reviewed on an individual basis.

Permission to reenter following a suspension may be granted *one time only*.

Students who have completed the total credits required by their degree or certificate program may not take additional credits at another institution to raise the grade-point average. At the completion of the total credits allotted to a program, if a student does not have a 3.0 average and wishes to register for additional courses at Queens to attempt to raise the grade-point average, permission to do so must be obtained from the Office of Graduate Studies.

Appeals of Grades

A student who believes he or she has received an inappropriate grade should take the following steps:

1. Consult with the instructor.
2. If there is no satisfactory resolution, consult with the departmental

COMPUTING THE GRADE-POINT AVERAGE

Grade	Numerical Value		Credits		Quality Points
A +	4	x	6	=	24
A	4	x	9	=	36
A -	3.7	x	3	=	11.1
B +	3.3	x	6	=	19.8
B	3	x	6	=	18
B -	2.7	x	3	=	8.1
C +	2.3	x	3	=	6.9
C	2	x	3	=	6
C -	1.7	x	3	=	5.1
WU, WF, F	0	x	3*	=	0
			45		135

135 ÷ 45 = 3.00

The grade-point average is 3.00.

*No credit counted.

Chair. The Chair may convene a faculty committee to review the appeal.

3. If there is still no satisfactory resolution, appeal to the Office of Graduate Studies for a further review. The appeal must be in writing and must detail the reasons why the grade is felt to be inappropriate.

4. Appeals from the decisions of the Office of Graduate Studies may be directed in writing to the Graduate Scholastic Standards Committee.

The only basis for an appeal to the Office of Graduate Studies and the Graduate Scholastic Standards Committee is that the student has been treated in an arbitrary and capricious manner by the instructor. To make such an appeal, the student must be prepared to demonstrate that the grade was assigned punitively, unfairly, or on a basis other than impartial academic evaluation. At the departmental level, a grade appeal may be based on the academic quality of the student's work.

Once a grade has been posted on the record, it may not be changed without the written permission of the Office of Graduate Studies.

Attendance

By registering in a course, the student assumes the obligation to fulfill the requirements set for that course by its instructor. Although absence in and of itself shall not affect a student's grade, students are responsible for such activities as participation in class discussions, laboratory sessions, field trips, etc.; the preparation of papers and reports; and the taking of quizzes and examinations, any or all of which may constitute a component in the student's final grade for the course. In addition to observing the regulation regarding withdrawal from a course, students are expected as a normal courtesy to inform the instructor of prolonged absence or withdrawal.

Students who wish to withdraw officially from a course should refer to the section of this *Bulletin* dealing with withdrawal procedures (page 24).

Students who wish to request a grade of *Incomplete (Inc.)* should refer to the section on *Incomplete Work* (page 24).

REGULATIONS

Rules governing campus parking, student records, non-discrimination policies, complaint procedures, the use of computers, and general student conduct are listed in this section.

A complete statement concerning the College's policy on sexual assault, sexual harassment, security, AIDS, and drugs and alcohol abuse is contained in a pamphlet called *Your Right to Know*. It is distributed to all students with the *Class Schedule* and is also available from the Information Center in the lobby of Kiely Hall, in the Office of the Dean of Students in Powder-maker 116, and at the information kiosk in the front lobby area of the Student Union. *Your Right to Know* lists resources both, on and off campus, for students who have questions or seek assistance about any of the topics noted above.

Identification Cards

The College supplies each student with an identification card. College regulations require students to carry their validated ID on campus and to present it to a member of the faculty or staff if requested to do so.

New students should have their ID photos taken in Jefferson Hall, Room 202, after they have completed their registration. The Bursar will mail a validation sticker with acknowledgment of receipt of payment of the tuition bill.

The validated card identifies those persons authorized to be on campus and extends to registered students all the privileges of membership in the College community. ID cards are used in the library system. A validated ID must be shown to collect any check from the Bursar's Office.

Replacement of lost or stolen ID

cards takes five days from the date of application to the Security Office, Jefferson Hall 204. A fee of \$5 is charged to duplicate a lost ID.

Campus Parking

A *special permit* is required to park on the campus. Parking space on campus is *extremely* limited, and only a small number of students can be accommodated. During the day session, the College provides parking for faculty, staff, and students with severe physical handicaps. During the evening session, limited space is available for students in courses beginning after 4 pm. Students should plan their programs assuming that parking will *not* be available; program changes *cannot* be made due to the lack of parking.

Applying for Parking

Applications will be accepted *only* during the Regular Registration period and the first week of classes.

Applications for parking may be made at the Security Office (Jefferson Hall 204). Applicants must produce the following at the time of application: a driver's license, the car registration (which must be in the student's name or in the family name), and proof of College registration (computer print-out or paid bill is the *only* acceptable proof). Permits are assigned on the basis of need, determined according to a point system. Information about this system is provided with the parking application, which is available at the Security Office. Office hours will be posted at time of application. Approved applicants will receive a parking decal from Security after payment of \$125 to the Bursar for Fall/ Spring parking.

Students purchasing a parking decal will receive a copy of the parking and traffic regulations. Decals *must* be per-

manently affixed (not taped on), according to the directions printed on them. Lost or stolen decals *will not be replaced*, and parking fees are *not refundable*. Violation of campus parking or traffic regulations can result in fines, suspension of parking privileges, tow-away, withholding of transcripts, and blocking of future registrations until fines are paid. Parking fees and fines are subject to change without notice.

Motorcycle riders are required to purchase a decal at a cost of \$125. A special area will be set aside for motorcycle parking.

Parking for Students with Disabilities

Requests for parking privileges based on physical disabilities must be made through the Health Service Center (FitzGerald Gym 204).

Student Records

The College abides by the provisions of the Federal Education Rights and Privacy Act of 1974. Students have the right to be advised of what student records and information are maintained by the College, who maintains them, who has access to them and for what purposes, policies for reviewing and expunging them, procedures for granting students access and for challenging the records, cost charged for copies, and other rights and requirements under the Act. All of this information is available from the Registrar, Jefferson 100, during the hours the office is open.

Queens College will confirm the following information concerning present and former students: name, dates of attendance, major field of study, and degrees and awards received.

Any student or former student may require that any or all of the above information not be released, without

the student's prior written consent, by completion of a form available in the Registrar's Office. The form may be completed, withdrawn, or modified at any time the Registrar's Office is open.

A student whose request for access is denied or not responded to within 15 days of receipt may appeal in writing to Jane Denkensohn, Esq., Special Counsel to the President, Kiely 1303, indicating the date of the original request for access, the particular records to which access was requested, the person to whom the request was made, and the reasons why the student believes he or she has a right of access to the record. The appeal will be decided no later than 25 days after the receipt of the original request for access. A denial of an appeal may be further appealed to the General Counsel and Vice Chancellor for Legal Affairs of the City University.

NON-DISCRIMINATION POLICIES

It is the policy of Queens College of the City University of New York to recruit, employ, retain, and promote employees and to admit and provide services for students without regard to sex, age, race, color, national or ethnic origin, religion, sexual orientation, veteran or marital status, or disability.

Affirmative Action

Affirmative Action (AA) goes beyond equal opportunity principles; it attests to the College's commitment to achieve substantial participation by women and minority groups in all phases of the College endeavor. The AA Committee monitors accomplishment of these goals, identifies problem areas that indicate patterns of discrimination against a group of people by a particular unit of the College, and presents proposals for remedial action to the President. For more information and for the names of the members of the AA Committee, you may obtain a copy of the pamphlet entitled *Your Right to Know* at the Information Center, Kiely 100; the Office of the Dean of Students, Powdermaker 116; or in the Student Union at the information kiosk, front lobby area; or contact the Director of Affirmative Action, Kiely 140, 997-5554.

Rights of Persons with Disabilities

The College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, which protect persons from discrimination on the basis of disability for all educational and employment purposes, including admissions,

evaluation and placement programs, activities and courses, counseling, financial aid, scholarships, athletics, and employment. The Office of Special Services coordinates implementation of the regulations contained in Section 504 and the ADA.

Those seeking information regarding Section 504 or ADA regulations or who wish to file a grievance, may do so with the Director of Special Services. For more information, you may obtain a copy of the pamphlet entitled *Your Right to Know* at the Information Center, Kiely 100; the Office of the Dean of Students, Powdermaker 116; or in the Student Union at the information kiosk, front lobby area; or contact the Counseling and Advisement Center, Powdermaker 128, 997-5420; or the Special Services Office, Christopher Rosa, Director, Kiely 171, 997-5870.

Sexual Discrimination

The College complies with Title IX of the Educational Amendments Act of 1972, which protects persons from discrimination on the basis of sex in the operation of its educational programs. Persons seeking information about Title IX may obtain a copy of the pamphlet *Your Right to Know* at the Information Center, Kiely 100; the Office of the Dean of Students, Powdermaker 116; or in the Student Union at the information kiosk, front lobby area; or may contact Jane Denkensohn, Esq., Title IX Coordinator, Kiely 1303, 997-5725.

Sexual Harassment

The following is the text of the City University of New York's Policy Against Sexual Harassment.

Policy Statement

It is the policy of the City University of New York to promote a cooperative work and academic environment in which there exists mutual respect for all University students, faculty, and staff. Harassment of employees or students based upon sex is inconsistent with this objective and contrary to the University policy of equal employment and academic opportunity without regard to age, sex, sexual orientation, alienage or citizenship, religion, race, color, national or ethnic origin, handicap, and veteran or marital status. Sexual harassment is illegal under Federal, State, and City laws, and will not be tolerated within the University.

The University, through its colleges, will disseminate this policy and take other steps to educate the University community about sexual harassment.

The University will establish procedures to ensure that investigations of allegations of sexual harassment are conducted in a manner that is prompt, fair, thorough, and as confidential as possible under the circumstances, and that appropriate corrective and/or disciplinary action is taken as warranted by the circumstances when sexual harassment is determined to have occurred. Members of the University community who believe themselves to be aggrieved under this policy are strongly encouraged to report allegations of sexual harassment as promptly as possible. Delay in making a complaint of sexual harassment may make it more difficult for the college to investigate the allegations.

Prohibited Conduct

It is a violation of University policy for any member of the University community to engage in sexual harassment or to retaliate against any member of the University community for raising an allegation of sexual harassment, for filing a complaint alleging sexual harassment, or for participating in any proceeding to determine if sexual harassment has occurred.

Definition of Sexual Harassment

For purposes of this policy, sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other oral or written communications or physical conduct of a sexual nature when:

- 1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic standing;
- 2) submission to or rejection of such conduct by an individual is used as a basis for employment or academic decisions affecting such individual; or
- 3) such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or abusive work or academic environment.

Sexual harassment can occur between individuals of different sexes or of the same sex. Although sexual harassment most often exploits a relationship between individuals of unequal power (such as between faculty/staff member and student, supervisor and employee, or tenured and untenured faculty members), it may also occur between individuals of equal power (such as between fellow students or coworkers), or in some circumstances even where it

appears that the harasser has less power than the individual harassed (for example, a student sexually harassing a faculty member). A lack of intent to harass may be relevant to, but will not be determinative of, whether sexual harassment has occurred.

Examples of Sexual Harassment

Sexual harassment may take different forms. Using a person's response to a request for sexual favors as a basis for an academic or employment decision is one form of sexual harassment. Examples of this type of sexual harassment (known as *quid pro quo* harassment) include, but are not limited to, the following:

- requesting or demanding sexual favors in exchange for employment or academic opportunities (such as hiring, promotions, grades, or recommendations);
- submitting unfair or inaccurate job or academic evaluations or grades, or denying training, promotion, or access to any other employment or academic opportunity, because sexual advances have been rejected.

Other types of unwelcome conduct of a sexual nature can also constitute sexual harassment, if sufficiently severe or pervasive that the target does find, and a reasonable person would find, that an intimidating, hostile, or abusive work or academic environment has been created. Examples of this kind of sexual harassment (known as hostile environment harassment) include, but are not limited to, the following:

- sexual comments, teasing, or jokes;
- sexual slurs, demeaning epithets, derogatory statements, or other verbal abuse;
- graphic or sexually suggestive comments about an individual's attire or body;
- inquiries or discussions about sexual activities;
- pressure to accept social invitations, to meet privately, to date, or to have sexual relations;
- sexually suggestive letters or other written materials;
- sexual touching, brushing up against another in a sexual manner, graphic or sexually suggestive gestures, cornering, pinching, grabbing, kissing, or fondling;
- coerced sexual intercourse or sexual assault.

Consensual Relationships

Amorous, dating, or sexual relationships that might be appropriate in other circumstances have inherent dangers when they occur between a faculty member, supervisor, or other member of the University community and any person for whom he or she has a professional responsibility. These dangers can include: that a student or employee may feel coerced into an unwanted relationship because he or she fears that refusal to enter into the relationship will adversely affect his or her education or employment; that conflicts of interest may arise when a faculty member, supervisor, or other member of the University community is required to evaluate the work or make personnel or academic decisions with respect to an individual with whom he or she is having a romantic relationship; that students or employees may perceive that a fellow student or coworker who is involved in a romantic relationship will receive an unfair advantage; and that if the relationship ends in a way that is not amicable, either or both of the parties may wish to take action to injure the other party.

Faculty members, supervisors, and other members of the University community who have professional responsibility for other individuals, accordingly, should be aware that any romantic or sexual involvement with a student or employee for whom they have such a responsibility may raise questions as to the mutuality of the relationship and may lead to charges of sexual harassment. For the reasons stated above, such relationships are strongly discouraged.

For purposes of this section, an individual has "professional responsibility" for another individual at the University if he or she performs functions including, but not limited to, teaching, counseling, grading, advising, evaluating, hiring, supervising, or making decisions or recommendations that confer benefits such as promotions, financial aid or awards or other remuneration, or that may impact upon other academic or employment opportunities.

Academic Freedom

This policy shall not be interpreted so as to constitute interference with academic freedom.

False and Malicious Accusations

Members of the University community who make false and malicious complaints of sexual harassment, as

opposed to complaints which, even if erroneous, are made in good faith, will be subject to disciplinary action.

Procedures

The University shall develop procedures to implement this policy. The President of each constituent college of the University, the Deputy Chancellor at the Central Office, and the Dean of the Law School shall have ultimate responsibility for overseeing compliance with this policy at his or her respective unit of the University. In addition, each dean, director, department chairperson, executive officer, administrator, or other person with supervisory responsibility shall be required to report any complaint of sexual harassment to an individual or individuals to be designated in the procedures. All members of the University community are required to cooperate in any investigation of a sexual harassment complaint.

Enforcement

There is a range of corrective actions and penalties available to the University for violations of this policy. Students, faculty, or staff who are found, following applicable disciplinary proceedings, to have violated this policy are subject to various penalties, including termination of employment and permanent dismissal from the University.

Sexual Harassment Panel

The President has designated the following persons to serve on the College Sexual Harassment Panel. Complaints of sexual harassment may be made to any member of the panel.

Dr. Elizabeth McCaffrey

Coordinator
Counseling and Advisement
Powdermaker 128 997-5421

Professor Helen Cairns

Deputy Coordinator
Linguistics & Communication Disorders
G Building, Room 100A 997-2870

Ms. Valli Cook

Director of Affirmative Action
Kiely Hall, Room 140 997-5554

Professor Elaine Ludman

Family, Nutrition, and Exercise
Sciences
Remsen Hall, Room 306 997-4150

Mr. Robert Weller

Director, ACE Program
Kiely Hall, Room 134B 997-5717

Two students also serve on the panel. Please contact the Dean of Students' Office for their names.

Confidentiality

The privacy of individuals who bring complaints of sexual harassment, who are accused of sexual harassment, or who are otherwise involved in the complaint process should be respected, and information obtained in connection with the bringing, investigation, or resolution of complaints should be handled as confidentially as possible. It is not possible, however, to guarantee absolute confidentiality and no such promises should be made by any member of the Panel or other University employee who may be involved in the complaint process.

Making a Complaint of Sexual Harassment

Any member of the University community may report allegations of sexual harassment to any member of the Panel. Employees who are covered by collective bargaining agreements may either use their contractual grievance procedures, within the time limits provided in those agreements, to report allegations of sexual harassment; or, they may report such allegations directly to a member of the Panel as provided in these Procedures. Members of the University community who believe themselves to be aggrieved under the Policy are strongly encouraged to report the allegations of sexual harassment as promptly as possible. Delay in making a complaint may make it more difficult for the college to investigate the allegations.

Responsibilities of Supervisors

(a) Each dean, director, department chairperson, executive officer, administrator, or other person with supervisory responsibility (hereinafter "supervisor") is responsible within his or her area of jurisdiction for the implementation of the Policy and must report to the Panel Coordinator any complaint of sexual harassment made to him or her and any other incidents of sexual harassment of which he or she becomes aware or reasonably believes to exist. Having reported such complaint or incident to the Panel Coordinator, the supervisor should keep it confidential and not disclose it further, except as necessary during the complaint process.

(b) Each supervisor shall arrange for the posting, in his or her area, of the University policy against sexual

harassment; the names, titles, telephone numbers, and office locations of college Panel members; and any other materials provided to him or her by the Sexual Harassment Education Committee for posting.

Responsibilities of the University Community-At-Large

Members of the University Community who become aware of allegations of sexual harassment should encourage the aggrieved individual to report the alleged sexual harassment to a member of the Panel.

COMPLAINT PROCEDURES

Student Complaints

Student complaints are heard initially by the Dean of Students. A student with a complaint is generally able to get an appointment within 72 hours and often sooner. When the student does not want to file a formal complaint or grievance, the Dean will act as an ombudsman or mediator in an effort to work out the problem and obtain a satisfactory outcome or get an answer for the student. To file a formal complaint the student fills out a complaint/problem sheet with the Dean of Students Office, and the Dean or the appropriate College official(s) then looks into the complaint and provides the student with a response within two weeks, often sooner. The College official(s) providing a final determination will not be a person (or persons) involved in the alleged problem. Filing a complaint can never result in adverse action taken against the student for filing the complaint.

Documentation concerning each formal College complaint and its disposition will be kept for a period of at least six years.

Any student may also file a complaint with the Education Department of the State of New York.

SUBSTANCE ABUSE

The following program, in compliance with the Drug-Free Schools and Campuses Act Amendments of 1989 (Public Law 101-226), has been adopted and implemented at Queens College to prevent the illicit use of drugs and abuse of alcohol and tobacco by students and employees. Copies of this statement will be made available to all Queens College students and employees.

Smoke-Free Policy

The City University has adopted a no

smoking policy that prohibits smoking in all buildings throughout the CUNY system.

Drug, Alcohol, and Tobacco Use

Standards of Conduct: The legislature of the State of New York and federal statutes have made the possession, sale, or purchase of certain drugs without authorization a crime. New York law prohibits selling or giving alcohol to any "visibly intoxicated person." The possession and consumption of alcohol is illegal under state law for those under 21 years of age.

All members of the College community are expected to abide by the laws of the city, state, and federal government (Board of Trustees Bylaws, Article XV, Section 15.1). The College will not serve as a sanctuary and cannot insulate its members from the consequences of illegal acts. Queens College will not protect students or other members of the College community from prosecution under the law. All members of the College community are expected to abide by the city, state, and federal statutes that have made the possession, sale, or purchase of illegal drugs a crime. Students are expected to comply with the Rules and Regulations for the Maintenance of Public Order, which appear on page 32.

It is illegal to sell tobacco products to any person under the age of 18 in New York State.

Sanctions - Students: Any student found in violation of the abovementioned Rules and Regulations may be subject to disciplinary action. Sanctions for violation may include admonition, warning, censure, discipline, probation, restitution, suspension, expulsion, complaint to civil authorities, and ejection. These sanctions are defined on page 33.

A student who is experiencing difficulty with alcohol or chemical dependency may be referred to the Dean of Students or the Counseling and Advice Center by members of the instructional staff or may seek assistance directly. The Dean of Students may take disciplinary action as required or may recommend that the student meet with a counselor for appropriate referral or assistance through self-help organizations or other outside intervention agencies. Serious health risks, documented by the medical community, accompany the use and abuse of alcohol and drugs.

Sanctions - Employees: The unlawful manufacture, distribution, dispensation, possession, or use of illegal drugs or other controlled substances and the unauthorized use of alcohol by employees in the workplace are prohibited. Employees of the University must also notify the Director of Human Resources of any criminal drug statute conviction for a violation occurring in the workplace not later than five days after such conviction.

Employees who are experiencing difficulty with alcohol or chemical dependency will, at the request of their supervisor, be asked to meet with a counselor. The counselor, after the interview, may recommend appropriate assistance through self-help organizations or other outside intervention such as drug rehabilitation or employee assistance programs. Employees may also seek assistance on their own. Serious health risks, documented by the medical community, accompany the use and abuse of alcohol and drugs.

Employees found in violation of the Standards of Conduct referred to in this policy may be subject to discipline under the provisions of their Union contract and/or applicable College and University policy. The sanctions that will be imposed may include, in addition to those found in the various contracts, verified attendance and successful participation in a drug/alcohol assistance program.

Criminal Sanctions: The unlawful possession, use, or distribution of illicit drugs and alcohol is punished by harsh sanctions by the United States government and by the State of New York, which range from completion of an appropriate rehabilitation program through imprisonment.

Regarding illicit drugs, the seriousness of the offense and the penalty imposed upon conviction usually depend upon the individual drug and the amount of the drug held or sold. For example, in New York State the possession of four ounces of cocaine is a class A-1 felony, punishable by a minimum of 15 years and a maximum of life in prison. The sale of two ounces of cocaine will be similarly treated. The possession of more than eight ounces of marijuana is a class E felony, punishable by up to four years in prison, as is the sale of 25 grams of marijuana. It is important to be aware that, in New York, a gift of drugs, including marijuana, is treated as a sale. Federal penalties are similar to those assessed by the State.

Criminal penalties may also result from the misuse of alcoholic beverages. In New York, if you give or sell an alcoholic beverage to a person less than 21 years old, you are committing a class B misdemeanor, punishable by up to three months in jail and a \$500 fine. Any sale of any kind of alcoholic beverage without a license or permit is also a misdemeanor punishable by a fine, a jail term, or both. If you are under the age of 21, you are prohibited from possessing alcoholic beverages with intent to consume them. Each violation is punishable by a \$50 fine. The beverages may also be seized and destroyed by internal or external authorities. You can be fined up to \$100 and required to perform community service if you are under 21 and present a falsified proof when attempting to purchase alcoholic beverages, and you can have your driver's license suspended for up to 90 days if you use the license to try to purchase alcohol illegally.

These are only examples of the penalties that can be assessed against you. You should also know that it is the University's policy to discourage violations of federal, state, and city laws. Where appropriate, the University will refer persons who violate such laws for prosecution to the relevant governmental authorities and will cooperate fully with such authorities.

Campus/Community-Based Services
These services and information centers for alcohol and drug abuse are available to all members of the College community: Counseling and Advisement Center, Powdermaker Hall 128 (997-5420); Health Service Center, FitzGerald Gym 204 (997-2760); Office of Human Resources, Kiely Hall 163 (997-4455).

OTHER REGULATIONS

Computer Use

The following regulations are intended for anyone who has been authorized to use a computer owned by or purchased with grant funds administered by the College. This includes students who have registered for courses requiring the use of a computer; faculty and staff who have been assigned computers or computer accounts for the purposes of research or other scholarly activities; administrative and secretarial staff who are required to use computers in fulfilling their responsibilities; anyone who uses the Queens College microcomputer network; and all others permitted access to a computer.

Regulations Regarding Use of Computing Facilities

Queens College maintains several computers for academic and administrative use. The security and good working order of these tools depend 'on responsible care and use by those who are accorded the privilege of using them. Proper use, in part, means:

1. Only valid Queens College ID bearer or other authorized persons may use the computing facilities. Users are required to present a valid ID upon request of computing facility personnel.

2. Queens College computing facilities are to be used *strictly* for those academic or administrative purposes that are established and approved when an account is granted or use is permitted.

3. Users are responsible for maintaining exclusive access to their accounts by ensuring that no one else is permitted the opportunity to learn their passwords. Periodically changing your password to protect your account is strongly urged. If your account is used improperly by someone else, you may lose the account.

4. Electronic mail or memo facilities shall not be used for transmitting any form of obscene or threatening messages, or to send multiuser-directed advertisements or announcements, or for other illegal purposes.

5. The writing of code or execution of instructions that threaten system integrity or security, cause harm to the system or users' files, or cause excessive or wasteful use of computer resources such as memory, cpu time, or output pages is strictly prohibited.

6. The computer should not be used for pranks or practical jokes or to gain unauthorized entry to other computers.

7. Use of computers for commercial gain is not permitted.

8. Theft or accessory to theft of equipment, documentation, supplies, or another person's files, programs, or output may result in criminal prosecution or other disciplinary action.

9. Users should use and maintain the computing facilities entrusted to them with care and good sense, and must refrain from smoking, eating, and drinking when using computing facilities. Users should be considerate of others.

10. Users are advised that it is Queens College policy that software that is copyrighted may not be copied, reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any human or computer language, in any form or by any means, in any part without prior written permission of the copyright holder. Backup

copies with a copyright notation may be kept for that purpose only.

Disability or Pregnancy

A student who becomes disabled or pregnant should consider discussing with a counselor from the Office of the Dean of Students 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. The recommendation, which would be filed in the Health Service Center, is useful information should the student require any medical services while on campus.

Student Integrity

Students found guilty of any form of academic dishonesty, such as plagiarism or cheating on an examination, are subject to discipline, including suspension or dismissal from the College. Any student who has been admitted on the basis of forged or altered transcripts will be subject to dismissal.

For retention in the Graduate Division, students must show evidence of good character and those personal characteristics required to fulfill course and certification requirements. Performance in classes may be taken as evidence of these personal characteristics.

Gambling

Gambling in any form is not permitted on campus except as expressly permitted by State law.

Smoking

Smoking is prohibited in all classrooms, auditoriums, gymnasiums, hallways, elevators, restrooms, libraries, stores, and medical facilities on campus.

Religious Observance

Education Law 224-a states:

1. No persons shall be expelled from or be refused admission as a student to an institution of higher education for the reason that they are unable, because of their religious beliefs, to attend classes or to participate in any examination, study, or work requirements on a particular day or days.

2. Students in an institution of higher education who are unable, because of their 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 all students who are absent from school, because of their religious beliefs, an equivalent opportunity to make up any examination, study, or work requirements which they 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 said students such equivalent opportunity.

4. If classes, examinations, study, or work requirements are held on Friday after four o'clock post meridian or on Saturday, similar or makeup classes, examinations, study, or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to students because of their availing themselves of the provisions of this section.

6. Students who are 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 their rights under this section.

Rules and Regulations for the Maintenance of Public Order

"Each student enrolled or in attendance in any College, School, or Unit under the control of the Board and every student organization, association, publication, club, or chapter shall obey the laws of the City, State, and Nation, and the Bylaws and resolutions of the Board and the policies, regulations, and orders of the College."

Bylaws, Board of Trustees

The attention of students, faculty, and staff is called to the Rules and Regulations for the Maintenance of Public Order below:

Adopted by the Board of Trustees, June 23, 1969, with subsequent amendments. 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 of 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 Trustees.

With respect to enforcement of these rules and regulations we note that the Bylaws of the Board of Trustees provide that:

THE PRESIDENT. The president, with respect to his/her educational unit, shall:

"a. Have the affirmative responsibility of conserving and enhancing the educational standards of the College and schools under his/her jurisdiction;

"b. Be the adviser and executive agent to the Board and of his/her respective College committee and as such shall have the immediate supervision with full discretionary power in carrying into effect the bylaws, resolutions and policies of the Board, the lawful resolutions of any of its committees and the policies, programs, and lawful resolutions of the several faculties;

"c. Exercise general superintendence over the concerns, officers, employees, and students of his/her educational unit."

I. RULES

1. Members of the academic community shall not intentionally obstruct and/or forcibly prevent others from the

exercise of their rights. Nor shall they 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 and/or supplies.

4. Theft from or damage to University/ College premises or property, or theft of or damage to property of any person on University/College premises is prohibited.

5. Members of the academic community or their invited guests have the right to advocate a 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 insti-

tution. 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.

9. Any action or situation which recklessly or intentionally endangers mental or physical health or involves the forced consumption of liquor or drugs for the purpose of initiation or affiliation with any organization is prohibited.

10. The unlawful manufacture, distribution, dispensation, possession, or use of illegal drugs or other controlled substances by University employees in the workplace is prohibited. Employees of the University must also notify the College Personnel Director of any criminal drug statute conviction for a violation occurring in the workplace not later than five (5) days after such conviction.

11. The unlawful possession, use, or distribution of alcohol by students or employees on University/College premises or as part of any University/ College activities is prohibited.

II. PENALTIES

1. Any student engaging in any manner in conduct prohibited under substantive Rules 1-11 shall be subject to the following range of sanctions as hereafter defined in the attached Appendix: admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion, ejection, and/or arrest by the civil authorities.

2. Any tenured or non-tenured faculty member, or tenured or non-tenured member of the administrative or custodial staff, engaging in any manner in conduct prohibited under substantive Rules 1-11 shall be subject to the following range of penalties: warning, censure, restitution, fine not exceeding those permitted by law or by the Bylaws of the City University, suspension with/without pay pending a hearing before an appropriate college authority, dismissal after a hearing, ejection, and/or arrest by the civil authorities, and, for engaging in any manner in conduct prohibited under substantive rule 10, may, in the alternative, be required to participate satisfactorily in an appropriately licensed drug treatment or rehabilitation program. In addition, a tenured faculty member, or tenured member of the administrative or custodial staff, engaging in any manner in conduct prohibited under substantive Rules 1-11 shall be entitled to be treated in accor-

dance 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 1-11 shall be subject to ejection and/or arrest by the civil authorities.

4. Any organization that authorizes the conduct prohibited under substantive Rules 1-11 shall have its permission to operate on campus rescinded.

Penalties 1-4 shall be in addition to any other penalty provided by law or the City University.

APPENDIX

Sanctions defined:

- A. *Admonition.* An oral statement to the offender that he has violated university rules.
- B. *Warning.* Notice to the offender, orally or in writing, that continuation or repetition of the wrongful conduct, within a period of time stated in the warning, may be cause for more severe disciplinary action.
- C. *Censure.* Written reprimand for violation of specified regulation, including the possibility of more severe disciplinary sanction in the event of conviction for the violation of any university regulation within a period stated in the letter of reprimand.
- D. *Disciplinary Probation.* Exclusion from participation in privileges or extracurricular university activities as set forth in the notice of disciplinary probation for a specified period of time.
- E. *Restitution.* Reimbursement for damage to or misappropriation of property. Reimbursement may take the form of appropriate service to repair or otherwise compensate for damages.
- F. *Suspension.* Exclusion from classes and other privileges or activities as set forth in the notice of suspension for a definite period of time.
- G. *Expulsion.* Termination of student status for an indefinite period. The conditions of readmission, if any is permitted, shall be stated in the order of expulsion.
- H. *Complaint to Civil Authorities.*
- I. *Ejection.*

Resolved. That a copy of these rules and regulations be filed with the Regents of the State of New York and with the Commissioner of Education.

Resolved. That these rules and regulations be incorporated in each college bulletin.

PROGRAMS OF STUDY

Scheduling information for courses listed is based on information available when the *Bulletin* went to press. For possible changes and for details on courses designated † (offered either Fall or Spring) or †† (may be offered), consult the current semester's Class Schedule, available at the Office of the Registrar just before registration periods.

Curricula are subject to change. Students are advised to check with the departmental office for the most current program requirements and course descriptions.

Course levels

500-level courses are special purpose courses; graduate students may take these courses at the discretion of departments. 500-level courses cannot be credited toward the Master of Arts, Master of Arts in Liberal Studies, Master of Arts in the Social Sciences, Master of Fine Arts, or Master of Library Science degrees, and are counted toward the Master of Science in Education degree only under specified circumstances.

600-level courses are introductory graduate courses.

700-level courses are intended primarily for Master's degree and first-level doctoral students.

Undergraduate Students in Graduate Courses

Graduate 500- and 600-level courses may be taken by undergraduate students provided that all prerequisites are met and departmental permission is obtained.

Upper-division undergraduate students may be admitted to 700-level

graduate courses, other than Education courses, provided they have a minimum cumulative average of B and the permission of the Chair or Graduate Adviser of the department offering the course.

For graduate Education courses at the 700 level, students must have the permission of the Chair and the Dean of the School of Education. In specific cases, additional prerequisites may be required. With appropriate approval, graduate courses can be counted toward the undergraduate degree.

In some circumstances it is possible that graduate course credits taken by a Queens College undergraduate can be applied toward the Master's degree instead of toward the undergraduate degree. In such circumstances, the graduate course credits must be in excess of the 120 credits required for the undergraduate degree. In addition, graduate courses cannot be counted toward the undergraduate major or used to meet other requirements.

A Queens College undergraduate who takes graduate courses and later receives approval to use those courses toward the graduate degree will be billed accordingly at the graduate level for the difference in tuition fees. For additional information, undergraduate students should consult the Department Chair or Graduate Adviser.

Graduate Students in Undergraduate Courses

Graduate students should be aware that undergraduate courses do not accrue credits toward a graduate degree or an advanced certificate.

Graduate Center Courses

The letter "U" preceding a course number indicates that this is a doctoral

course. Students must register for doctoral courses through the Graduate Center. These courses may be taken by students who have the prerequisites, whether or not they intend to continue for the doctoral degree. Students are advised to complete a permit form before registering at the Graduate Center. (See page 11, *Transfer Credits and Permits*.)

Overlapping Courses

Academic policy as passed by the Senate of the College prohibits registration into courses with overlapping schedules. Students who register into courses that overlap will be dropped from one of the courses. No exceptions will be made.

DO NOT register for overlapping courses since you WILL BE DROPPED from one of the courses.

ART

Chair: Barbara Lane

Graduate Advisers: M.A. in Art History: Carol F. Lewine; M.F.A. in Studio Art: Cynthia Carlson; M.S. in Education: Lawrence S. Fane

Dept. Office: Klapper Hall 172, 997-4800

Art History: Klapper Hall 168, 997-4803

Studio Art: Klapper Hall 172, 997-4800

The Master of Arts Program in Art History is designed to prepare students to meet the specialized requirements of work in museums, galleries, publishing, and teaching. The program deepens students' insights into the history of art as a whole and provides them with opportunities to develop research skills in specific areas under the direction of scholars in those fields. Students who complete the program are qualified to enter advanced Ph.D. programs.

The Master of Fine Arts Program in Studio Art is designed to assist serious artists in the development of their work. The heart of the program is independent work in the fine arts in the student's chosen specialty, complemented by required courses and electives. Attendance usually is full time with four semesters required to complete the program. Admission is selective, limited to those who have already demonstrated both a commitment to art and the promise of further development. Students are provided with individual studios and share additional workspace in wood, printmaking, and metal workshops. Shared ceramics, computer, and photography facilities are also available. The M.F.A. degree is generally recognized as the appropriate academic credential for teaching art in college.

The Art Department provides both art history and studio courses to students seeking the Master of Science in Education degree. These students - high school and potential high school art teachers - should be considered artist-teachers whose development will be aided, as will their teaching, by their artistic growth. Their work in art history has the twofold value of deepening their understanding of studio activities and fitting them for the art historical education of high school students.

Faculty

Lane, Barbara G., Chair, *Professor*, Ph.D. 1970, University of Pennsylvania: Medieval art, Northern Renaissance
Lewine, Carol F., M.A. in Art History Adviser, *Associate Professor*, Ph.D. 1970, Columbia University: early Christian and Byzantine art, early Medieval art
Carlson, Cynthia J., M.F.A. in Studio Art Adviser, *Professor*, M.F.A. 1967, Pratt Institute: painting, drawing, design
Fane, Lawrence S., M.S. in Education Adviser, *Professor*, A.B. 1955, Harvard University: sculpture, three-dimension-

al design

Andrews, Benny, *Professor*, B.F.A. 1958, Art Institute of Chicago: painting, drawing, design
Chave, Anna C., *Professor*, Ph.D. 1982, Yale University: twentieth-century art
Clark, William W., *Professor*, Ph.D. 1970, Columbia University: Medieval art, architecture
Cohen, Arthur M., *Professor*, M.F.A. 1969, Indiana University: painting, drawing, design
Connor, Maureen, *Professor*, M.F.A., 1973, Pratt Institute: sculpture
Davis, Ellen N., *Associate Professor*, Ph.D. 1973, Institute of Fine Arts, New York University: ancient art
Hofsted, Jolyon G., *Professor*, Brooklyn Museum of Art School: ceramics, three-dimensional design
Hoshino, Marvin, *Associate Professor*, M.F.A. 1972, Indiana University: graphic design
Kramer, Harry, *Professor*, M.F.A. 1965, Yale University: painting, drawing
Lin, Xiaoping, *Assistant Professor*, Ph.D. 1993, Yale University: Chinese painting
Magid, Eleanor A., *Associate Professor*, M.F.A. 1984, Brooklyn College: drawing, graphics, photography
Mitchell, Tyrone, *Assistant Professor*, Art Students League, New York Studio School: sculpture
Percival, Brian R., *Lecturer*, B. Arch. 1961, University of Pennsylvania: architecture, modern art, Asian art and architecture
Porter, Liliana, *Professor*, M.F.A. 1962, Universidad Iberoamericana: printmaking, drawing
Ruffins, Reynold D., *Professor*, Certificate 1951, Cooper Union: illustration, design
Saslow, James M., *Professor*, Ph.D. 1983, Columbia University: Italian Renaissance
Slatkes, Leonard J., *Professor*, Ph.D. 1962, University of Utrecht: Northern Renaissance, Northern Baroque, history of graphics
Snider, Jenny R., *Associate Professor*, M.F.A. 1966, Yale University: painting, drawing, design
Sund, Judy, *Associate Professor*, Ph.D. 1986, Columbia University: nineteenth-century art

Master of Arts Program in Art History

Graduate Adviser: Carol F. Lewine

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. The applicant must be approved by the Departmental Committee; Graduate Study in Art History, which shall have the authority to accept or reject candidates subject to the approval of the Office of Graduate Studies. This Committee may request an interview with the candidate.

2. A minimum of four courses (normally 12 credits) in Art History beyond the intro-

ductory level is required. Not all applicants meeting minimum qualifications can be admitted. In selecting among applicants, the Committee will consider such factors as breadth of preparation, level of accomplishment, and the suitability of the applicant's special interests to the curriculum.

3. Evidence of a good reading knowledge in one of the following languages: French, German, Italian, Latin, or Ancient Greek.

4. A student may be conditionally admitted with the stipulation that any deficiencies in preparation be removed in the first year.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Each student selects a faculty adviser for guidance in working out a course of study to be approved by the Departmental Committee on Graduate Study. Programs will be planned to allow for concentration in a field of special interest with, at the same time, a balanced range of study in other areas.

2. Of the 30 credits required for the degree, 24 must be in Art History. The remaining six credits may, as part of the program, be taken in other departments, e.g., history, literature. The auditing of courses in Art History and at the College is recommended.

3. At least two of the courses in Art History must be seminars.

4. Students who have no previous studio work will be required to take, without credit, one course to be selected with the guidance of the adviser from among the department's studio offerings.

5. Not later than the completion of the first 15 credits, each student must pass a reading examination in a second foreign language to be approved by the adviser.

6. Each candidate for the degree is required to pass a Qualifying Examination demonstrating general competence in Art History, which is administered during the opening weeks of the first semester. In case of failure, this examination may be taken a second time. Students failing twice may be asked to withdraw.

7. A thesis is required.

Master of Fine Arts Program

Graduate Adviser: Cynthia Carlson

Requirements for Matriculation

These requirements are in addition to the general requirements for admission to the Master of Arts Program. Alternatively, the Bachelor of Fine Arts degree from a recognized institution shall be considered as an acceptable equivalent for the general requirements of the B.A., subject to the determination of the Departmental M.F.A. Committee in concurrence with the Office of Graduate Studies.

1. In addition to three letters of reference, each candidate for admission shall submit a portfolio of work as prescribed by the Departmental M.F.A. Committee. This portfolio shall be examined by the Committee, which shall have the authority to accept or reject the candidate.

2. Undergraduate study should consist of at least 30 credits in art; students shall have taken the equivalent of a two-semester survey course plus two elective courses in the history of art.

3. Normally, each candidate for admission will be interviewed by a member of the Departmental M.F.A. Committee. This requirement may be waived at the department's option.

4. Applicants must demonstrate satisfactory standards of spoken and written English. For applicants whose first language is not English: a) Interviews are required of those applicants who hold an undergraduate or graduate degree from an accredited American institution of higher education; b) All other applicants must submit proof of having achieved a score of 600 or higher on the Test of English as a Foreign Language (TOEFL).

Requirements for the M.F.A.

1. Completion of 54 credits consisting of the following:

a. Two courses in the history of art. (See Graduate Art History Electives.)

b. Art 724, Contemporary Issues in the Visual Arts.

c. Three seminar courses (a total of 9 credits), each with a different topic, must be taken under Art 730 and/or 731.

d. Two elective courses to be selected with departmental approval from Art 725, 726, 727.1, 727.2, 728.

e. Advanced Problems in Drawing (Art 735) must be taken twice for a total of 6 credits.

f. The remaining 24 credits will be taken in the student's area of concentration:

For Painting or Mixed Media Concentration: Art 721.1, 721.2, 721.3, 721.4

For Sculpture or Installation Concentration: Art 722.1, 722.2, 722.3, 722.4

Student work in the specialized area shall be reviewed and graded by the Departmental M.F.A. Committee each semester. This Committee shall be authorized to approve or reject a student for continuation in the program, to place a student on probation, and to approve a student for the M.F.A. degree.

2. A grade index of 3.0 shall be maintained.

3. Participation in the program is full time except as approved by the M.F.A. Committee, and the degree is normally completed within two years.

4. Students will do all of their creative work on campus except by permission of the Committee.

Courses in Art History

Courses numbered 500-506 are intended

for graduate students whose primary area of study is not art history; these courses may not be credited toward the Master of Arts degree in Art History.

Matriculation for the Master of Arts degree in Art History or permission of the instructor is required for admission to courses numbered 641-643 and 740-756, which assume a good background in art history and, in some instances, the ability to read in a foreign language.

Seminars numbered in the 750s and Art 740.1 and 740.2 assume prior study in the area and a knowledge of appropriate languages. Students will be expected to do independent work and present reports and an extended paper. Admission to seminars for all students is by permission of the instructor.

Not all courses will be offered each semester. Consult the Art Department for announcements of forthcoming offerings.

500. Topics in Art History. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.??

501.1. Topics in Ancient Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

501.2. Topics in Greek and Roman Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.??

502.1. Topics in Medieval Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.??

503.1. Topics in Renaissance and Mannerist Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

503.2. Topics in Baroque and Rococo Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.??

504.1. Impressionism to Cubism. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history.††

504.2. Art since World War II. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. A critical survey from abstract expressionism on: pop art, color-field painting, minimalist and post-minimalist art, conceptual art, the figurative revival, etc.††

504.3. Topics in Modern Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

505.1. Topics in American Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

506.1. Topics in Non-Western Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

556. Independent Study in Art History. Hr. to be arranged; 3 cr. Prereq.: Permission of instructor. Work in some particular area of research for candidates for the Master of Science in Education and Master of Fine Arts degrees.

556.1. Independent Study in Ancient Art.

556.2. Independent Study in Medieval Art.

556.3. Independent Study in Renaissance and Mannerist Art.

556.4. Independent Study in Baroque and Rococo Art.

556.5. Independent Study in Modern and American Art.

556.6. Independent Study in Asian Art.

600. Museum Studies. 3 hr.; 3 cr. The course will acquaint students with museum work by providing supervised participation in the functioning of the Godwin-Ternbach Museum. Students will engage in such museum activities as the preparation of exhibitions and care of the collection. Practical experience will be supplemented by lectures on the history of the art museum and the concerns of the contemporary museum world, and by "behind-the-scenes" visits to other museums. A term paper on an object in the Museum's collection is required.

641. Literature and Theory of Art. 3 hr. plus conf.; 3 cr. Prereq.: Matriculation for M.A. in Art History or permission of instructor.††

642. The Major Artist and His Development. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History or permission of instructor. The artist to be studied will be announced each time the course is given. May be repeated for credit when the topic is different.††

643. Studies in Non-Western Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History or permission of instructor. The area to be studied will be

† - Offered either Fall or Spring; see Class Schedule.

†† - May be offered; see Class Schedule.

announced each time the course is given, and will be selected from such topics as pre-Columbian art, African sculpture, Egyptian art, Chinese and Japanese paintings, or Japanese prints. May be repeated for credit when the topic is different.††

740.1. Art Historical Method: A Colloquium. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The basic problems and techniques of art historical scholarship, stylistic and iconographic analysis, sources and documentation.††

740.2. Problems in Iconography: A Seminar. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The interpretation of subject matter in Medieval and post-Medieval art. Methods used in the identification of various subjects and the tracing of their sources.††

COURSES IN ANCIENT ART

741.1. Ancient Painting. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. Greek and Roman paintings and mosaics, with emphasis on Roman wall decoration, its origins and originality.††

741.2. Greek Sculpture. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The leading masters and centers: Athens, Olympia, Delphi, Pergamon.††

741.3. Greek and Roman Architecture. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The development of the classical orders; Roman vault construction, space systems, and building types.††

741.4. Studies in Classical Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The topic will vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

751.1-751.9. Seminar in Ancient Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The particular area to be studied will vary and will be announced prior to each offering. Consult the Art Department for information.††

COURSES IN MEDIEVAL ART

742.1. Late Antique and Early Medieval Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

742.2. Early Gothic Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The evolution before 1200 in architecture, sculpture, the minor arts, and painting.††

742.3. Studies in Medieval Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The topic will vary and will be announced each time the course is given.

May be repeated for credit when the topic is different.††

752.1-752.9. Seminar in Medieval Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The particular area to be studied will vary and will be announced prior to each offering. Consult the Art Department for information.††

COURSES IN RENAISSANCE ART

743.1. Renaissance Painting in Florence. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

743.2. Painting of the High Renaissance and Early Mannerism (1480-1550). 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.??

743.3. Renaissance Architecture. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

743.4. Northern European Painting. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

743.5. Studies in Renaissance Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The topic will vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

753.1-753.9. Seminar in Renaissance Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The particular area to be studied will vary and will be announced prior to each offering. Consult the Art Department for information.††

COURSES IN POST-RENAISSANCE ART

744.1. Dutch Painting in the Seventeenth Century. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

744.2. Italian Painting in the Seventeenth Century. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. Anti-mannerist reform, the Carracci, Caravaggio, and the impact of their styles on later generations.††

744.3. Studies in Baroque and Eighteenth-century Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The topic will vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

754.1-754.9. Seminar in Mannerist and Baroque Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The particular area to be studied will vary and will be announced prior to each offering. Students should consult the Art Department for information.††

COURSES IN MODERN ART

745.1. Impressionism and Post-Impressionism. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

745.2. Cubism and Its Impact on Twentieth-century Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

745.3. Modern Architecture. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

745.4. American Art in the Nineteenth Century. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor.††

745.5. Studies in Modern Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the M.A. in Art History *or* permission of instructor. The topic will vary and will be announced each time the course is given. May be repeated for credit when the topic is different.††

755.1-755.9. Seminar in Modern Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. The particular area to be studied will vary and will be announced prior to each offering.

SPECIAL PROBLEMS

756. Special Problems. Hr. to be arranged; 3 cr. Work in some particular area of research for advanced candidates in Art History. Approval of the Departmental Committee on Graduate Study is required. May be repeated for credit if the project is different.??

756.1. Special Problems in Ancient Art.

756.2. Special Problems in Medieval Art.

756.3. Special Problems in Renaissance and Mannerist Art.

756.4. Special Problems in Baroque and Rococo Art.

756.5. Special Problems in Modern and American Art.

756.6. Special Problems in Asian Art.

790. Thesis. Hours to be arranged; 3 cr. Prereq.: Approval of Departmental Committee on Graduate Study. Supervised thesis writing.

M.F.A. Courses in Art

SPECIALIZED COURSES

721. Individual Problems in Painting and/or Mixed Media.

721.1. Painting and/or Mixed Media I.

721.2. Painting and/or Mixed Media II.

721.3. Painting and/or Mixed Media III.

721.4. Painting and/or Mixed Media IV.
722. Individual Problems in Sculpture, and Installation.

722.1. Sculpture and Installation I.

722.2. Sculpture and Installation II.

722.3. Sculpture and Installation III.

722.4. Sculpture and Installation IV. 6 hr. plus conf.; 6 cr. each semester. Prereq.: Matriculation in the M.F.A. program and completion of appropriate prior courses. In each of these courses the student will be assigned an instructor as adviser, with whom he or she shall meet weekly for criticism, as well as with visiting critics as assigned. The work of the final semester, either 721.4 or 722.4, shall be submitted in the form of a self-selected one-person exhibition of the course work for the Department Committee, and open to the College community, in lieu of a comprehensive examination.

REQUIRED COLLOQUIUM

724. Contemporary Issues in the Visual Arts. 3 hr.; 3 cr. Prereq.: A course in the history of modern art and permission of instructor. Limited to students matriculated in the M.F.A. program. Diverse critical views on selected topical issues concerning contemporary art will be discussed. Students will further be asked to locate, describe, and discuss their own work and one another's work in relation to present-day art practices and concerns. A paper on an approved topic will be presented by each participant.††

ELECTIVE COURSES

713. Computer Imaging. 4 hr.; 3 cr. Prereq.: Permission of M.F.A. Committee. An introduction to basic concepts of computer graphics in the context of the full range of visual media traditions, with contemporary applications in the fine and applied arts. Individual projects will further define different areas inherent in the newer media.

727.1. Printmaking. Hr. to be arranged; 3 cr. Prereq.: Permission of M.F.A. Committee.??

727.2. Photography. Hr. to be arranged; 3 cr. Prereq.: Permission of M.F.A. Committee. May be repeated for credit. This course is designed for graduate students who are interested in pursuing the study of photography, and to give them information which will allow them to use photography in conjunction with other mediums.††

728. Sculpture Techniques. 4 hr.; 3 cr. Prereq.: Permission of M.F.A. Committee. Individual and group projects in metal casting, including investment and chasing; advanced technical problems in plaster; techniques of construction and assemblage in metal, wood, plastics.††

729. Individual Criticism. Hr. to be arranged; 3 cr. Prereq.: Permission of the M.F.A. Committee. The work will consist of a particular topic or focus established be-

tween the individual student and a faculty member. It will not consist of work undertaken in either 721.1, 2, 3, 4, or 722.1, 2, 3, 4. May be repeated for credit.††

STUDIO SEMINARS

730. Seminar in Problems of New Forms.

731. Seminar in Problems of Representation. 3 cr. each semester. Prereq.: Permission of M.F.A. Committee. In each of these areas a particular topic will be announced for study each semester. Each seminar includes execution of an appropriate project, the study of historical and recent precedents, and studio problems as indicated. A research paper may be assigned. May be repeated for credit if the topic is different. Seminars will comprise 60 contact hours each; however, meetings may be scheduled so that the course does not extend over the entire semester.

DRAWING COURSE

735. Advanced Problems in Drawing. 4 hr.; 3 cr. Prereq.: Permission of M.F.A. Committee. May be repeated for credit. Drawing is taught with a variety of approaches, ranging from the more traditional, including life drawing, to conceptually oriented problems based upon the particular interests of the instructor or the student.

Master of Science in Education Program (Art Education)

Graduate Adviser: Cynthia Carlson

Courses in Art History

Any of the art history offerings may be taken for credit toward the degree of Master of Science in Education. Courses on the 500 level are primarily arranged for students in this program. Courses on the 600 and 700 level are designed for art history students who have a reading knowledge of foreign languages. M.S. in Education candidates must consult the instructor before registering in these courses. The M.F.A. studio seminars, Art 730-734, and Advanced Problems in Drawing, Art 735-736, are also available with permission of instructor.

603,604. Advanced Design Studio I, II. 4 hr.; 2 cr. each semester. Prereq.: Two semesters of work in design principles or workshop experience in applied design.††

607, 608. Advanced Drawing Studio I, II. 4 hr.; 2 cr. each semester. Prereq.: A two-semester course in basic drawing.††

609. Introduction to Painting. 4 hr.; 2 cr. Prereq.: Two semesters of work in drawing and design, or permission of department. A basic course, using gouache, oil, and watercolor, for graduate students who have not majored in art as undergraduates.††

610. Advertising Design I: Lettering. 4 hr.; 2 cr. Prereq.: Four semesters of work in design and drawing.††

611. Advertising Design II: Poster and Packaging Design. 4 hr.; 2 cr. Prereq.: Four semesters of work in design and drawing plus a semester of lettering.††

620.3. Special Projects in Design. 4 hr.; 3 cr. Prereq.: Permission of Graduate Adviser. May be repeated for credit if project is different.††

621.3. Special Projects in Fine Arts. 4 hr.; 3 cr. Prereq.: Permission of Graduate Adviser. May be repeated for credit if the project is different.††

Course in Reserve

619. Textile Design.

BIOLOGY

Chair: Uldis Raze

Deputy Chair of Doctoral Studies:
Jeanne Szalay

M.A. Program Adviser: Andrew Greller

Department Office: SB D346, 997-3400;
Fax 997-3445

The Biology Department offers programs of courses and research leading to the Master of Arts degree at Queens College. It also offers programs of courses and research leading to the Ph.D. at the CUNY Graduate School in the subprograms of Cellular, Molecular, and Developmental Biology; Evolution, Ecology, and Behavior; Physiology and Neurosciences; and Plant Sciences. Refer to the *Bulletin* of the Graduate School for application, financial aid, and course information for the Ph.D. program. Opportunities for specialization in applied and basic research are included below in the listing of the supervising faculty.

The department has excellent research facilities, including well-equipped research laboratories, cold-room and environmental control units, marine and fresh-water aquaria, scanning and transmission electron microscopes, a carbon-dating laboratory, and computer access. Opportunities are enhanced by affiliation with other city institutions and cooperative efforts with other divisions of the City University and the American Museum of Natural History. The 1,470-acre Queens College Center for Environmental Teaching and Research at Caumsett State Park on Long Island's North Shore offers a number of field study areas, including a variety of field and forest types, ponds, streams, and salt marsh, marine, and beach habitats.

Faculty

- Roze, Uldis, Chair, *Professor*, Ph.D. 1964, Washington University: natural history, mammalogy, biology of the porcupine
- Szalay, Jeanne, Deputy Chair of Doctoral Studies, *Professor*, Ph.D. 1966, Columbia University: cell biology, tumor biology, metastasis, immunology
- Greller, Andrew M., M.A. Program Adviser, *Professor*, Ph.D. 1967, Columbia University: bioclimatology, forest ecology, tropical botany
- Alsop, David W., *Associate Professor*, Ph.D. 1970, Cornell University: comparative insect morphology, insect genetics, arthropod systematics and evolution
- Beretta, Alberto, *Visiting Professor*, M.D. 1978, University of Pavia: genetic and immune factors of resistance to HIV infection; development of immunological treatments for AIDS and an AIDS vaccine
- Bienkowski, Robert, *Adjunct Associate Professor*, Ph.D. 1973, State University of New York at Stony Brook: connective

- tissue metabolism, biology of the extracellular matrix
- Calhoun, Robert E., *Associate Professor*, Ph.D. 1972, Purdue University: quantitative genetics, selection and mating systems, genetics of natural populations
- Chabora, Peter C., *Professor*, Ph.D. 1967, Cornell University: population ecology, evolution of parasite-host interactions
- Koepfer, H. Roberta, *Associate Professor*, Ph.D. 1984, City University of New York: behavioral ecology; evolution and genetics of behavior
- Magazine, Harold I., *Assistant Professor*, Ph.D. 1990, University of Florida: vascular biology, receptor pharmacology, and cell biology as related to development of atherosclerosis
- Marcus, Leslie F., *Professor*, Ph.D. 1962, University of California at Berkeley: biometrics, multivariate morphometrics, computer graphics
- Merluzzi, Vincent J., *Adjunct Professor*, Boehringer-Ingelheim Pharmaceuticals; Ph.D. 1977, Boston University: immunology, immunotoxicology, tumor immunology
- Michels, Corinne A., *Professor*, Ph.D. 1969, Columbia University: molecular genetics, regulation of gene expression, yeast genetics
- Montagnier, Luc., *Bernard and Gloria Salick Distinguished Professor*, M.D. 1960, University of Paris: virology; etiology and treatment of AIDS
- Mundinger, Paul C., *Professor*, Ph.D. 1968, Cornell University: animal behavior, bird song dialects, development and learning, biosociology
- Rifkin, Jared L., *Associate Professor*, Ph.D. 1969, Johns Hopkins University/ cell physiology, developmental mechanisms in cellular slime molds
- Savage-Dunn, Cathy, *Assistant Professor*, Ph.D. 1992, Columbia University: development, molecular genetics, signal transduction, *C. elegans*
- Short, Timothy W., *Assistant Professor*, Ph.D. 1991, Stanford University: plant physiology and molecular biology; light control of plant development
- Sperling, Jon A., *Associate Professor*, Ph.D. 1972, University of Wisconsin: algal and bryophyte ecology and physiology, limnology
- Wasserman, Marvin, *Professor*, Ph.D. 1954, University of Texas: evolution and cytogenetics, population genetics and evolution of *Drosophila*
- Zakeri, Zahra F., *Associate Professor*, Ph.D. 1984, St. John's University: molecular developmental biology, regulation of gene expansion in aging and cell death

Master of Arts Program

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. Students are expected to have a minimum of 20 credits in biology beyond the introductory level. Undergraduate courses in physics, chemistry, and mathematics

are required. A course in biostatistics is highly recommended.

2. The credentials of each applicant will be examined by the departmental admissions committee. This committee may request an interview with a candidate for admission.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Each student's program will be approved by a supervising professor chosen by the student with the approval of the Graduate Adviser.

2. A minimum of either 24 graduate course credits and 6 thesis credits, or 32 graduate course credits, is required. A course in biostatistics is highly recommended. For all programs listed below, course credits must include a minimum of 4 lecture courses. Furthermore, the combination of 788 (Cooperative Education Placement), 799 (Research), 791 (Colloquium), and 792 (Tutorial) may not exceed 12 credits.

3. Students must participate in two semesters of Biology 791 (Colloquium), one credit each semester.

4. Programs:
A. General *Biology*. 32 course credits chosen in consultation with the Graduate Adviser. Students in this track are eligible to take Biology 788 (Cooperative Education Placement) and participate in the Graduate Cooperative Education Program. A student who takes the 32-course-credit option will be given a written or oral comprehensive examination based on the core courses and the student's area of concentration after at least 24 course credits have been completed. Each student will be limited to two attempts to pass this examination.

B. *Cellular, Molecular, and Developmental Biology*. 24 credits chosen in consultation with the thesis adviser, plus 6 credits of research under the direction of a thesis supervisor. Students conducting thesis research must pass an oral examination in the area of their thesis and related subjects. This examination will be administered following thesis completion by the supervising professor, thesis committee members, and invited examiners. One re-examination may be attempted.

C. *Evolution, Ecology, and Behavior*. 24 course credits chosen in consultation with the thesis adviser, plus 6 credits of research under the direction of a thesis supervisor. Students conducting thesis research must pass an oral examination in the area of their thesis and related subjects. This examination will be administered following thesis completion by the supervising professor, thesis committee members, and invited examiners. One re-examination may be attempted.

Other Information

Arrangements may be made for students to take courses for graduate credit in other

departments at Queens College or within CUNY in order to fulfill particular career requirements (i.e., resource management, environmental impact assays, etc.).

Faculty in the Department of Biology at Queens College participate actively in the CUNY Ph.D. Program in Biology. Arrangements can be made to transfer graduate credits earned at Queens College to the Ph.D. Program at CUNY. Students are encouraged to discuss their long-range goals with the Master's Program Graduate Adviser as soon as possible.

The University doctoral program in biology is described in the *Bulletin* of the Graduate School.

Courses in Biology

600-LEVEL COURSES

Candidates for the Master of Arts degree may not receive graduate credit for more than two courses at the 600 level.

610. Lower Plants. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: A survey of algae, bryophytes, and fungi of the northeastern United States, with an emphasis on identification, morphology, physiology, and ecology. A library or field research paper is required.

611. Mycology. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: One semester of genetics and permission of instructor. A survey of the major taxa of fungi, including slime molds, with emphasis on their morphology and taxonomy. The importance of fungi as causal agents in diseases of man, other animals, and plants, as experimental tools of genetic, biochemical, and physiological research will be considered. Basic techniques of culturing fungi will be utilized in the execution of individual projects.††

612. Morphology and Evolution of Plants. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: Permission of instructor. Comparison of plant form and function. Lectures will emphasize the structure and origin of plant organs, and the use of this information in classifying major plant groups. Information from paleobotany will be integrated with comparative morphology of living plants. A library research paper will be required. Laboratory includes several field trips.††

613. Field Botany. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: Permission of instructor. Introduction to local flora and vegetation. Lectures will emphasize the structure and composition of local vegetation. Laboratories will consist mainly of field trips to parks, preserves, and botanical gardens. Students will submit a field trip report, a plant collection, and library research paper.††

614. Plant Systematics. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: Permission of instructor. Survey of the vascular plants with emphasis on flowering plants. Lectures will emphasize taxonomic characters useful in identification of major plant groups. Laboratories will be devoted to techniques of identification. Stu-

dents will submit a plant collection and a library research paper. Field trips will occupy half days or full days; they will comprise a large part of the lab component.††

621. Entomology. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: Course in invertebrate zoology. Anatomy, physiology, and ecology of insects. Identified insect collection required of each student. Students should expect to reside at the Queens College Center for Environmental Teaching and Research, Caumsett State Park, Lloyd Neck, Long Island, for at least one week of the course (dormitory fees will be announced and collected at time of registration). Summer Sessions I and II only.††

626. Vertebrate Phylogeny. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: A course in comparative anatomy. Phylogeny and interrelationships of the important major groups of the phylum Chordata, emphasizing the origins of higher categories and their adaptive radiation into sub-groups. Laboratory on representatives of fishes, amphibians, reptiles, birds, and mammals, emphasizing differences in locomotion, feeding mechanisms, and sense organs found within the same sub-classes, infra-classes, super-orders, and orders, with practice in the identification of typical specimens likely to be found in the field.

630. Biometrics. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: Courses in genetics and calculus. Probabilistic models in biology, field and laboratory sampling, tests of hypotheses; uses of statistics for estimation. Topics selected will include growth processes of organisms and populations, discriminant functions, and genetic descriptions of evolving populations. The laboratory includes computational procedures in evaluating biological data.††

680. Field Biology Studies. Prereq.: Variable prerequisites and permission of instructor(s). A variable content course encompassing field studies in the areas of botany, ecology, entomology, invertebrate and vertebrate zoology, and limnology. Usually offered Summers only, with 3-6 credits depending on the subjects included and the time involved. The focus of the course is the comparative study of habitats and their components. Format and destinations are variable and costs reflect the mode of travel, destination, and type of accommodations. A term paper is required.
680.3. 9 hr.; 3 cr.
680.4. 12 hr.; 4 cr.
680.5. 15 hr.; 5 cr.
680.6. 18 hr.; 6 cr.

685. Special Topics. 2-6 hr.; 2-4 cr. Special topics in various areas of cellular, developmental, environmental, or evolutionary biology to be taken by arrangement with the instructor and Graduate Adviser. May be repeated for credit if the topic is different. May include laboratory or field experience.

700-LEVEL COURSES

700.3. Molecular Genetics. 3 hr.; 3 cr. Prereq.: A course in genetics and a course in organic chemistry. The nature of genetic material, the gene, and the chromosome as demonstrated by recombination, mutation, and gene action in microorganisms, plants, and animals; diversity of genetic systems and sex determination; introduction to special problems in human genetics, population genetics, and radiation genetics.††

700.4. Laboratory Techniques in Molecular Genetics. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 700.3.

705.3. Evolution. 3 hr.; 3 cr. Prereq.: Courses in genetics, vertebrate zoology or invertebrate zoology, botany, historical geology, or permission of department. Study of the mechanisms and processes of evolution based on the results and concepts of population genetics, speciation, and mega-evolutionary processes.††

705.4. Laboratory in Evolution. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 705.3.

705.6. Macroevolution: Patterns of Evolution above the Species Level. 3 hr.; 3 cr. Prereq.: A course in graduate evolution and undergraduate genetics. A course in evolution above the species level analyzing the interface between evolution at the species level and higher systematic and ecological hierarchies. The discussion will include origin, diversification, and extinction patterns of lineages; rates of evolution, deterministic versus stochastic patterns; the problem of adaptation and diversification; developmental aspects of phylogeny; taxic distribution in space and time; phylogenetic inference; morphological versus paleontological data; the molecular clock; ecological versus historical biogeography; gradualism versus saltationalism; neodarwinian paradigm versus others at supra-specific levels.

706.3. Systematics. 3 hr.; 3 cr. Prereq.: A course in evolution or in some major group of organisms. Principles of classification, phylogenetic inference, methods of systematics.

707.1, 707.3, 707.5, 707.7. Zoology and Phylogeny of the Chordata. 2 lec. hr.; 2 cr. each semester. Prereq.: For Biology 707.1, courses in comparative vertebrate anatomy and graduate courses in evolution, advanced genetics, and systematics; for Biology 707.3, Biology 707.1 or permission of instructor; for Biology 707.5, Biology 707.3 or permission of instructor; for Biology 707.7, Biology 707.5. The first semester to emphasize the fishlike chordates; the second semester to emphasize the amphibia, reptiles; the third semester to emphasize mammals; and the fourth semester to emphasize birds.

707.2, 707.4, 707.6, 707.8. Laboratory in Zoology and Phylogeny of the Chorda-

† Offered either Fall or Spring; see Class Schedule.
†† May be offered; see Class Schedule.

ta. 4 lab. hr.; 2 cr. each semester. Prereq. or coreq.: For Biology 707.2, Biology 707.1; for Biology 707.4, Biology 707.3; for Biology 707.6, Biology 707.5; for Biology 707.8, Biology 707.7. Examination of living, fossil, and other museum materials illustrating techniques and problems in research. The first semester to emphasize the fishlike chordates; the second semester to emphasize the amphibia, reptiles; the third semester to emphasize mammals; and the fourth semester to emphasize birds.

709.1. Population Genetics. 3 hr.; 3 cr. Prereq.: A course in statistics and a course in general genetics, evolution, or permission of instructor. Study of single gene systems on the population level with emphasis on the mechanisms of evolution/speciation.††

709.3. Quantitative Genetics. 3 hr.; 3 cr. Prereq.: A course in statistics and a course in general genetics or permission of instructor. Study of genetic selection, heritability, inbreeding, genetic drift, and the mathematical models which describe these processes.

710.3. Cellular Physiology. 3 hr.; 3 cr. Prereq.: Courses in physiology and cytology or permission of department. The functions of acellular organisms and the cells of metazoa and metaphyta, including the normal internal-external environment of the cell; permeability and cell membranes; contractility; action potentials; specialized cells and their functions.††

710.4. Laboratory in Cellular Physiology. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 710.3.

711.3. Experimental Microbiology. 3 lec. hr.; 3 cr. Prereq.: One year of organic chemistry, one year of physics, one-half year of microbiology. The processes whereby microorganisms 1) obtain energy and cellular materials, 2) synthesize cell constituents, and 3) interact with their environment.

711.4. Experimental Microbiology Laboratory. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 711.3. The study of the metabolism of selected microorganisms by chemical and physical methods.

712.3. Comparative Biochemistry. 3 hr.; 3 cr. Prereq.: Courses in general biochemistry and evolution or permission of department. Comparison of the chemical constitution and metabolism of major groups of organisms.

712.4. Laboratory in Comparative Biochemistry. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 712.3.

714.1. Cell Biology. 2-4 hr.; 2-4 cr. This course will cover select areas in cell biology and concentrate on the characteristics and properties of cells that govern interactions with other cells and the environment. The structure and function of the plasma membrane will be emphasized.††

717.1. Virology. 3 hr.; 3 cr. Prereq.: One

course in genetics, biochemistry, or equivalent. The structure and diversity of viruses will be discussed. The mechanisms of viral infection and multiplication, as well as host cell responses, will be studied. Several types of viruses will be analyzed in detail (e.g., human immunodeficiency virus, herpes viruses, hepatitis viruses, influenza virus).††

718. Immunology. 3 hr.; 3 cr. Principles of immunology including discussions of relevant experimental techniques and contemporary topics.††

719. Molecular Communication in Microorganisms. 3 hr.; 3 cr. Prereq.: A course in organic chemistry or biochemistry, or permission of instructor. A study of the surface of microbial cells and how microbial cells interact by means of molecules between cells of the same or different species. The role of these molecules in the regulation of morphogenesis, sexual and asexual reproduction, life cycles, metabolic regulation, genetic recombination, and bioengineering will be examined. Comparison of these communicating molecules will be made with hormones of higher plants and animals.

722.1. Endocrinology. 3 hr.; 3 cr. Prereq.: Courses in physiology (preferably vertebrate) or biochemistry, or permission of instructor. Study of the mechanisms of hormone action and survey of the major mammalian endocrine systems.††

724.6. Behavior and Evolution. 3 hr.; 3 cr. A reading, discussion, and seminar course focusing on two basic questions asked by ethologists: 1) What is the ecological (adaptive) significance of behavior? and 2) What is the evolutionary history of behavior? Gene (biological) evolution is the prime focus; cultural evolution is also examined.††

726.3. Comparative Animal Physiology. 3 hr.; 3 cr. Prereq.: Courses in invertebrate zoology, vertebrate zoology, physiology, and organic chemistry, or permission of department. Physiological processes in invertebrates and vertebrates are compared. Osmoregulation, respiration, circulation of body fluids, receptors, effector and integrating mechanisms are explored. Emphasis is placed on an examination of functional homology and analogy as evidence for phylogeny.††

726.4. Laboratory in Comparative Animal Physiology. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 726.3. Laboratory work will involve qualitative as well as quantitative techniques for measuring environment-organism interaction. Marine, freshwater, and terrestrial invertebrates and vertebrates will be utilized for investigations into the effects on the organism of pressure, temperature, radiant energy, etc.

731.3. Microbial Ecology. 3 hr.; 3 cr. Prereq.: General microbiology or protozoology or phycology or mycology or lower plants, or permission of instructor. Study of the relationships of microorganisms to their

natural environments (air, water, soil, higher animals, or plants) and each other.

741.3. Radiation Biology. 3 hr.; 3 cr. Prereq.: Courses in organic chemistry, general physics, two advanced courses in biology, or permission of department. Interaction of radiation with living matter, the effect of such interactions on a variety of plants and animals, and methods for detecting and measuring radiation.

741.4. Laboratory in Radiation Biology. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 741.3.

750.3. Developmental Biology. 3 hr.; 3 cr. Prereq.: Courses in embryology and cytology. The underlying principles and problems related to the structure and development of the gametes, fertilization, cleavage and cell differentiation as elucidated by methods of electron microscopy, biochemistry, immunology, and tissue culture.??

750.4. Laboratory in Developmental Biology. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 750.3.

753.3. Molecular Basis of Development. 2 hr.; 2 cr. Prereq.: A course in developmental biology or biochemistry, or permission of instructor. Analysis of selected topics in developmental biology at the molecular level, e.g., biochemical basis of induction, hormonal regulation of gene expression in development.††

760.1. Ecology. 3 hr.; 3 cr. Prereq.: Courses in vertebrate zoology. A general course in ecology covering theoretical and experimental aspects at the population, community, and ecosystem levels of organization. Emphasis is placed on the studies of populations - their organization, growth, and regulation - and interactions within and between species. Basic concepts concerning community organization and dynamics are considered.††

760.2. Laboratory in Ecology. 4 lab. hr.; 2 cr. Coreq.: Biology 760.1.

760.3. Community Ecology. 3 hr.; 3 cr. Prereq.: A course in botany (higher plants). Analysis of selected topics in synecology. Emphasis will be on structural and temporal relationships of plants, animals, and climate-plant community relationships.

760.5. Population Ecology. 3 hr.; 3 cr. Prereq.: Courses in botany, zoology, or permission of instructor. Study of the composition and dynamics of populations, including age structure, sex ratio, mating systems, growth patterns, life table analysis, regulation, and intraspecific interactions.

760.7. Limnology. 3 hr.; 3 cr. The study of the physical, chemical, and biological features of freshwater systems.††

760.8. Laboratory in Limnology. 4 hr.; 2 cr. Coreq.: Biology 760.7. This laboratory course must be taken simultaneously with

the lecture. Laboratory testing and analysis along with considerable field exercises are designed to provide a survey of physical, chemical, and biological sampling techniques involved in limnological studies. A portion of the course period will be held at Caumsett State Park, where intensive day and night sampling and measurements will be conducted. Along with written reports, an identified collection of aquatic specimens is required. Several additional all-day field trips are planned.††

764.3. Plant Ecology: Vegetation of the World. 3 hr.; 3 cr. Prereq.: A course in botany. A survey of world vegetation, with emphasis on North and Central America. Structural and floristic composition of major vegetation types will be emphasized. Schemes of vegetation classification will be compared and contrasted. Latitudinal and altitudinal zones will be discussed in the context of bioclimatic parameters.††

768.3. World Vegetation. 3 hr.; 3 cr. A survey of vegetation of the earth touching on paleogeofloristics, from the Paleophytic to Cenophytic Eras. Changes in the Earth's vegetation and present distributions of zonal plant communities are discussed in the light of plate tectonics and bioclimatology. Contemporary world vegetation types are analyzed structurally, physiognomically, and floristically. Systems of vegetation classification are compared and contrasted. Emphasis is placed on New World vegetation. A library research paper is required.††

772. Theory and Biological Applications of Electron Microscopy. 2 lec., 1 rec., 3 lab. hr.; 4 cr. Prereq.: A course in histological techniques or permission of instructor. Study of the theory of electron microscopy plus practice of electron microscope operation and preparation of tissues for fine structure studies.

780.1. Biostatistics. 2-4 lec. hr.; 2-4 cr. Prereq.: Mathematics through calculus and permission of instructor. Descriptive and inferential biostatistics including analysis of variance, regression, and other selected methods.

780.2. Laboratory in Biostatistics. 1 rec., 3-6 lab. hr.; 2-3 cr. Prereq. or coreq.: Biology 780.1 or equivalent. The laboratory work consists of individual student projects and of introduction to computer programming.

781.1. Applied Multivariate Statistics. 2 hr.; 2 cr. Prereq.: Biology 780.1, 780.2, or equivalent. Coreq.: Biology 781.2. This course will involve principal components, factor analysis, discriminant analysis, multivariate analysis of variance, distance statistics, and multiple regression. Material will be covered in the context of biological problems in the laboratory and field.

781.2. Applied Multivariate Statistics Laboratory. 3 lab., 1 conf. hr.; 2 cr. Prereq.: Biology 780.1, 780.2, or equivalent. Coreq.: Biology 781.1. Data analysis and problem solving using multivariate data

from experiments and the field. Use of SAS statistical package, including some programming in matrix algebra.

788. Cooperative Education Placement. Hr. to be arranged; 1 to 4 cr. Prereq.: Permission of department. Opportunities to apply academic learning in biology in a work environment. The student will develop a learning contract with an on-site supervisor and a departmental adviser. A written report and an oral or written examination are required. Open only to students who pursue the 32-credit-course-work track; a maximum of 4 credits may be applied toward the M.A. in Biology.

790.1. Seminar in Evolution. 2 hr. plus conf.; 3 cr. Topics relating to the general subject of evolution.††

790.2. Seminar in Genetics. 2 hr. plus conf.; 3 cr. Heredity and genetics of plants and animals, and applications to other areas.††

790.4. Seminar in Molecular Genetics. 3 hr.; 3 cr. Prereq.: A course in molecular genetics or biochemistry, or permission of instructor. Seminar format course on a specified topic in the field of molecular genetics. Course may be taken more than once if topic changes.††

790.5. Seminar in Developmental Biology. 2 hr. plus conf.; 3 cr. Prereq.: Biology 750.3 or equivalent and/or permission of instructor. Special topics in developmental biology, emphasizing recent work relating to problems of chemical embryology, induction and tissue interaction, genes in development, hormones in development, differentiation and growth, teratology, and regeneration.††

790.6. Seminar in Ecology. 2 hr. plus conf.; 3 cr. Prereq.: Biology 760.1 or equivalent and/or permission of instructor. Seminar in the interrelationships of plants and animals with their biotic and abiotic environments.††

790.7. Seminar in Cytology. 3 hr.; 3 cr. Special topics in cytology.††

790.8. Seminar in Biomathematics. 3 hr.; 3 cr. Prereq.: Biology 780.1 and 780.2 or equivalent, or permission of instructor. Seminar-format course on a specified topic in the field of biomathematics and its applications. Course may be taken more than once if topic changes.

791. Colloquium. 1 hr.; 1 cr. Graded on Pass/Fail basis only.†

792. Tutorial. 1-4 hr.; 1-4 cr.

793.1. Seminar in Systematics. 3 hr.; 3 cr. Problems in modern classification and phylogeny, with emphasis on areas such as vertical vs. horizontal classification, convergent and parallel evolution, adaptive radiation, behavioral aspects, biochemical systematics, computer methods, etc.

793.2. Seminar in Zoogeography. 3 hr.; 3 cr. Prereq.: A course in evolution or per-

mission of instructor. Seminar-format course on a specified topic in the field of zoogeography. Course may be taken more than once if topic changes.

793.3. Seminar in Physiology. 3 hr.; 3 cr. Special problems in physiology.

793.4. Seminar in Animal Behavior. 3 hr.; 3 cr. Prereq.: A course in animal behavior or permission of instructor. Seminar-format course on a specified topic in the field of animal behavior. Course may be taken more than once if topic changes.

793.5. Seminar in Cell Biology. 3 hr.; 3 cr. Prereq.: A course in cell biology or biochemistry, or permission of instructor. Seminar-format course on a specified topic in the field of cell biology. Course may be taken more than once if topic changes.††

793.9. Seminar in Special Topics. 2 hr.; 2 cr.††

794.1. Ecology and Evolutionary Biology Data/Journal Club. 1 hr.; 1 cr. Prereq.: At least one graduate-level course in ecology, evolution, or systematics. Seminar-format course consisting of student and faculty oral presentations. Topics of the presentations will be taken from the student's or faculty member's own research or from journal articles in the scientific literature.

795,796. Basic Laboratory Techniques for Research. 2 lec., 3 lab. hr.; 3 cr. per course. Lecture and laboratory work on modern instrumentation and experimental design used to solve biological problems. The theory underlying the experimental design and equipment will be discussed.

797.1. Molecular, Cellular, and Developmental Biology Journal Club. 1 hr.; 1 cr. Prereq.: At least one graduate-level course in molecular genetics, cell biology, developmental biology, or biochemistry. Seminar-format course consisting of student and faculty oral presentations. Topics of the presentations will be taken from journal articles in the scientific literature.†

798.1. Molecular, Cellular, and Developmental Biology Data Club. 1 hr.; 1 cr. Prereq.: At least one graduate-level course in molecular genetics, cell biology, developmental biology, or biochemistry. Seminar-format course consisting of student and faculty oral presentations. Topics of the presentations will be taken from the student's or faculty member's own research.?

799. Research. Up to 6 cr. Research under the guidance of a faculty adviser.

CHEMISTRY & BIOCHEMISTRY

Chair: Harry D. Gafney

Graduate Adviser: Robert R. Engel

Dept. Office: Remsen 206, 997-4100

The Department of Chemistry and Biochemistry offers programs leading to the degree of Master of Arts with concentrated study in chemistry or biochemistry. These programs include course and standard laboratory work designed to prepare the student for employment in the chemical industry, government, or teaching, or for continuation of study for an advanced degree. The department is an active component of the doctoral programs in Chemistry and Biochemistry of the Graduate School of the City University of New York.

In addition to the programs of courses outlined below, each student is strongly encouraged to participate in the extensive research programs of the department, which in fiscal 1996 received funding from such entities as the National Institutes of Health, the National Heart, Blood, and Lung Institute, the National Science Foundation, New York State Science and Technology Foundation, the National Cancer Institute, the Liposome Company, American Chemical Society, Westinghouse Hanford Company, the National Research Council, and the Petroleum Research Foundation. By such participation, the student learns to maintain a current knowledge of the discipline necessary for the development of a career. A description of research programs in the department is available upon request.

The department is also an active participant in the Graduate Cooperative Education Program. Students should contact the Graduate Adviser for further details and a discussion of the opportunities this program offers.

Faculty

Gafney, Harry D., Chair, *Professor*, Ph.D. 1970, Wayne State University: inorganic and material science: photochemistry of transition and main group metal complexes, hybrid catalysis, photoinduced electron transfer in glass matrices, photodeposition and characterization of metal and metal oxide clusters in glass; photochemical generation of gradient indices in glass

Engel, Robert R., Graduate Adviser, *Professor*, Ph.D. 1966, Pennsylvania State University: organic and biochemistry: design and synthesis of metabolic regulators; phosphonic acids as analogues of natural phosphates; phosphonate and phosphinate synthesis; synthesis and investigation of dendrimeric phosphorus species; chemical architecture

Axelrad, George, *Professor*, Ph.D. 1960,

University of Kansas: organic: organoboron chemistry; synthesis of heterocyclic compounds; synthesis of organophosphorous compounds

Baker, Arthur D., *Professor*, Ph.D. 1968, University of London: heterocyclic chemistry: synthesis and study of heterocyclic molecules and their metal ion complexes that undergo specific interactions (e.g., enantiospecific) with nucleic acids

Berkowitz, William F., *Professor*, Ph.D. 1963, Massachusetts Institute of Technology: organic: natural products, synthesis; synthesis of truncated tetrahedrane and taxol

Bittman, Robert, *Distinguished Professor*, Ph.D. 1965, University of California at Berkeley: biochemistry and organic chemistry: structure and function of biological membranes; phospholipid-sterol and polyene antibiotic-sterol interactions in biomembranes; chemical synthesis of lipids; movement of lipids between membranes

Disch, Raymond L., *Professor*, Ph.D. 1959, Harvard University: physical: electric, magnetic, and optical studies of molecular structure; laser polarimetry; electro-magnetic-optical effects; ORD/CD; ab initio molecular orbital theory

Goldman, Norman L., *Professor*, Ph.D. 1959, Columbia University: synthetic organic chemistry

Hersh, William H., *Professor*, Ph.D. 1980, Columbia University: organic and organometallic: difunctional heteronuclear transition metal clusters, mechanisms of hydride, alkyl, carbene, carbyne, and acyl migration and coupling reactions; chiral tungsten nitrosyl Lewis acids; asymmetric induction of Diels-Alder reactions

Koeppl, Gerald W., *Professor*, Ph.D. 1969, Illinois Institute of Technology: physical: theory of molecular rate processes; classical mechanical trajectory studies of chemical reaction dynamics; formulation of variational versions of the transition state theory of chemical reaction rates

Locke, David C., *Professor*, Ph.D. 1965, Kansas State University: analytical: supercritical fluid extraction; HPLC, GC, and GC/Mass spectrometry; physical measurements using chromatography; chemistry of biosolids

Mirkin, Michael V., *Assistant Professor*, Ph.D. 1987, Kazakh State University: Electrochemistry/Physical/Analytical: chemically modified electrodes, electrochemical kinetics, scanning electrochemical microscopy, electron transfer, electronically conductive and redox polymers, biosensors, electrochemical systems approaching molecular dimensions, mathematical modeling of electrochemical processes

Rotenberg, Susan A., *Associate Professor*, Ph.D. 1985, Brown University: biochemistry, enzymology, protein chemistry, enzyme inhibitors, site-directed mutagenesis, signal transduction, anti-

neoplastic drug design

Saffran, Wilma A., *Associate Professor*, Ph.D. 1979, Cornell University: biochemistry, molecular biology: DNA damage and repair; mutagenesis; recombination; carcinogenesis

Schulman, Jerome M., *Professor*, Ph.D. 1964, Columbia University: physical: quantum theory of atomic and molecular structure; applications of quantum theory to problems of molecular recognition, drug design, and the pharmacology of the nervous system; use of accurate quantum mechanical methods for determining the structures, energies, and properties of molecules

Strekas, Thomas C., *Professor*, Ph.D. 1973, Princeton University: inorganic and biochemistry: Raman and resonance Raman studies of transition metal diimine complexes; metal complex interactions with nucleic acids; surface-enhanced Raman studies

Tropp, Burton E., *Professor*, Ph.D. 1966, Harvard University: biochemistry: genetic and pharmacological aspects of phosphoglyceride metabolism

Program for the Master of Arts Degree

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. Undergraduate credits in chemistry should include one full year each of general chemistry, organic chemistry, and physical chemistry, and one-half year of quantitative analysis. Mathematics through integral calculus and one year of physics are required. Students planning to concentrate in biochemistry should have completed at least one year of biology and one semester of biochemistry (lecture and laboratory). Deficiencies may be removed by course work or individual study.

2. Three written recommendations from undergraduate chemistry instructors are required (preferably from instructors who have taught the applicant during the junior or senior year).

3. An interview with a member of the Chemistry and Biochemistry Graduate Committee may be requested. This Committee decides on deficiencies, conditions, exceptions, and special permissions.

4. Graduate Record Examination scores.

5. Students whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

A minimum of 30 graduate course credits, including

- a) One of the two following sets of required courses:

	<i>credits</i>
Chemistry 710 - Advanced Inorganic Chemistry	3
Chemistry 750 - Advanced Organic Chemistry I	3
Chemistry 760 - Introductory Quantum Chemistry	3
A second course in physical chemistry	3
Chemistry 780 or 781 - Advanced Seminar	2
Chemistry 790 - Basic Laboratory Techniques for Research	4
Chemistry 795 - Research	4 (minimum) 22

or, alternatively

	<i>credits</i>
Biochemistry 710 - Advanced Biochemistry	3
Biochemistry 711.1 & 711.2 - Basic Laboratory Techniques for - Research in Biochemistry	8
Chemistry 750 - Advanced Organic Chemistry I	3
Chemistry 760 - Introductory Quantum Chemistry	
or	
Chemistry 770 - Chemical Thermo- dynamics	
or	
Biochemistry 770 - Physical Biochemistry	3
Chemistry 780 or 781 - Advanced Seminar	
Biochemistry U810A - Seminar in Biochemistry	1
Chemistry 790 (or Biochem- istry 796) - Basic Labora- tory Techniques for Research	4 22

The Chemistry and Biochemistry Graduate Committee may waive or modify some of these requirements for students who have had equivalent training. In some cases the student may be required to show competence by formal or informal examination.

b) Remaining credits may be taken, with prior approval of the Chemistry and Biochemistry Graduate Committee, in graduate courses in the Division of the Natural Sciences. A maximum of two credits in seminars will be credited toward the Master of Arts degree. Students will be encouraged to audit additional seminars.

The required courses for the Master of Arts degree, described in a), are similar to the core courses for the University doctoral programs in chemistry and biochemistry, which are described in the *Bulletin* of the Graduate School.

Courses in Chemistry & Biochemistry

504. Environmental Chemistry. 3 hr.; 3 cr. Prereq.: General and organic chemistry. A general overview of the chemistry of our environment, focusing on pollution of the atmosphere and hydrosphere, hazardous wastes, heavy metals, and pesticides. Topics of current interest such as the greenhouse effect, stratospheric ozone depletion, acid deposition, and indoor air pollution are emphasized. Also the systems used by the City of New York for provision of drinking water, treatment of waste water, and disposal of solid waste are considered.

650. Biochemistry. 4 hr.; 4 cr. Prereq.: An approved two-semester course in college organic chemistry and a bachelor's degree in chemistry or biology. Structure, properties, biosynthesis, and metabolism of major groups of compounds of biological importance, such as amino acids, nucleic acids, carbohydrates, lipids, and vitamins. Not to be used for credit toward the Master's degree in Chemistry and Biochemistry. Fall, Spring

710. Advanced Inorganic Chemistry. 3 hr.; 3 cr. Prereq.: An advanced undergraduate course in inorganic chemistry or Chemistry 760. The theoretical and experimental fundamentals of atomic and molecular structure. Emphasis is on physical interpretation. Fall

Biochemistry 710. Advanced Biochemistry. 3 hr.; 3 cr. Prereq.: A one-semester course in biochemistry or equivalent, and physical chemistry. Biosynthesis, especially of macromolecules and complex cellular constituents such as membranes. Specialized topics of current interest. Spring

Biochemistry 711.1, 711.2. Basic Laboratory Techniques for Research in Biochemistry. 8 lab. hr.; 4 cr. each semester. Prereq. or coreq.: Biochemistry 710 and Biochemistry 796, and permission of instructor. Laboratory work dealing with the theories and application of modern approaches to the solution of biochemical problems.

715. Special Topics in Inorganic Chemistry. 3 hr.; 3 cr. Prereq.: Chem. 710. Topic can change from semester to semester.††

740. Special Topics in Analytical Chemistry. 3 hr.; 3 cr. Prereq.: Undergraduate quantitative analysis and instrumental analysis. Topics of current interest in important areas of analytical chemistry, such as analytical separations, electroanalytical chemistry, and analytical spectroscopy will be covered.

Biochemistry 740. Enzyme Function and Applications. 3 hr.; 3 cr. Prereq. or coreq.: Biochemistry 710 (Advanced Biochemistry) or equivalent. A consideration of enzymatic function in the cell and of the several applications of enzymes in analytical and preparatory work.

742. Environmental Analytical Chemistry. 2 lec., 4 lab. hr.; 4 cr. Prereq.: Undergraduate course in quantitative analysis. Environmental analytical chemistry is an instrumental methods-of-analysis course oriented specifically toward the needs of those concerned with natural waters, soils, sediments, and related media. Emphasis is placed on sampling, maintenance of sample integrity, and sample preparation for analysis. Modern spectrophotometric, electrochemical, and high-resolution chromatographic methods are used for the determination of organic and inorganic compounds in environmental media.

750. Advanced Organic Chemistry I. 3 hr.; 3 cr. Fundamentals of organic chemical principles, reactions, and structures. Fall

755. Special Topics in Organic Chemistry. 3 hr.; 3 cr. Prereq.: Chemistry 750. Topic can change from semester to semester.††

760. Introductory Quantum Chemistry. 3 hr.; 3 cr. Systematic development of the theories of chemistry, including mathematical development and structural effects and the application of these theories to chemical systems. Spring

761. Spectroscopy. 3 hr.; 3 cr. A continuation of Chemistry 760.††

765. Special Topics in Physical Chemistry. 3 hr.; 3 cr. Prereq.: Chemistry 760. Topic can change from semester to semester.??

770. Chemical Thermodynamics. 3 hr.; 3 cr. The development of the thermodynamic foundations of chemical processes; both the classical and statistical mechanical approaches will be used.††

Biochemistry 770. Physical Biochemistry. 3 hr.; 3 cr. Prereq.: Permission of Chair or Graduate Adviser. Structure and conformation of proteins, nucleic acids, and other biopolymers; physical techniques for study of macromolecules; behavior and properties of biopolymers. Among the topics to be discussed are the theories and applications of the following techniques: a) spectroscopic studies (absorption, fluorescence, magnetic resonance, infrared and Raman, circular dichroism, and optical rotary dispersion); b) size, shape, and molecular weight methods (sedimentation, diffusion, viscosity, osmometry, and light scattering); c) kinetics and equilibria; d) diffraction methods (X-ray and neutron). Specific examples of the structures and functions of macromolecules will be examined. Fall

780,781. Advanced Seminar. 2 hr.; 2 cr. each semester. Seminars will consist of reading and discussion of the literature on selected topics from the various branches of chemistry, or the presentation of experimental results. 780- Fall; 781- Spring

†. Offered either Fall or Spring; see Class Schedule.
††. May be offered; see Class Schedule.

788. Cooperative Study. Prereq.: Permission of department. Cooperative Study is performed by students participating in the Cooperative Education Program. It involves employment of the student in one of a variety of chemistry-related jobs with direct supervision of the employer and overview guidance provided by a faculty adviser. Cooperative Study is intended to supplement the traditional classroom and laboratory programs of study. The student shall prepare a report for the Chemistry and Biochemistry Graduate Committee upon completion of the experience. No more than 6 credits may be taken in Cooperative Study.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

788.6. 6 hr.; 6 cr.

Biochemistry 789. Special Topics in Biochemistry. 3 hr.; 3 cr. Prereq.: Biochemistry 650 or equivalent. Will cover topics of current interest in areas of critical importance to biochemistry.

790.1. Basic Laboratory Techniques for Research in Analytical and Physical Chemistry. 1 lec., 7 lab. hr.; 4 cr. Prereq.: Permission of the department. Analysis of real life samples using modern instrumental methods and equipment including HPLC, GC, GC/MS, AAS, ICP, UV-Visible, fluorescence and FTIR.

790.2. Basic Laboratory Techniques for Research in Organic Chemistry. 1 lec., 7 lab. hr.; 4 cr. Prereq.: Permission of the department. Modern techniques in the preparation and characterization of organic substances including spectroscopic techniques, chromatographic separations, vacuum distillation, use of inert atmosphere and related syringe techniques.

793. Tutorial in Chemistry. Prereq.: Matriculation in the Chemistry Master of Arts Program and completion of 9 M.A. credits in Chemistry. Tutorial in advanced topics to be performed under the supervision of a department faculty member with the approval of the Graduate Adviser.

793.1. 1 hr.; 1 cr.

793.2. 2 hr.; 2 cr.

793.3. 3 hr.; 3 cr.

795. Research. Prereq.: Permission of the Chemistry and Biochemistry Graduate Committee. Research under the guidance of a faculty adviser. Fall, Spring

795.1. 1 hr.; 1 cr.

795.2. 2 hr.; 2 cr.

795.3. 3 hr.; 3 cr.

795.4. 4 hr.; 4 cr.

795.5. 5 hr.; 5 cr.

795.6. 6 hr.; 6 cr.

Biochemistry 796. Introduction to Laboratory Techniques for Research in Biochemistry. 10 lab. hr.; 4 cr. Laboratory work dealing with the theories of modern experimental techniques and their applications to biochemical research; devel-

opment of experimental rationale for biochemical research.

Courses in Reserve

501,502. Modern Concepts of General Chemistry.

503. Selected Topics in Chemistry.

751. Advanced Organic Chemistry II.

CLASSICAL, MIDDLE EASTERN & ASIAN LANGUAGES & CULTURES

Chair: Ammiel Alcalay

Graduate Adviser: Joel B. Lidov

Dept. Office: Ring 203, 997-5570;
Fax 997-5072

The department offers only Classics courses on a graduate level. Courses in the other languages and literatures of the department (Arabic, Chinese, Hebrew, Yiddish) are offered only on an undergraduate level.

M.A. and Ph.D. degrees in Classical Studies are offered by the City University Graduate School and University Center with a faculty drawn from the Classics faculties of the CUNY senior colleges.

Faculty

Alcalay, Ammiel, Chair, *Associate Professor*, Ph. D., City University of New York: 1989: Hebrew literature, Middle Eastern studies, modern literature and theory

Lidov, Joel B., Graduate Adviser, *Associate Professor*, Ph.D. 1972, Columbia University: Greek and Latin language and literature, Greek lyric poetry and metrics

Rim, Jinyo, *Assistant Professor*, Ph.D. 1992, Columbia University: Greek and Latin language and literature, Greek epic

Schoenheim, Ursula, *Professor*, Ph.D. 1958, Cornell University: Latin and Greek language and literature, Roman satire

Courses in Reserve

504. Studies in Classical Mythology.

505. Studies in Greek Tragedy in Translation.

506. Studies in Ancient Comedy in Translation.

COMPUTER SCIENCE

Chair: Theodore D. Brown

Assistant Chair: Kenneth J. Lord

Chair, Graduate Curriculum and Advisement: Howard C. Wasserman

Graduate Admissions Officers: Zhigang Xiang, Keitaro Yukawa

Dept. Office: SB A202, 997-3500

The dynamic and growing field of computer science provides opportunities for intellectual activity, research, and future employment. The aim of the Master's program is to prepare students for professional careers in private industry, government, and academe. For those who seek academic careers and opportunities for more advanced research, the Master's program may constitute a significant portion of the Ph.D. program offered by the CUNY Graduate School. For information on the Ph.D. program, consult the department.

The department's faculty do a wide range of research in computer science, and in fiscal 1997 received external funding from such federal agencies as the National Science Foundation, the National Institutes of Health, and the Department of Defense, as well as from corporate sources. Please examine our web page for the most up-to-date information:

<http://www.cs.qc.edu>

We have about 50 workstations of various types (Sun, SGI, etc.) networked in the department available for research and instruction, and the College provides many PCs and a DEC Alpha server. A list of our facilities may be accessed at the web address above.

Faculty

- Brown, Theodore D., *Chair, Professor*, Ph.D. 1971, New York University: simulation methodology, analytic modeling, parallel algorithms, analysis of algorithms
- Lord, Kenneth J., *Assistant Chair, Assistant Professor*, Ph.D. 1995, City University of New York: operating systems, applications of computers to linguistics and music, web programming
- Wasserman, Howard C., *Chair, Graduate Curriculum and Advisement, Associate Professor*, Ph.D. 1971, University of Pennsylvania: logic programming
- Xiang, Zhigang, *Graduate Admissions Officer, Associate Professor*, Ph.D. 1988, SUNY Buffalo: computer graphics, image processing, interactive techniques, artificial intelligence, compilers
- Yukawa, Keitaro, *Graduate Admissions Officer, Assistant Professor*, Ph.D. 1987, University of Waterloo: application of mathematical logic and category theory

to computer science, logic and functional programming, logic database, programming languages, design and analysis of algorithms

- DiPaola, Robert A., *Professor*, Ph.D. 1964, Yeshiva University: mathematical logic, theory of computability, computational complexity, probability and information theory
- Friedman, Carol, *Associate Professor*, Ph.D. 1989, New York University: computational linguistics, medical informatics, databases
- Ghozati, S. Ali, *Associate Professor*, Ph.D. 1976, Columbia University: computer communication networks, parallel processing
- Goldberg, Robert R., *Associate Professor*, Ph.D. 1989, Courant Institute of Mathematical Science, New York University: graphics image processing, formal languages
- Goodman, Seymour, *Professor Emeritus*, Ph.D. 1962, Columbia University: microprogramming; computer architecture
- Gross, Ari D., *Associate Professor*, Ph.D. 1991, Columbia University: computer vision, computer graphics, shape modeling, computational geometry
- Kong, T. Yung, *Professor*, Ph.D. 1986, University of Oxford, Great Britain: geometrical and topological problems related to computer vision graphics and image processing
- Kwok, Kui-Lam, *Professor*, Ph.D. 1965, University of Manchester, England: information retrieval (IR), application of neural networks to IR, data structures
- Obrenic, Bojana, *Assistant Professor*, Ph.D. 1993, University of Massachusetts at Amherst: applications of discrete mathematics in computer science, theoretical parallel computing
- Sy, Bon K., *Associate Professor*, Ph.D. 1988, Northeastern University: uncertain reasoning, use of AI augmentative communication, the recognition of impaired speech
- Vickery, Christopher, *Professor*, Ph.D. 1971, City University of New York: computer organization and architecture, operating systems, graphics
- Waxman, Jerry, *Professor*, Ph.D. 1973, New York University: voice/data systems, algorithms, computer science education
- Whitehead, Jennifer, *Associate Professor*, Ph.D. 1975, University of Warwick, England: computational complexity, computability, operating systems

Program for the Master of Arts Degree

The Master of Arts in Computer Science includes courses in four areas of study: Software, Theoretical Foundations, Hardware, and Scientific and Statistical Computing.

The Software area is the primary focus of the program, and includes courses in fundamental algorithms, software design, database systems, distributed software sys-

tems, operating systems, compiler design, graphics, information organization and retrieval, and artificial intelligence. The Theoretical Foundations courses include the mathematical treatment of such topics as formal language theory, automata theory, and computability theory. The Hardware area course offerings cover topics including computer systems design, networking principles, and distributed hardware systems. The Scientific and Statistical area includes courses covering sequential and parallel numerical algorithms, applications of probability and statistics to the study of hardware and software systems, and principles of simulation and modeling.

All 700-level courses in the department are applicable to the CUNY doctoral program in computer science. Some graduate courses are open to students who are not matriculated in the Master's program. Consult the department for details.

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

Matriculation is based on merit as judged by the Graduate Admissions Committee of the department. The Committee will expect each candidate for matriculation to have an adequate mathematics background, including integral calculus, probability and statistics, and discrete mathematical structures.

Matriculation requirements include a working knowledge of high-level object-oriented programming language, assembly language programming, data structures, principles of programming languages, operating systems, and computer organization. A candidate who is partially deficient in the above requirements may, at the discretion of the Admissions Committee, be admitted subject to the requirement that the deficiencies be rectified. Appropriate means to fulfill this requirement are provided by the department. Courses taken to meet admissions deficiencies do not count toward the credit requirements for the degree.

The Jacob Rootenberg Fellowship Award

Each semester an award from the Jacob Rootenberg Fellowship Fund will be made to a new matriculant with an outstanding record of scholarship.

Program Requirements

These requirements are in addition to the general requirements for the Master of Arts degree as specified in this *Bulletin*.

Each student must complete 30 credits of 700-level courses, including the core courses (Algorithms I, Distributed Computing Foundations of Computer Science, and Computer Architecture and Networks). In addition, the student must choose one course in each of the three semi-core categories: Software, Hardware, and Scientific and Statistical Computing. After completion of 21 credits, each student must satisfy a "Capstone Requirement" by completing a

COMPUTER SCIENCE

Software Development Practicum, a Research Practicum, or a Master's Thesis. The remaining courses may be freely chosen from a variety of other 700-level courses, including "special topics" and seminar courses.

Courses in Computer Science

The second digit of each course number represents a particular area.

- 0 or 1 Software
- 2 Foundations
- 4 Hardware
- 6 Scientific and Statistical Computing

Remedial Background Courses (May be used to satisfy conditions for matriculation)

- 603. Data Structures
- 642. Assembly Language and Computer Organization

Core Courses (Students must take all four)

- 700. Algorithms I
- 715. Distributed Computing
- 721. Foundations of Computer Science
- 744. Computer Architecture and Networks

Software Semi-core Courses (Students must take at least one)

- 701. Software Design
- 707. Compiler Construction
- 718. Computer Graphics

Hardware Semi-core Courses (Students must take at least one)

- 745. Switching Theory
- 746. Computer Systems
- 748. Computer Networks

Scientific and Statistical Semi-core Courses (Students must take at least one)

- 762. Algorithms II
- 764. Topics in Systems Simulation
- 766. Probabilistic Models in Computer Systems

Elective Courses

- 711. Data Base Systems.
- 780. 782. 784. 786. 783. Seminars in Computer Science.
- 790, 792, 794, 796, 793. Special Topics in Computer Science.
- 799.1-3. Research.

Note: In the seminar and special topic courses the third digit represents the subject area. The numbers 783 and 793 will be given to courses that resist categorization with respect to subject area.

Capstone Courses (Students must take one, after completing 21 credits)

- 731. Software Development Practicum.
- 732. Research Practicum.
- 733. Master's Thesis.

Note: The programming project reports, research reports, and Master's theses submitted by the students shall be placed in the departmental files.

Other Courses

- 788.1-3. Computer Science: Cooperative Education Placement.

COURSE DESCRIPTIONS

Remedial Background Courses

603. Data Structures. 4 hr.; 3 cr. Prereq.: Computer Science 95 or equivalent. Design and implementation of data structures using C++. Introduction to C++, including objects, classes, and inheritance. Stacks and queues. Pointers and dynamic storage allocation. Linked lists. Recursion. Sorting and searching. Binary trees. Hash tables.-

642. Assembly Language and Computer Organization. 4 hr.; 3 cr. Prereq.: Mathematics 601. An intensive course introducing the elements of computer architecture and assembly level programming. Topics include the gate, register, and processor level of design, interrupt handling, and input/output facilities. Assembler, linkers, interrupt handling and input/output programming.

M.A. Courses

700. Algorithms I. 3 hr.; 3 cr. Fundamental algorithms, their use, analysis, and the data structures used in their formulation. Programming paradigms such as dynamic programming, divide and conquer, greedy algorithms, branch and bound, backtracking, and their applications. Parallel algorithms.

701. Software Design. 3 hr.; 3 cr. Prereq.: Computer Science 700. Techniques and principles of systematic software development. Review of current software development tools. Top-down design and structured programming. History and concepts of modular design. Graphical user interfaces. Object-oriented design including data abstraction by classes and type polymorphism. Significant programming projects will be assigned.

707. Compiler Construction. 3 hr.; 3 cr. Prereq.: Computer Science 700 and 721. Theory and practice of compiler construction. Topics include theoretical and practical studies of lexical analysis, syntax analysis, type checking, semantic analysis, object code generation and optimization.

711. Data Base Systems. 3 hr.; 3 cr. Prereq.: Computer Science 700. In-depth review of data base systems and extensive survey of the current literature on the topic.

715. Distributed Computing. 3 hr.; 3 cr. Distributed systems design and implementation. Concurrency and modularity. Operating system considerations. Transport-level communication protocols. RPC's. Examples of distributed systems.

718. Computer Graphics. 3 hr.; 3 cr. Prereq.: Computer Science 700. Organization of graphic systems, output primitives and their attributes, geometric and viewing

transformations, scan-conversion and clipping algorithms, segments, interactive devices and techniques, graphics standards such as GKS, color models, three-dimensional representations, projections, hidden line/surface removal algorithms, shading methods and illumination models. Significant programming projects to illustrate the rendering process as well as the design of user interfaces will be assigned.

721. Foundations of Computer Science. 3 hr.; 3 cr. Finite automata and regular expressions. Context-free grammars and pushdown automata. Type-0 grammars, Turing machines, and the Church-Turing thesis. Decidability, reducibility, and the recursion theorem. Runtime complexity and NP-completeness.

731. Software Development Practicum. 3 hr.; 3 cr. Prereq.: Completion of 21 credits, including Computer Science 701,707, or 718. Each student will complete a significant software development project, either of his/her own choosing or one selected by the instructor. In general, projects will incorporate the following features in their design: A graphical user interface, concurrent processing, and persistent state across invocations. All projects will include complete and separate documentation for end-users, for installation, and for software maintenance. Project management tools for version and module management, and a complete record of the development stages are required.

732. Research Practicum. 3 hr.; 3 cr. Prereq.: Completion of 21 credits. Critical review of research in computer science. Students will conduct research on one of the topics given by the instructor, and gain experience in writing research proposals, actual research process (including the use of libraries and the reading of papers), and in writing research reports. The instructor will give lectures on the selected topics as well as on general research methods, and closely monitor the students' research process.

733. Master's Thesis. 3 cr. Prereq.: Completion of 21 credits. A Master's thesis must be accepted by a sponsoring member of the department and by a thesis committee chosen by the department. (For College requirements regarding theses, see page 11 of this Bulletin.)

744. Computer Architecture and Networks. 3 hr.; 3 cr. The design of CPU, memory, and I/O systems. Performance evaluation. Pipeline processor design. SIMD architecture. Communication issues in a distributed computing system. Design of interconnection networks and their applications. Fault-tolerant computer systems.

745. Switching Theory. 3 hr.; 3 cr. Boolean algebra. Symmetric and iterative circuits. Fault detection and location. State equivalence and reduction of completely and incompletely specified machines. State identification and experiments. Linear

sequential circuits. Current research topics.

746. Computer Systems. 3 hr.; 3 cr. Prereq.: Computer Science 744. Parallel computer models. Program and network properties. Performance metrics and measures. Advanced processor technology, RISC and CISC processors. Software for parallel programming. Current research topics.

748. Computer Networks. 3 hr.; 3 cr. Prereq.: Computer Science 744. Basic communication concepts, connectivity analysis, delay analysis, and the International Standards Organization Reference Model of Open Systems Interconnection (ISO-OSI).

762. **Algorithms II.** 3 hr.; 3 cr. Prereq.: Computer Science 700. A continuation of the material of 700, including algorithms for numerical computation, algorithms for parallel or distributed computers, and probabilistic analysis of algorithms.

764. Topics in Systems Simulation 3 hr.; 3 cr. Prereq.: Computer Science 700. Introduction to simulation and comparison with other techniques. Discrete simulation models and introduction to, or review of, queuing theory and stochastic processes. Comparisons of discrete change simulation languages. Simulation methodology including generation of random numbers and variates, design of simulation experiments for optimization, analysis of data generated by simulation experiments and validation of simulation models and results. Selected applications of simulation.

766. Probabilistic Models in Computer Systems. 3 hr.; 3 cr. Prereq.: Computer Science 700. This course deals with analytical modeling as a means of analyzing computer hardware and software through the application of fundamental concepts of probability theory, statistics, random processes such as queuing theory and Markov chains to problems encountered in queuing models of time-sharing systems, multiprocessor interference, statistical evaluation of sorting techniques, and reliability of computer systems and networks.

780, 782, 783, 784, 786. **Seminars in Computer Science.** 3 hr.; 3 cr. May be repeated for credit if the topic changes.

766.1-3. Computer Science: Cooperative Education Placement. 1-3 hr.; 1-3 cr. Prereq.: Completion of at least three 700-level Computer Science courses and approval by the Departmental Graduate Curriculum and Advisement Committee of a detailed project description submitted by the student. Experiential learning through job placements developed by the Queens College Cooperative Education Program. Opportunities are provided to test, demonstrate, and expand on academic learning in an organizational setting. This course does not count toward the 30 credits required for the Master of Arts degree in Computer Science. The grade for this course will be

given on a Pass/Fail basis.

799, 792, 793, 794, 796. Special Topics in Computer Science. 3 hr.; 3 cr. May be repeated for credit for differing titles.

799.1-3. Research. 1-3 hr.; 1-3 cr. Prereq.: Permission of department. May be repeated for credit for differing titles. to a maximum of 3 credits. Student research reports shall be written; they will be placed on file with departmental technical reports.

SCHOOL OF EDUCATION

Acting Dean: Sydney Schwartz

Director of College Preparatory Programs:
Marvin Leiner

Department of Elementary & Early Childhood Education & Services

Acting Chair: Nancy L. Dill

Department of Secondary Education & Youth Services

Chair: Philip M. Anderson

Department of Educational & Community Programs

Chair: David S. Goh

Programs in Education and Human Service

Queens College offers integrated programs of advanced studies leading to the degree of Master of Science in Education. Through these programs students acquire a broad background in general education; they enrich their knowledge of a specialized area of education or a related area of human service; and they develop the attitudes, knowledge, and skills needed for professional success.

In addition to the Master's degree programs, there are special advanced certificate programs for prospective school administrators and supervisors and school psychologists.

For students with baccalaureate degrees who lack undergraduate work in education and/or areas related to the school curriculum, an advanced certificate program is available in Elementary and Early Childhood Education (page 53) and Secondary Education (page 58). Completion of these programs leads to approved provisional New York State teaching certification.

Graduate students are allowed to transfer up to 12 credits from other institutions with permission of the appropriate Chair. The degree of Master of Science in Education must be completed within five years of the date of the first credit earned.

Regardless of the education program in which a student is enrolled, he or she may take courses in any of the three Departments of Education with the permission of a Graduate Adviser. It is recommended,

therefore, that students examine course listings of all three departments.

The Master of Science in Education is granted in the following areas:

	<i>HEGIS Code</i>
Art Education see p. 39	0831
Counselor Education see p. 71	0826.01
Bilingual Counseling	
College Counseling -	
Mental Health Counseling	
School Counseling -	
Elementary Education Pre-K-6	
see p. 52	0802
Elementary Education-Specialization	
in Bilingual Education	
see p. 53	0899
English Education see p. 75	1501.01
Environmental Ed. see-p. 53	0802
General Science Education ¹	
(Federal No. 0834) See p. 58	
Biology	0401.01
Chemistry	1905.01
Earth Sciences	1917.01
Physics	1902.01
Home Economics Ed. see p. 79	1301.01
Mathematics Ed. see p. 53	1701.01
Music Education see p. 110	0832
Physical Education see p. 79	0835
Reading Education see p. 62	0830
Romance Langs. Ed. see p. 58	
French see p. 77	1102.01
Italian see p. 77	1104.01
Spanish see p. 86	1105.01
School Psychology see p. 63	0826.01
Social Studies Ed. see p. 58	2201.01
Special Education see p. 68	0808
Teaching of English as a Second	
Language see p. 99	1508

Professional Certificate Programs

Advanced Certificate and Diploma programs are offered in the following areas:

Elementary and Early Childhood	Education (post-baccalaureate)
School Administration and Supervision	(post-Master's)
School Psychology	
Secondary Education (post-baccalaureate)	

Awards

The Alan Richard Hamovitch Award for Excellence in Special Education. \$1,000 is given annually to a graduating student of the Master's program in Special Education. The recipient must have an outstanding record of scholarship and teaching and have plans to continue in the field of special education. For information, contact the Special Education Program Coordinator.

The Hazel Grubbs Davis Award is to be given to a graduating Master of Science in Education student who has completed the specialization in Children's Literature and whose high quality of work while in the program promises future contributions in the field. For information, contact the Department of Elementary and Early Childhood Education and Services.

The Marc Belth Award is an annual prize of \$700 awarded under the auspices of the School of Education to a graduating

undergraduate or graduate student who has created an original work of high quality in the areas of philosophical, social, or curriculum theory of education. For information, please contact Elayne Bernstein at 718-997-5709.

The Albert Angrilli Award in School Psychology is an annual award of \$200 given to a graduating student in the School Psychology Program who has demonstrated excellence in academic achievement as well as commitment to the field of school psychology. The recipient is an individual who holds promise for becoming an outstanding school psychologist. For information, please contact the School Psychology Program Coordinator.

The Corinne J. Weithorn Scholarship in School Psychology. The School Psychology Program is proud to administer a scholarship in honor of Corinne J. Weithorn, who was a faculty member in the program for two decades and chair of the department. Professor Weithorn was strongly supportive of all of her students. In particular, she was aware of the difficulties experienced by graduate students who were also mothers of minor children. The Weithorn family has established a fund for a scholarship of \$6000 to assist a woman school psychology student who is raising a family while pursuing her education. For information, contact Roslyn P. Ross, Chair, School Psychology Scholarship Committee.

Assistantships and Financial Aid

Assistantships in Education are occasionally available. For information, consult the Department Chair. In addition, the Financial Aid Office provides partial waivers of graduate tuition, New York State Tuition Assistance Program (TAP), Federal Perkins Loans, Federal Direct Loans, and Federal Work-Study Program to qualified students. For additional information, see pages 21-23.

Internships

The Queens College Center for the Improvement of Education sponsors a graduate internship program for students with or without prior background in education. The internships provide students with free tuition and a stipend as they participate in supervised field experience in one of the schools associated with the Center. For further information, students should go to Powdermaker Hall, Room 004, or call 718-997-5505.

Field Opportunities

Field work opportunities are available for graduate students in numerous schools and agencies.

Educational Placement Service

As a service to its students, the School of Education maintains an Educational Placement Office (Powdermaker Hall, Room 104, 718-997-5545). This office pro-

¹New York State Teacher Certification area

vides job listings in professional education and, upon request from employers, nominates qualified candidates for various positions. These include classroom teachers, curriculum specialists, guidance and counseling personnel, educational technologists, school psychologists, and elementary and secondary school administrators and supervisors. Students may register with the office by setting up a placement folder with recommendations and an ongoing record of their professional qualifications and experience.

Students are urged to register with the Placement Office when they have completed 12 credits of graduate work at Queens College. Those who have registered as undergraduates need not re-register, but should bring their records up to date.

Field Placement Office

This office (Powder-maker Hall, Room 183, 718-997-5546) coordinates assignments for student teaching and other field experiences required in the programs.

New York State Permanent Certification

Queens College Education programs leading to the Master of Science degree in Education or to an advanced certificate or diploma meet all New York State academic and field requirements for certification.” When a graduate student has completed two years of demonstrated effectiveness as a practitioner and has completed all the academic requirements of an approved program leading to provisional, permanent, or advanced certification, the School of Education forwards to the New York State Department of Education the necessary documentation.

While departmental Graduate Advisers will be pleased to answer any questions about the College certification process, it is the student's responsibility to seek advice directly from state certifying agencies about those professional regulations not imposed by the College.

New York City License

New York City licensing requirements change from time to time. It is the responsibility of students to determine whether their course of study will meet in full the city requirements. Students may make inquiries for information only in the Educational Placement Office, Powder-maker Hall, Room 104, or call 718-997-5545.

Human Relations

The New York City Board of Education requires teachers to complete one approved course with a human relations component. Students contemplating a teaching position in New York City may fulfill this requirement with EECE 704 or 705, or SEYS 702, 705, or 707.

Special Education

The New York City Board of Education now requires its instructional and administrative personnel to complete six credits of approved special education courses. Students contemplating employment with the Board are referred to the following approved courses: EECE 713, 732, 733; ECPSE 700,750; SEYS 765.

*The following programs in Education do not lead to State certification:

Master of Science in Home Economics Education:
Nutrition Specialty
Master of Science in Physical Education: Exercise
Science
Master of Science in Counselor Education: College
Counseling Specialty, and Mental Health
Counseling Specialty

ELEMENTARY & EARLY CHILDHOOD EDUCATION & SERVICES

Acting Chair: Nancy L. Dill

Graduate Coordinator: Janet G. Ezair

Dept. Office: Powdermaker 171, 997-5300

The Department of Elementary and Early Childhood Education and Services offers the M.S. in Education degree in Elementary Education, Pre-K-Grade 6. Students may specialize in either Elementary Education, Early Childhood Education, Children's Literature, or Mathematics Education. The 30-credit program fulfills requirements for permanent New York State certification, Pre-K-Grade 6.

The department also offers a 36-credit program leading to the M.S. in Education degree in Elementary Education with a specialization in Bilingual Education. Completion of this program fulfills requirements for both permanent New York State certification in Pre-K-Grade 6, and the Bilingual Education Extension.

For students who did not major in Elementary or Early Childhood Education as undergraduates, the department offers a 48-credit program for the combined Advanced Certificate/Master of Science in Education Degree.

A 54-credit program for the combined Advanced Certificate/Master of Science in Education Degree in Elementary Education with a specialization in Bilingual Education is also available.

Demonstration of knowledge of drug and alcohol abuse and child abuse and mistreatment is required for New York State certification.

Part-time students normally register for 6 credits each semester. A typical full-time program would be 12 credits each semester and 6 credits in the Summer.

Faculty

Dill, Nancy L., Chair, *Assistant Professor*, Ed.D. 1969, Teachers College, Columbia University: educational law, program research and evaluation

Ezair, Janet G., Graduate Coordinator, *Associate Professor*, Ed.D. 1965, Teachers College, Columbia University: reading, sociology of education

Schwartz, Judith Iris, Early Childhood Education Adviser, *Professor*, Ph.D. 1970, New York University: early linguistic and cognitive development, early childhood education, reading and language arts instruction

Olivares, Rafael A., Coordinator Bilingual

Education Program, *Assistant Professor*, Ed.D. 1985, Teachers College, Columbia University: bilingual education

Abramson, Theodore, *Professor*, Ph.D. 1969, Fordham University: psychology of learning, research/evaluation methodology, vocational education

Baghban, Marcia M., *Associate Professor*, Ed.D. 1979, Indiana University: language arts and reading education

Bisland, Beverly, *Instructor*, M.A.T. 1967, Duke University: elementary social studies education

Brovey, Daniel J., *Professor*, Ed.D. 1969, Teachers College, Columbia University: science education, research and evaluation, computer education

Craven, John A. III, *Assistant Professor*, Ph.D. 1997, University of Iowa: science education; elementary science methods and geology

Gibson, Linda G., *Associate Professor*, Ed.D. 1981, New York University: early childhood, language and thought development

Harris, Gloria A., *Assistant Professor*, Ed.D. 1968, Teachers College, Columbia University: social studies, multicultural education

Johnson, Helen S., *Associate Professor*, Ph.D. 1972, University of Wisconsin: children's cognitive development, literacy and consequences of early deprivation in children

Okongwu, Anne L., *Assistant Professor*, Ph.D. 1986, City University of New York: multicultural education, ethnographic research with single parent families

Salz, Arthur E., *Associate Professor*, Ed.D. 1967, Teachers College, Columbia University: open education, mainstreaming handicapped children

Schwartz, Sydney L., *Professor*, Ed.D. 1965, Teachers College, Columbia University: early childhood curriculum, mathematics and science in elementary/early childhood education, study of teaching behavior and children's learning

Sloan, Glenna Davis, *Professor*, Ed.D. 1972, Teachers College, Columbia University: children's literature and reading, writing for children

Sobel, Harold W., *Associate Professor*, Ed.D. 1970, Teachers College, Columbia University: open education, educational foundations

Swell, Lila, *Associate Professor*, Ed.D. 1964, Teachers College, Columbia University: creative methods in affective education

Turkel, Susan B., *Associate Professor*, Ed.D. 1977, Teachers College, Columbia University: mathematics, science, computer education

Zarnowski, Myra S., *Associate Professor*, Ed.D. 1983, University of Georgia: language arts and social studies education

Entrance Requirements

General admission and matriculation requirements for all departmental programs are described in the section begin-

ning on page 16.

After students have been accepted, they should consult with the appropriate Adviser, who will review their background and help them plan a program. An approved program must be filed during the first semester. Students must subsequently obtain permission from their Adviser before making any program changes and bring copies of their signed, approved programs whenever appearing for registration.

Advisers

Elementary Education Program: Janet G. Ezair, *Coordinator*

Early Childhood Education Program: Judith Iris Schwartz

Bilingual Education Program: Rafael A. Olivares

Advanced Certificate Program: Janet G. Ezair

Early Childhood Education Program

Students majoring in Early Childhood Education may have an early childhood professional background at the undergraduate level or an elementary school professional background. The program of study varies slightly and is explained below.

A. Program for students whose primary undergraduate area of study was Pre-K-3 (30 credits required).

1. Psychological Foundations: Required course: EECE 710.

2. Curriculum: Required courses: EECE 722, 725. Select one additional course from the following: EECE 723, 726, 727, SEYS 711, EECE 760, and a course approved by the Early Childhood Education Graduate Adviser.

3. Research: Select Option A or B. *Option A*: EECE 784, 785. *Option B*: EECE 780, 781.

4. Philosophical, Social, Historical Foundations: Required course: EECE 721.

5. Electives (6 credits): Students may select graduate education courses or any courses on the graduate level for which they meet course requirements. (Check the *Bulletin* for requirements, including departmental statement preliminary to course listings.)

B. Program for students whose primary undergraduate area of study was elementary education (30 credits required).

1. Psychological Foundations: Required course: EECE 710.

2. Curriculum: Required courses: EECE 722, 724, 725. Select one additional course from the following: EECE 723, 726, 727, SEYS 711, EECE 760, and a course approved by the Early Childhood Education Graduate Adviser.

3. Option A or B as above.

4. Philosophical, Social, Historical Foundations: Required course: EECE 721.

5. Electives (3 credits): Select graduate education or liberal arts courses, as above.

Elementary Education Program

The Elementary Education program is designed for those who have a background in Elementary or Early Childhood Education (30 credits required).

A. CORE REQUIREMENTS

Core requirements of 18 credits for the Master of Science in Education degree consist of:

1. One course (3 credits) from the Philosophical, Social, Historical Foundations Area
2. One course (3 credits) from the Psychological Foundations Area
3. One course (3 credits) from the Curriculum Area
4. Two courses (6 credits) of research taken in consecutive semesters
5. One additional course from area 1, 2, or 3 above.

B. ADDITIONAL REQUIREMENTS

The remaining 12 credits may be completed by taking graduate education courses, or any graduate courses for which the student meets course requirements. (Check the Bulletin for requirements, including departmental statement preceding course listings.) Students should consult an Adviser to plan their selection of courses.

Elementary Education with a Specialization in Children's literature

Students interested in the Children's Literature Specialization in Elementary Education should contact Professor Glenna Sloan.

The following courses are required:

1. One course (3 credits) in Philosophical and Social Foundations.
2. One course (3 credits) in Psychological Foundations.
3. Curriculum (6 credits): EECE 742 (3 credits); Advanced Independent Study (3 credits) or an approved elective (3 credits).
4. Research (6 credits): Topic related to literature and literacy.
5. Children's Literature electives (6 credits): EECE 744, 746, 747, 759, and selected 771 workshop courses.
6. Electives (6 credits): Children's Literature electives or graduate courses approved by adviser.

Elementary Education with a Specialization in Mathematics Education

Students interested in a Mathematics Education specialization should contact Professor Susan Turkel.

The following courses are required:

1. EECE 751, Mathematics in the Elementary School.
2. EECE 752, Principles, Practices, and Problems in Elementary Mathematics Education.

3. EECE 720, Microcomputer Applications for Early Childhood.

4. EECE 750, Computers in the Elementary Classroom.

5. Elective (3 credits): Mathematics Education elective or graduate course approved by adviser.

6. The thesis must be in the Mathematics Education area.

Elementary Education with a Specialization in Environmental Education

Students interested in an Environmental Education Specialization should contact Professor Daniel Brovey. (Applications for admission are not being accepted for the 1997-98 academic year.)

Elementary Education Program with Specialization in Bilingual Education

This 36-credit program leads to a Master of Science in Elementary Education with a specialization in Bilingual Education. It also fulfills requirements for permanent New York State Certification Pre-K-6 (general) and Bilingual Education Extension Elementary (specialty). Students interested in the Bilingual Education specialization should contact Professor Rafael Olivares.

The selection criteria for admission will be the same as those for entering the other Master's degree programs in Elementary Education, with the addition of bilingual proficiency. Native speakers will evaluate candidates' proficiency in a language other than English.

A. GENERAL AREA: REQUIRED CORE IN ELEMENTARY AND EARLY CHILDHOOD EDUCATION

1. One course (3 credits) from the Philosophical, Social, or Historical Foundations of Education Area: EECE 700, 702, 703, 704, or 705.

2. One course (3 credits) from the Psychological Foundations Area: EECE 711, 712, 713, 714, or 715.

3. One course (3 credits) from the Curriculum Area: EECE 740, 741, 742, 743, 750, 751, or 753.

4. Two courses (6 credits) of research taken in two consecutive semesters: EECE 780-781 or 782-783. Students must complete their research project in the area of Bilingual Education.

B. BILINGUAL SPECIALIZATION

The following six courses (18 credits) are to be taken: EECE 761, 762, 763, 764, Linguistics 740, 741.

C. INTERNSHIP

One course (3 credits) entitled Internship in a Bilingual Classroom (EECE 765) must be taken.

Advanced Certificate Program

Graduate students who did not major in Elementary or Early Childhood Education as undergraduates may enroll in a 48-credit combined Advanced Certificate/Master of Science in Education degree program, which is a modification of the MS. in Education program in Elementary Education. The program is 54 credits for those students who select the M.S. in Education in Elementary Education with a specialization in Bilingual Education.

This modification provides an integrated program that includes the course work and field experience that are necessary for students to meet requirements for provisional certification through the completion of the 33-credit Advanced Certificate, and which, on completion of the Master's degree, will lead to permanent certification. Information is available from Professor Janet Ezair, the Graduate Adviser, Powdermaker 189. To be considered for admission, candidates must meet the following requirements:

1. Students must have earned a Bachelor's degree with a cumulative index of 3.0. Those with an undergraduate average between 2.8 and 3.0, or who lack a liberal arts or science major at the undergraduate level, or who do not have a complete foundation in the liberal arts and sciences are advised to enroll in undergraduate courses at a college of their own choosing before applying to the Advanced Certificate Master's program.

2. Students must have taken a concentration of no fewer than 18 credits in one of the liberal arts and sciences subject areas during their undergraduate degree programs. Specializations such as advertising, sales management, accounting, graphic design, nursing, and studio arts, which traditionally are offered at technical and vocational colleges, do not usually meet this requirement. Applicants whose major is in an applied area such as those listed above, will have their transcripts reviewed in accordance with New York State Education Department's program guidelines.

3. Students must have completed a foundation in the general liberal arts and sciences. General distribution of courses in a student's undergraduate program must have included the following:

English: 6 credits

Mathematics: 6 credits

Science: 6 credits, of which 3 credits are earned in a laboratory course

Social Sciences: 6 credits

Foreign Language: one year at the college level or its equivalent. In New York State, a third year high school regents in a foreign language is equivalent when entered on the college transcript.

Students may lack some of these foundation courses but may meet the grade-point average requirement for admission. Students needing 9 or fewer credits may be admitted; however, they must complete these credits by the time they satisfy the

requirements for the Advanced Certificate. Those students needing more than 9 credits are advised to complete those courses missing in their liberal arts and sciences foundation at a college of their own choosing before applying to the Advanced Certificate/Master's program.

The Advanced Certificate program is offered in a program of late afternoon and evening courses or in a full-time day program, which can be completed in one year, including Summer. Admission to the full-time program is granted in the Fall semester only. Students enrolled in the late afternoon/evening program will need more than one year to complete the program. Additionally, they need to plan for one semester of daytime attendance, which is required for student teaching. Courses required to complete the Master's degree are offered in the late afternoon and evening only.

Students admitted to the Advanced Certificate program are required to have a minimum of 50 hours of experience working with children in appropriate settings. Forms for reporting the experience are available from the Graduate Elementary Education Office and must be on file before students will be eligible for student teaching.

The department may also require an interview. Candidates may enter the program only as matriculating students.

The requirements for the Advanced Certificate (33 credits) consist of three parts:

1. Students must complete, with a minimum grade of B, the following five special courses (18 credits). Each course focuses on an aspect of teaching in the elementary school.

	<i>credits</i>
EECE 525. Teaching Reading and Children's Literature	3
EECE 535. Educational Foundations	3
EECE 545. Teaching Language Arts and Social Studies	3
EECE 555. Teaching Science and Mathematics	3
EECE 565. Student Teaching	6

Students may take EECE 565 in the Fall or Spring semester, but only after completing EECE 525, 535, 545, and 555 or the equivalent. Students must register for the student teaching course no later than the point at which a total of 21 credits is accrued.

2. Students choose one of the existing Master's programs in Elementary Education or Elementary Education with a Specialization in Bilingual Education and complete the following 15 credits, which are grouped into three areas:

	<i>credits</i>
Reading (EECE 731, 740, 742)	3
Philosophical and Psychological Foundations	6
Curriculum Development and Implementation	6

3. All students in the School of Educa-

tion, including those in the Advanced Certificate/Master's program, must enroll in two 3-hour workshops: one on alcohol and drug abuse, and the other a state-approved workshop entitled "Identification and Reporting of Suspected Child Abuse, Maltreatment, and Neglect." Students must complete these workshops by 33 credits if they want to apply for provisional certification through the completion of the Advanced Certificate.

Please note: Students who have had one year or more of full-time teaching experience as classroom teachers must speak to an adviser.

Upon completion of the Advanced Certificate program (as outlined above in 1, 2, and 3), students will have satisfied the academic requirements for provisional certification for elementary teachers in New York State. In addition to completing the program, students must pass the following New York State Teacher Certification Examinations complete their qualifications for provisional certification: Liberal Arts and Sciences Test (LAST) and the Elementary and Early Childhood version of the Assessment of Teaching Skills-Written (ATS-W). LAST may be taken prior to the beginning of the Advanced Certificate program or at any time thereafter. ATS-W would normally be taken near the end of the program or upon its completion. Students must pass these examinations according to the criteria set by the New York State Education Department in order to be eligible to receive the provisional certificate and to be qualified to take the remaining examinations necessary for permanent certification.

Upon completion of the above requirements, the student should meet with the Graduate Coordinator for an audit to verify that all program requirements have been met. Upon such verification, the student will be recommended by the College for New York State Provisional Pre-K-Grade 6 certification.

Following fulfillment of the Advanced Certificate program, students will complete the remaining graduate courses required for their specific specialization in the Master of Science in Education degree in the Elementary and Early Childhood Education Department, which will lead to permanent certification.

Courses in Elementary and Early Childhood Education

COURSES IN THE ADVANCED CERTIFICATE PROGRAM

EECE 525. Teaching Reading and Children's Literature. 3 hr. plus field work; 3 cr. Prereq.: Permission of department. May not be credited toward the Master of Science degree in Education. A comprehensive course in the basic skills of reading using both text and trade book materials. This course plus one of the following: EECE 731, EECE 740, EECE 742, or EECE 745 meet the reading requirement for New York State certification.

EECE 535. Educational Foundations. 3 hr. plus field work; 3 cr. Prereq.: Permission of department. May not be credited toward the Master of Science degree in Education. Selected concepts in the foundations of education.

EECE 545. Teaching Language Arts and Social Studies. 3 hr. plus field work; 3 cr. Prereq.: Permission of department. May not be credited toward the Master of Science degree in Education. The teaching of selected concepts in language arts and social studies.

EECE 555. Teaching Science and Mathematics. 3 hr. plus field work; 3 cr. Prereq.: Permission of department. May not be credited toward the Master of Science degree in Education. The teaching of selected concepts in science and mathematics.

EECE 565. Student Teaching. 3 hr. plus participation; 6 cr. Prereq.: Permission of Graduate Adviser and completion of required 500-level course work in the Advanced Certificate Program. May not be credited toward the Master of Science degree in Education. Regular (non-teaching) student teachers are supervised by College faculty in schools and classrooms selected by Queens College faculty. Participation consists of full-time teaching and observations by College faculty for 11 weeks, 4½ to 5 days per week. Will include teaching practice at two levels, K-Grade 2 and Grades 3-6. One part of the student teaching assignment will span 7-8 weeks. Weekly seminars supplement the field experience.

EECE 565.3. Student Teaching. 3 hr. plus participation; 3 cr. Prereq.: Permission of Graduate Adviser; must be enrolled prior to Spring 1995; and completion of at least 12 credits of course work in Special Admissions. May not be credited toward the Master of Science degree in Education. Regular (non-teaching) student teachers are supervised by College faculty in the schools and classrooms selected by Queens College faculty. Participation consists of full-time teaching and observations by College faculty for eleven weeks, 4 to 5 days per week. Will include teaching practice at two levels: K-Grades 2 and Grades 3-6. One part of the student teaching assignment will span 7-8 weeks. Weekly seminars supplement the field experience.

EECE 575. Internship in Elementary Education. 3 hr. plus participation; 6 cr. Prereq.: Permission of Graduate Adviser; limited to students who matriculated in Fall 1994 or Spring 1995; at least one year in a full-time teaching position in a New York State accredited school, and completion of at least 12 credits of course work in the Advanced Certificate Program. May not be credited toward the Master of Science degree in Education. College-supervised teaching in elementary settings approved by the Elementary Education Faculty. Conference/seminar participation is required.

Foundations Courses in Elementary and Early Childhood Education

HISTORICAL

EECE 700. A History of Ideas in Education. 2 hr. plus conf.; 3 cr.

EECE 721. Trends and Issues in Early Childhood Education. 2 hr. plus conf.; 3 cr. Prereq.: Open only to graduate students who are majoring in early childhood education.

PHILOSOPHICAL

EECE 702. Philosophies of Education. 2 hr. plus conf.; 3 cr.

EECE 703. Philosophy of Teaching. 2 hr. plus conf.; 3 cr.

SOCIAL

EECE 704. Major Issues in Elementary and Early Childhood Education. 2 hr. plus conf.; 3 cr.

EECE 705. School and Community. 2 hr. plus conf.; 3 cr.

PSYCHOLOGICAL

EECE 710. Psychology of Early Childhood. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in educational psychology.

EECE 711. Child Development. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in educational psychology.

EECE 712. Humanistic Psychology: Educational Applications. 2 hr. plus conf.; 3 cr. Prereq.: Undergraduate work in educational psychology.

EECE 713. The Psychology and Education of Exceptional Children and Youth. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in educational psychology.

EECE 714. Behavior Problems of Children and Adolescents. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in educational psychology.

EECE 715. Understanding Group Behavior in Schools. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in educational psychology.

CURRICULUM AND METHODS

EECE 720. Microcomputer Applications for Early Childhood. 3 hr.; 3 cr. Prereq.: Matriculated graduate student or permission of instructor. This course prepares teachers, prospective teachers, and administrators of early childhood programs to design and implement computer experiences for children 3 to 8 years of age.

EECE 722. Language Development During Early Childhood. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in Early Childhood program and Education 710.

EECE 723. The Expanding Role of the Teacher in Early Childhood Education. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in Early Childhood program.

EECE 724. Integrating Curriculum in Early Childhood Education. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in Early Childhood program.

EECE 725. Mathematics and Science in Early Childhood Education. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in Early Childhood program or permission of department. Course focuses on scope and sequence in science and mathematics curricula for children ages 3-8, with concern for ways to foster the development of children's skills of inquiry and cognitive processing.

EECE 726. Administration and Supervision of Day Care: Staff Development and Management Procedures. 3 hr.; 3 cr. Management of day care centers will be studied. Supervisory techniques will be examined and in-service programs designed to improve the quality of teaching in day care centers.

EECE 727. Administration and Supervision of Day Care: Parent Education and Community Relations. 3 hr.; 3 cr. Parent roles in day care programs will be studied. The course will include also a study of the role of local, state, and federal agencies responsible for the care of young children and their relationships to day care programs.

EECE 731. Teaching Beginning Reading and Writing. 2 hr. plus conf.; 3 cr. Coreq.: Weekly opportunity to work with young children to develop reading and writing experiences. Designed for teachers of children from the preschool through the third grade level. Explores how school programs can facilitate the development of reading and writing in the young child in ways that are consistent with current research and theory on the development of literacy.

EECE 732. Instructional Strategies for Mainstreaming Students. 3 hr.; 3 cr. Course focuses on legal bases for mainstreaming of children with special needs, developing individualized educational plans, developing appropriate instructional strategies for individuals in all content areas of the elementary school curriculum.

EECE 733. Curriculum Adaptation for Mainstreaming. 3 hr.; 3 cr. Conceptions of handicap and exceptionality are explored. Emphases on affective as well as cognitive considerations in curriculum adaptations. Examination of the roles of teacher, parent, and school support services in providing for children with special needs.

EECE 740. The Improvement of Reading in the Elementary School. 2 hr. plus conf.; 3 cr. Consideration of developmental growth in reading from beginning to advanced stages. Trends in reading instruction and the more common reading

difficulties will be examined.

EECE 741. Language Arts in the Elementary School. 2 hr. plus conf.; 3 cr. Study of ways in which teachers can build upon the resources of children's everyday living to facilitate children's oral and written language development.

EECE 742. Reading Materials for Children. 2 hr. plus conf.; 3 cr. Prereq.: Undergraduate course in children's literature or permission of department.

EECE 743. Critical Analysis of Language Arts Material. 2 hr. plus conf.; 3 cr. Prereq.: EECE 740 and 741 or permission of department. Critical evaluation of the various kinds of materials in language arts programs in light of the language and personal development of children. The use of the environment as a resource for language learning. Each student must select one area of language arts instruction for intensive study and comparative evaluation of the available materials in that area.

EECE 744. The Art and Technique of Storytelling. 3 hr.; 3 cr. Students examine, evaluate, and prepare a wide range of material as they develop a personal storytelling repertoire. Films, audiotapes, and videotapes by professional storytellers supplement classroom demonstrations and practice exercises.

EECE 745. The Reading-Writing Connection. 3 hr.; 3 cr. This course reviews current research on the development of children's writing and explores how writing can enhance children's learning to read. The course will investigate children's writing through actual writing samples and strategies. Students will also work on their own writing and will look at the childhoods of famous writers.

EECE 746. Nonfiction for Children. 3 hr.; 3 cr. This course will acquaint students with quality nonfiction books for children. The class will focus on ways to encourage children to respond to nonfiction and ways teachers can promote children's comprehension of informational books.

EECE 747. Poetry for Children. 2 hr. plus conf.; 3 cr. Prereq.: Admission to EECE Master's Program. This course will focus not only on classroom practices and materials that will motivate children to encounter poetic expression as listeners, speakers, readers, and writers, but on the contribution that poetry and aesthetics make to education in general.

EECE 748. Myths, Legends, and Folktales. 3 hr.; 3 cr. Prereq.: Admission to EECE Master's Program. This course is designed for, but not restricted to, students in the Children's Literature specialization. It will trace the traditional roots of a story as a model for better understanding of and coping with the complexities of human existence. It will focus also on the significance of these prototypes for the study of literature and for the elementary school curriculum. Participants should expect to

do extensive reading and library research.

EECE 749. Child Centered Education. 3 hr.; 3 cr. In this course students will explore the origins, philosophy, and forms of implementation of child-centered education with special emphasis on the progressive movement and the open classroom. The course includes films, workshops, and discussions, focusing on the use of concrete materials as vehicles for accessing knowledge about objects and events.

EECE 750. Computers in the Elementary Classroom. 3 hr.; 3 cr. Prereq.: Matriculated graduate student or permission of instructor. This course is designed to help teachers increase the effectiveness of teaching and learning for children through the use of the microcomputer.

EECE 751. Mathematics in the Elementary School. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in elementary school curriculum and methods. Open only to experienced elementary school teachers.

EECE 752. Principles, Practices, and Problems in Elementary Mathematics Education. 2 hr. plus conf.; 3 cr. Prereq.: EECE 751. An advanced course that focuses on the total elementary school mathematics curriculum.

EECE 753. Science in the Elementary School Curriculum. 2 hr. plus conf.; 3 cr. Prereq.: A year of college science and basic undergraduate or graduate courses in elementary school curriculum and methods. Open only to experienced elementary school teachers. Designed to present an understanding of the function of science in the curriculum for elementary school children. Emphasis is placed upon the selection, organization, and manipulation of teaching materials, and the adaptations of experiences to the interest and abilities of children of different levels, from first through sixth grades. Materials will be drawn from the various sciences and there will be an emphasis upon deepening the teacher's background in science content and skills in laboratory techniques applicable to the elementary schools. Field trips.

EECE 754,755. Curriculum and Materials in Environmental Education for Elementary Schools. Parts I and II. 2 hr. plus conf.; 3 cr. each course. Prereq.: For EECE 755: EECE 754. An examination of new curricular matters in environmental studies. Field trips.

EECE 759. Environmental Literature. 2 hr. plus conf.; 3 cr. An examination of literature, materials, and teaching practices appropriate for children of pre-school through elementary school ages that focuses on the natural world and the interaction between humans and the environment.

EECE 760. Social Studies in the Elementary School. 2 hr. plus conf.; 3 cr. Prereq.: Elementary school teaching experience.

EECE 770. Supervision of Student Teachers in the Elementary School. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in the M.S. in Education program or permission of department; coreq.: currently teaching full-time in an elementary or early childhood classroom and current involvement with student teacher.

EECE 790. Independent Study in Education. Prereq.: Matriculation in M.S. in Education program. Independent study or special project under supervision of a departmental faculty member. Permission of the Chair required.
EECE 790.1. 1 hr.; 1 cr.
EECE 790.2. 2 hr.; 2 cr.
EECE 790.3. 3 hr.; 3 cr.

WORKSHOP COURSES

EECE 729. Workshop in Early Childhood Education. Open only to teachers of early childhood education. May be repeated for credit if topic is changed. Designed to assist interns and teachers in nursery schools, kindergartens, or primary grades in solving the problems they encounter in their teaching.
EECE 729.2. 2 hr.; 2 cr.
EECE 729.3. 3 hr.; 3 cr.
EECE 729.4. 4 hr.; 4 cr.

EECE 757. Physical Science Workshop. 6 hr. plus conf.; 6 cr. Prereq.: Students must currently be teaching in an elementary school. Topics that have applications to the teaching of science concepts in the elementary school are presented from astronomy, chemistry, geology, meteorology, and physics. To enrich the background of science for elementary school teachers, this workshop will stress basic principles, applications, experiments, field work, and demonstrations.

EECE 758. Environmental Science Workshop for Elementary School Teachers. 6 hr. plus conf.; 6 cr. Topics from science disciplines that have application to the teaching of environmental science concepts in elementary school. Field trips.

EECE 771. Workshop in Early Childhood Education. Coreq.: Elementary school teaching. Designed to assist teachers in elementary school positions in solving classroom problems. May be repeated for credit if topic is changed.
EECE 771.2. 2 hr.; 2 cr.
EECE 771.3. 3 hr.; 3 cr.
EECE 771.4. 4 hr.; 4 cr.

SEYS 711. Workshop in Art Education in the Elementary School. 3 hr.; 2 cr. Prereq.: One course in art education or permission of Chair. May be repeated for credit if topic is changed.

RESEARCH COURSES

EECE 780,781. Seminar in Research in Early Childhood Education. 2 hr. plus conf.; 3 cr. each course. Prereq.: Matriculation in M.S. in Education (Early Child-

hood) program and completion of one Early Childhood Education curriculum course; for EECE 781, EECE 780 during the preceding semester. EECE 780 graded on a Pass/Fail basis only. To insure continuity in their research, students should make every effort to enroll in the section of EECE 781 that is taught by the instructor they had for EECE 780.

EECE 782,783. Seminar in Research in Elementary Education. 2 hr. plus conf.; 3 cr. each course. Prereq.: Matriculation in M.S. in Education (Elementary) program and completion of one Elementary Education curriculum course; for EECE 783, EECE 782 in the preceding semester. Topic to be announced each semester. EECE 782 graded on a Pass/Fail basis only. To insure continuity in their research, students should make every effort to enroll in the section of EECE 783 that is taught by the instructor they had for EECE 782.

EECE 784,785. Scientific Approach to Educational Problems. 2 hr. plus conf.; 3 cr. each course. Prereq.: Matriculation in the M.S. in Education program, and completion of one graduate curriculum course; for EECE 785, EECE 784 during the preceding semester. EECE 784 graded on a Pass/Fail basis only. To insure continuity in their research, students should make every effort to enroll in the section of EECE 785 that is taught by the instructor they had for EECE 784.

BILINGUAL EDUCATION COURSES

EECE 761. Foundations of Bilingual Education. 3 hr.; 3 cr. This course will examine the philosophy, rationale, and historical background of bilingual education. By using information provided by research in the field, participants will discuss the programs, models, and trends while exploring the sociological and political aspects of bilingual education. Special emphasis is placed on the analysis of the research theory of first and second language acquisition as well as on the study of strategies to develop the first language and acquire a second language through the content areas.

EECE 762. Multicultural Perspectives. 3 hr.; 3 cr. This course is concerned with how culture affects thinking and the implications of this for the process of teaching and learning. Participants will review a broad variety of research and theoretical literature in the fields of culture, thinking, and education. They will develop the initial-level skills needed for tapping the vein of cultural, ethnic, and social diversity that exists in the schools and use it to improve education for children. In addition, participants will learn a) how to see all subject matter from several ethnic perspectives, and b) how the frames of reference of various ethnic groups can be infused throughout the curriculum. Traditional elements of culture such as ethnicity, language, and religion will be considered along with less traditional indicators of

cultural diversity such as age, gender, sexual orientation, social class, and physical disabilities.

EECE 763. Teaching of Reading and Language Arts in Bilingual Education.

3 hr.; 3 cr. This course discusses the characteristics of language arts in the mother tongue in the bilingual classroom. The development and evaluation of literacy in the first language and the transfer of skills from one language to another. Participants will: learn and practice different methodologies for teaching language arts; develop skills in analyzing and creating instructional materials to teach in the native language; and elaborate techniques to evaluate existing language arts programs in the area.

EECE 764. Methods, Materials, and Evaluation in Bilingual Education. 3

hr.; 3 cr. This course focuses on the study, analysis, application, and creation of appropriate classroom instructional strategies to teach content areas to language minority students. Following the basic principles of bilingual education theory, participants will be exposed to and will practice different methodologies in teaching mathematics, science, social studies, and other content areas in the first and second language. The course will provide graduate students with techniques for identifying the nature of the evaluation issues related to language and content in the bilingual-multicultural classroom. Participants will also develop skills to examine, evaluate, and create instructional materials to teach language minority children in their mother tongue.

EECE 765. Internship in a Bilingual

Classroom. 3 hr.; 3 cr. This course has been designed to provide the future bilingual teacher with the opportunity to live the experience of teaching in a bilingual setting. It is expected that through the internship, participants will show their professional strengths when teaching limited English proficient students. During the internship, bilingual teachers will demonstrate their ability to communicate and teach effectively in the first and second language of the students.

EECE 791.1. Independent Study in Bilingual Education. 1 hr.; 1 cr. Prereq.:

Permission of Graduate Adviser.

EECE 791.2. Independent Study in Bilingual Education. 2 hr.; 2 cr. Prereq.:

Permission of Graduate Adviser.

EECE 791.3. Independent Study in

Bilingual Education. 3 hr.; 3 cr. Prereq.:
Permission of Graduate Adviser.

SECONDARY EDUCATION & YOUTH SERVICES

Chair: Philip M. Anderson

Dept. Office: Powdermaker 193, 997-5150

The Department of Secondary Education and Youth Services prepares teachers for the middle, junior high, and senior high schools through 1) state-accredited programs, leading to an Advanced Certificate for provisional New York State certification, and 2) the Master of Science degree in Secondary Education for permanent state certification. Each program has a concentration in a specific academic area, as well as education content courses.

Faculty

- Anderson, Philip M., Chair, *Professor*, Ph.D. 1979, University of Wisconsin at Madison: English education, mass media, reading, curriculum development
- Armour-Thomas, Eleanor, *Associate Professor*, Ed.D. 1984, Teachers College, Columbia University: educational psychology, cognitive functioning, human growth and development, instructional psychology
- Artzt, Alice, *Associate Professor*, Ph.D. 1983, New York University: mathematics education
- Bomer, Randy, *Assistant Professor*, Ph.D. 1996, Columbia University: English education, teaching of composition, qualitative research
- Castiglione, Lawrence V., *Professor*, Ph.D. 1965, New York University: educational research and measurement, selection and assessment, evaluation techniques
- Dixon, Douglas, *Assistant Professor*, Ph.D. 1997, University of Georgia: social studies education, educational policy studies.
- Dong, Yu Ren, *Assistant Professor*, Ph.D. 1995, University of Georgia: English as a second language (TESOL), teaching composition
- Gerwin, David, *Assistant Professor*, Ph.D. 1997, Columbia University: social studies education and oral history
- Miller, June K., *Assistant Professor*, Ed.D., 1985, Columbia University: science education and evaluation, education for the gifted and talented
- Moncada-Davidson, Lillian, *Assistant Professor*, Ph.D. 1990, Columbia University: sociology and education
- Zevin, Jack, *Professor*, Ph.D. 1969, University of Michigan: social studies education, curriculum development, education of the gifted and talented, economics education, philosophy in the elementary classroom

Master of Science in Secondary Education Programs

Students enrolling in Master of Science in Secondary Education programs will be assigned an Adviser in the area of certification. The Adviser will meet with the student and review the student's background. Together, they will plan an appropriate program of graduate courses. This approved program is to be filed with the Secondary Education and Youth Services Department during the first semester of attendance. The student may not depart from this approved program without permission of the Adviser. Each academic area has its own course requirements. In general, students take about one-half of their program in the appropriate academic departments and one-half in education.

Admission Requirements

All students must have a Bachelor's degree from an accredited college or university, or the foreign equivalent. They must have completed: 1) a major in the area in which they wish to become certified; 2) one year of college-level study, or its equivalent, in a language other than English; and 3) an undergraduate education sequence (including student teaching or its equivalent). Students should also have a cumulative and departmental average of at least *B* (3.0).

Planning a Program in Secondary Education

Each subject area has its own pattern of instruction. Following is a list of program Coordinators/Advisers in the various areas of certification:

- Art: R. Asher
 English: P. Anderson, R. Bomer
 Family & Consumer Science/Home Economics: L. Malrouit
 General Science: J. Miller
 Mathematics: A. Artzt
 Music: R. Sang
 Physical Education: M. Toner
 Romance Languages: Y. Dong
 Social Studies: D. Dixon, D. Gerwin, J. Zevin

To obtain the Master of Science in Education degree, students must complete 30 graduate credits or more in an approved course of study. Students should consult with an Adviser in the appropriate area before choosing graduate courses. Generally, students pursuing the M.S. in Secondary Education take the following sequence of courses:

Historical, Philosophical, Social Foundations of Education	3
Psychological Foundations Curriculum Methods in Secondary Education	3
Research	3-6
Elective (optional)	3
	15-18

Certification Area (see appropriate department listings in this *Bulletin* for M.S. in Ed. requirements) 15-18

Although the above sample program represents the general pattern of courses within the M.S. in Secondary Education sequence, there may be differences for academic areas. Students are strongly urged to see Advisers as early as possible.

As indicated above, in choosing academic courses, students should read the section of the *Bulletin* appropriate to their certification area and consult with an Adviser in the appropriate department.

Research is an important component of every Master's program. Requirements vary with each certification area. Students should consult with their Advisers concerning research options open and the appropriate semesters in which to undertake research.

Secondary Art Education

Secondary Education requirements for all candidates for an M.S. in Education degree in Art Education include: 3 credits of educational foundations (historical, philosophical, or psychological), 6 credits of workshops and advanced workshops in art education, SEYS 711 (Workshop in Art Education in the Elementary School), SEYS 732 (Seminar in Art Education), and SEYS 774 (Seminar in Research in Art Education). Students are required to take a minimum of 15 credits of studio art. Courses should be selected after consultation with the Fine Arts M.S.E. Graduate Adviser.

Advanced Certificate Program

For students who decide late in their undergraduate careers or after they graduate to pursue certification as teachers, the department offers a sequence of courses, consisting of 18 credits, which leads to an Advanced Certificate. This sequence provides an integrated program that includes the course work and field experience necessary to meet state requirements for provisional certification.

Upon completing the Advanced Certificate program, students will be recommended for provisional certification by the Queens College School of Education, provided they have also completed the required 36 credits in their major area and met all other state requirements for provisional certification. The Advanced Certificate program enables students to begin teaching and gain the professional experience necessary for permanent certification while they complete the course work required for the Master's degree.

Students who earn the Advanced Certificate will automatically become eligible for matriculation in the Master of Science in Education program in their major area. As part of the course work for the Advanced Certificate, students will have taken a 700-level 3-credit course from the

total of 30 credits required for the Master's degree; these credits can be applied toward the credit requirement for the Master's.

Students who complete the course and credit requirements for the Master's program in their area will have met the educational requirements for permanent certification as well as for the degree of Master of Science in Education.

Admission Requirements

Students must hold a bachelor's degree with a major (or the equivalent) in the subject matter area in which they wish to be certified. Students who were not subject area majors but have a minimum of 21 appropriate credits in the content area may be accepted but are required to complete at least 15 content area credits before they are granted the Advanced Certificate and recommended for provisional certification. The courses making up these 15 credits will be selected with the approval of their major Adviser. Where students have more than 21 credits but fewer than 36, they will be required to make up the corresponding number of missing credits. In all cases, the Adviser will ensure that the distribution of the 36 credits is appropriate to the requirements of certification in the student's major area.

Students are also required to have one year of college study, or its equivalent, of a language other than English. They must meet as well the general admissions requirements for graduate study at Queens College, including a cumulative and departmental average of at least *B (3.0)* (see page 16 of this *Bulletin*). Students must maintain a *B (3.0)* average to be retained in the program.

Course Work in Advanced Certificate Program

The Advanced Certificate program comprises the following:

- 1) An education sequence of 18 credits:

SEYS 536. Educational Foundations. 3 hr. plus field work; 3 cr. Prereq.: Permission of the department. Overview of key social, philosophical, and historical foundations of education. Includes field experience component for students not currently teaching.

SEYS 552. Educational Psychology. 3 hr. plus field work in a middle or junior high school; 3 cr. Prereq.: Permission of the department. Overview of developmental and instructional issues in teaching adolescents. Includes college-supervised middle school field experience for students not currently teaching in secondary schools. A supervised clinical experience in middle school or intermediate school is required.

SEYS 562. Seminar in the Teaching of a Specific Subject in the Secondary Schools. 3 hr. plus field work; 3 cr. Prereq.: Permission of the department. Methods and materials of instruction in the specific subject areas. Includes a 30-hour

field experience component for students not currently teaching. A clinical experience at the middle school or high school is required.

SEYS 573. Student Teaching in Secondary Education. 15 hr. a week; 6 cr. Prereq.: Permission of the department. Supervised observation and student teaching at the high school level plus a weekly seminar at the College. Students are required to spend a minimum of 3 hours in a high school per day. Subject to prior approval of the program director, students may do their supervised clinical experience at the high school and student teaching at the middle school.

SEYS 700-Level Elective. 3 hr.; 3 cr. In consultation with their major area Adviser, students will select an education course offered in the Secondary Education Department as part of the registered Master's program in their area. (See courses listed below.) This course will be drawn from one of the following areas: Historical, Philosophical, and Social Foundations; Psychological Foundations; Curriculum and Methods; Research.

- 2) Completion of 36 credits in the student's area of certification.

- 3) Students are required to take two seminars offered through the College's Continuing Education Program: a) The Child Abuse, Identification and Reporting Seminar, and b) The Drug and Alcohol Abuse Seminar.

Upon completion of the Advanced Certificate program (as outlined above in 1, 2, and 3), students will have satisfied the academic requirements for provisional certification as teachers of secondary academic subjects in New York State. Passing of the following New York State Teacher Certification Examinations will complete their qualifications for provisional certification: Liberal Arts and Sciences Test (LAST) and the Secondary version of the Assessment of Teaching Skills-Written (ATS-W). LAST may be taken prior to the beginning of the Advanced Certificate program or at any time thereafter. ATS-W would normally be taken near the end of the program or upon its completion.

When students have fulfilled the above requirements, they will apply through the School of Education for New York State provisional certification.

Following fulfillment of the Advanced Certificate program, students will complete the remaining graduate courses required for the Master of Science in Education degree in Secondary Education, which will lead to permanent certification.

Courses in Secondary Education

HISTORICAL, PHILOSOPHICAL, AND SOCIAL FOUNDATIONS OF EDUCATION

SEYS 701. A History of Ideas in Education. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in edu-

cational foundations (historical, philosophical, or social).

SEYS 702. The History of Education in the United States. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 703. Philosophies of Education. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 704. The Philosophy of Teaching. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 705. School and Community. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 706. Introduction to Comparative Education. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 707. Major Issues in Education. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 708. Seminar in Theoretical Study of Education. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations (historical, philosophical, or social).

SEYS 720. The Education of Immigrants' Children in the United States. 3 hr.; 3 cr. This course will deal with international migration to the United States from an historical perspective, including the development of United States immigration policies and their impact on the socio-cultural adaptation of immigrants to the host society, especially in relation to the education of young people. The course will address issues of discrimination, differential socialization, and multicultural problems. Students are expected to acquire first-hand experience by interacting with a recent immigrant family and following the educational experience of recent immigrant students presently attending a school in the United States.

PSYCHOLOGICAL FOUNDATIONS

SEYS 709. Humanistic Psychology: Educational Applications. 2 hr. plus conf.; 3 cr. Prereq.: Undergraduate work in educational psychology.

SEYS 710. The Psychology of Adolescence. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational psychology.

SEYS 717. Learning Theory in Education. 2 hr. plus conf.; 3 cr. Prereq.: Course

in psychology of the elementary school child, or psychology of the adolescent student, or permission of the department.

SEYS 718. Classroom Management. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational psychology. Principles and practices of classroom management in secondary schools with a focus on dealing with behavior and discipline problems.

SEYS 719. Understanding Group Behavior and Cultural Differences in Schools. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational psychology.

SEYS 738. The Teaching Process. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational psychology. Examination of current literature relating to the analysis of teaching. Study of recent research and other materials on the nature of teaching.

SEYS 762. Teaching Creative and Critical Thinking Skills: Questioning Strategies and Techniques for Secondary and Middle Schools. 3 hr.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational psychology. Training teachers to use instructional techniques that foster students' cognitive skills in asking and answering application, analysis, synthesis, and evaluation questions. Applications of cognitive theories through workshop participation with problem-solving and application of selected questioning strategies. Examination of the current literature concerning contemporary practice in questioning techniques.

SEYS 768. Measurement and Evaluation in Education. 2 hr. plus conf.; 3 cr. Recent trends and practices in measurement and evaluation in the various aspects of the school. Experience will be provided in the construction of evaluative instruments and in the interpretation and use of data.

CURRICULUM AND METHODS COURSES:
SECONDARY EDUCATION

Open to all graduate students in Education who can satisfy the prerequisites. All other students must obtain the permission of the Chair.

SEYS 711. Workshop in Art Education in the Elementary School. 3 hr.; 2 cr. Prereq.: One course in art education or permission of the Chair. May be repeated for credit if topic is changed.

SEYS 712. Workshop in Visual Thinking. 3 hr.; 3 cr. An advanced course in art education with emphasis on the understanding and development of visual thinking and perceptual awareness. This course attempts to increase the student's ability to observe, remember, visualize, analyze, and discuss visual phenomena and art. Various media and techniques will be utilized.

SEYS 724, 725, 727. Workshops in Middle and High School Art Education. 3 hr.; 3 cr. Required of all candidates for the M.S. in Education (Art Education) degree. Selection and numbers of workshops taken by candidates to be determined in consultation with art education adviser. Open as elective to other matriculated students with departmental permission. Teaching methods utilizing classroom materials and techniques applied to specific areas of art education instruction. Ways of working with a variety of age groups and students of varying abilities in a range of instructional settings.

SEYS 724. Classroom Methods in Crafts. 3 hr.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching art in the schools.

SEYS 725. Classroom Methods in Printmaking. 3 hr.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching art in the schools.

SEYS 727. Classroom Methods in Computer Art. 3 hr.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching art in the schools.

SEYS 732. Seminar in Art Education. 3 hr.; 3 cr. Prereq.: Completion of the undergraduate sequence in art education or experience in teaching secondary school art.

SEYS 740. The Improvement of Reading in the Secondary School. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching English in the secondary schools; coreq.: Classroom teaching in a secondary school.

SEYS 741. Literature for Adolescents. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching English in the secondary schools; coreq.: Classroom teaching in a secondary school.

SEYS 743. Foreign Languages in the Secondary School. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching foreign languages in the secondary schools.

SEYS 744. Methods and Materials in Teaching English to Speakers of Other Languages in the Content Areas. 3 hr.; 3 cr. Prereq.: Permission of the department. This course will provide training in the teaching of speaking, reading, writing, and comprehension in English to speakers of other languages at all grade levels. The course will include materials and techniques for teaching English to speakers of other languages through mathematics, science, and social studies.

SEYS 750. Mathematics in the Junior High or Middle School. 2 hr. plus conf.; 3 cr. Prereq.: Undergraduate course in methods of teaching mathematics, and

permission of Chair.

SEYS 751. Mathematics in the High School. 2 hr. plus conf.; 3 cr. Prereq.: Undergraduate course in methods of teaching mathematics, and permission of Chair.

SEYS 752. Problems in Teaching General Science in the Junior High School. 2 hr. plus conf.; 3 cr. Prereq.: Appropriate basic courses in science and methods of teaching science in the secondary school, or secondary school science teaching experience.

SEYS 760. Curriculum Innovations in the Social Studies. 2 hr. plus conf.; 3 cr. Prereq.: 30 credits in the social sciences (undergraduate and/or graduate) and basic undergraduate or graduate course in curriculum and methods of teaching social studies in secondary schools.

SEYS 761. Law and the Social Studies. 2 hr. plus conf.; 3 cr. Prereq.: Completion of an undergraduate sequence in social studies education.

SEYS 763. Mass Media in School and Society. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching English in secondary schools. An examination of the media of mass communication from the point of view of the teacher. The focus of the course is on the improvement of instruction through a critical-evaluative study of the bases, processes, techniques, and probable effects of mass media on school and society.

SEYS 764. The Secondary School Curriculum: Current Theories and Controversies. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate courses in secondary school curriculum and methods and student teaching or teaching experience.

SEYS 765. Teaching the Slow Learner in Secondary Schools. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate courses in secondary school curriculum and methods, or secondary school teaching experience.

SEYS 766. Workshop in Junior High School Education. Prereq.: Basic undergraduate or graduate courses in curriculum and methods of teaching a specific subject in secondary schools; coreq.: Secondary school teaching. May be repeated for credit if topic is changed.
SEYS 766.2. 2 hr.; 2 cr.
SEYS 766.3. 3 hr.; 3 cr.
SEYS 766.4. 4 hr.; 4 cr.

SEYS 767. Workshop in Secondary Education. Prereq.: Basic undergraduate or graduate courses in curriculum and methods of teaching a specific subject in secondary schools; coreq.: Secondary school teaching. May be repeated for credit if topic is changed.
SEYS 767.2. 2 hr.; 2 cr.
SEYS 767.3. 3 hr.; 3 cr.
SEYS 767.4. 4 hr.; 4 cr.

SEYS 790. Independent Study in Secondary Education. Prereq.: Matriculation in the Master of Science in Secondary Education Program. Permission of the Chair is required. Independent study or special project under the supervision of a departmental faculty member. This course may be repeated for credit if the topic is changed for a maximum of 6 credits.

SEYS 790.1. 1 hr.; 1 cr.
SEYS 790.2. 2 hr.; 2 cr.
SEYS 790.3. 3 hr.; 3 cr.
SEYS 790.4. 4 hr.; 4 cr.
SEYS 790.5. 5 hr.; 5 cr.
SEYS 790.6. 6 hr.; 6 cr.

RESEARCH COURSES

Research courses open to Master of Science in Secondary Education candidates with permission of appropriate adviser.

SEYS 769,770. Scientific Approach to Educational Problems. 2 hr.; 3 cr. each course. Prereq.: For SEYS 769, matriculation in the M.S. in Education program, completion of one graduate curriculum course, and completion of 20 graduate credits; for SEYS 770, SEYS 769 during the preceding semester.

SEYS 771,772. Seminar in Research in Educational Foundations. 2 hr. plus conf.; 3 cr. each course. Prereq.: For SEYS 771, matriculation in M.S. in Education program, and completion of two appropriate graduate courses in philosophical, historical, or comparative education; for SEYS 772. SEYS 771 in preceding semester. Examination and evaluation of research in educational foundations: philosophy, history, comparative education. Topics to be announced each year.

SEYS 773,774. Seminar in Research in Art Education. 2 hr. plus conf.; 3 cr. each course. Prereq.: Matriculation in the M.S. in Education (Art Education) program, completion of 20 graduate credits, including SEYS 732. SEYS 773 prepares students for research projects. It is an elective and does not satisfy the research requirement. In SEYS 774, students complete the required research project.

SEYS 775,776. Seminar in Research in Mathematics Education. 2 hr. plus conf.; 3 cr. each course. Prereq.: For SEYS 775, matriculation in M.S. in Education (Mathematics) program, 20 credits in graduate program, 30 credits in mathematics (undergraduate and graduate), and SEYS 750 and 751; for SEYS 776, SEYS 775 in the preceding semester.††

SEYS 777,778. Seminar in Research in Science Education. 2 hr. plus conf.; 3 cr. each course. Prereq.: For SEYS 777, matriculation in M.S. in Education (Science) program, completion of 20 graduate credits, and 30 credits (undergraduate and graduate) in general science; for SEYS 778, SEYS 777 during preceding semester.

SEYS 779,780. Seminar in Research in Psychological Foundations. 2 hr. plus

conf.; 3 cr. each course. Prereq.: For SEYS 779, matriculation in M.S. in Education program and two courses in Psychological Foundations area; for SEYS 780, SEYS 779 during the preceding semester.††

SEYS 781,782. Seminar in Research in Language Arts. 2 hr. plus conf.; 3 cr. each course. Prereq.: For SEYS 781, matriculation in M.S. in Education (English) program, completion of 20 graduate credits, and 30 credits in English (undergraduate and graduate); for SEYS 782, SEYS 781 in the preceding semester.††

SEYS 783,784. Seminar in Research in the Teaching of Social Studies. 2 hr. plus conf.; 3 cr. each course. Prereq.: For SEYS 783, matriculation in the M.S. in Education (Social Studies) program, completion of 20 graduate credits, and 30 credits (undergraduate and graduate) in social studies; for SEYS 784, SEYS 783 during the preceding semester.

SEYS 785. Seminar in Research in Foreign Language Education. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in M.S. in Education program and completion of 20 graduate credits. Completion of SEYS 743 or an equivalent course-presented for transfer credit is a degree requirement and a strongly recommended prerequisite for this course.

SEYS 787. Seminar in Family and Consumer Sciences Research. 3 hr.; 3 cr. Prereq.: Completion of no fewer than 6 graduate credits nor more than 12 graduate credits; FNES 636, Writing for the Professional in FNES, and FNES 710, Application of Quantitative Methods. Theories, methods, and tools applied to research and proposal writing. Development of a research proposal.

RESEARCH PROJECT

When the research project has been approved by the Research Adviser, the student must arrange for binding of the approved manuscript. A \$15 binding fee, for which a receipt will be issued, is payable at the Bursar's window. The receipt and two copies of the manuscript must be taken to the Catalogue Department, Rosenthal Library, Room 201. A bound copy is retained by the Library and becomes part of its collection. A second bound copy is for the department. A third copy may be submitted, which, when bound, will become the property of the student.

††-May be offered; see Class Schedule

EDUCATIONAL & COMMUNITY PROGRAMS

Chair: David S. Goh

Graduate Coordinators: Reading Education: H. Margolis; School Psychology: M. Fish; Administration and Supervision: K. Dunn; Special Education: F. Brown; Counselor Education: L. Schwartz

Dept. Office: Powdermaker 051, 997-5250, 5251

The Department of Educational and Community Programs prepares students for leadership positions in school administration and supervision, school psychology, and counselor education. In addition, the department prepares students to become specialists in special education and in reading. An undergraduate minor in human relations is also offered. Graduates have found employment in schools, community agencies, industry, and other institutions dealing with human services.

All students must meet appropriate standards in scholarship, communication skills, character, interpersonal relations, and social judgment to continue in any program. Students may be subject to review by a departmental committee for an assessment of the above.

Preregistration

Preregistration is conducted by each program in the department. Students must consult their Advisers before registering, and should contact departmental secretaries for the dates of preregistration.

Department-wide Courses

ECP 749. Independent Study in Education. Prereq.: Matriculation in M.S. in Ed. Program or in an ECP Advanced Certificate Program in Ed. Independent study or special project under supervision of a departmental faculty member. Permission of the Chair required. No more than 3 credits of Independent Study may be taken. This course may be given Pass/Fail for students in the Advanced Certificate Program in Education, with permission of the Chair.

ECP 749.1. 1 cr.
ECP 749.2. 2 cr.
ECP 749.3. 3 cr.

ECP 790. Workshop in Current Issues in Education and Human Services.

Prereq.: Permission of department. Course content will vary from year to year and will cover a range of issues. May be repeated for credit if topic is changed.

ECP 790.2. 2 hr.; 2 cr.
ECP 790.3. 3 hr.; 3 cr.
ECP 790.4. 4 hr.; 4 cr.

Reading Education

Coordinator: Howard Margolis

Reading Education is a 33-credit program designed to prepare teachers who will provide necessary instruction in reading for elementary and secondary school students. This program is approved by the New York State Education Department and will enable graduates to qualify for State certification as K-12 reading teachers. Additional information is available from department faculty.

Applications for the Reading Program are considered for Fall admission only.

Faculty

Margolis, Howard, Coordinator, Professor, Ed.D. 1974, Hofstra University: diagnosis and remediation of learning difficulties, interdisciplinary team functioning, motivation theory, parent involvement in program planning

Hittleman, Daniel R., Professor, Ed.D. 1971, Hofstra University: research supervision, curriculum, and instructional strategies

With specialists from the field.

Requirements for Admission

In addition to meeting the general requirements for admission to the Master of Science in Education degree program, the student may be required to take the Miller Analogies Test and appear for a personal interview. Admissions are limited, and a

competitive selection system is used in which the total record of the applicant is appraised and evaluated. (Requirements for the degree are listed below.)

Courses in Reading Education

ECPRE 781. Improving the Teaching of Reading I. 3 hr.; 3 cr. Advanced course in the theory and practice of reading instruction. Major areas of inquiry include the psychological bases of the reading process, the acquisition of reading skills (beginning reading), and reading comprehension. Specific teaching and assessment techniques will be presented.

ECPRE 782. Improving the Teaching of Reading II. 3 hr.; 3 cr. Prereq.: ECPRE 781. Theory and practice of teaching reading comprehension in literature and subject matter areas. Specific teaching techniques will be explored. Relevant assessment materials and techniques will be presented.

ECPRE 783. Diagnostic Teaching of Reading I. 3 hr.; 3 cr. Prereq.: ECPRE 781, 782. This course examines the reasons for reading difficulty and provides strategies for the diagnosis and remediation of word recognition and comprehension problems. The administration and interpretation of selected reading tests is an integral part of the course. Emphasis is on mild reading problems and corrective approaches.

ECPRE 784. Diagnostic Teaching of Reading II. 3 hr.; 3 cr. Prereq.: ECPRE 783. A continuation of ECPRE 783, 784

Requirements for the Reading Education Degree

The required courses below must be taken in the sequence indicated.

	<i>credits</i>
<i>Semester I¹</i>	
ECPRE 781 Improving the Teaching of Reading I	3
Elective	3
<i>Semester II¹</i>	
ECPRE 782 Improving the Teaching of Reading II	3
Elective	3
<i>Semester III</i>	
ECPRE 783 Diagnostic Teaching of Reading I	3
ECPRE 789 Consultation in Reading	3
<i>Semester IV</i>	
ECPRE 784 Diagnostic Teaching of Reading II	3
<i>Semester V</i>	
ECPRE 787 Diagnosis and Remediation in Reading I	3
ECPRE 785 Seminar in Research in Reading I	3
<i>Semester VI</i>	
ECPRE 788 Diagnosis and Remediation in Reading II	3
ECPRE 786 Seminar in Research in Reading II	3

¹Students are required to take 6 credits of electives during Semesters I and II and/or the first two Summer Sessions. Unless students majored or minored in special education at the undergraduate level, they are encouraged to take their electives in this area.

emphasizes the diagnosis and remediation of students with severe reading disabilities. Criterion-referenced and curriculum-based assessment is examined along with strategies for structuring classroom situations to address the needs of reading disabled students.

ECPRE 785. Seminar in Research in Reading I. 3 hr.; 3 cr. Prereq. or coreq.:

ECPRE 787. Examination and evaluation of the research literature in reading. Introduction to related statistical procedures, data collection, and analysis.

ECPRE 786. Seminar in Research in Reading II. 3 hr.; 3 cr. Prereq. or coreq.:

ECPRE 788. Examination and evaluation of the research literature in reading. Introduction to related statistical procedures, data collection, and analysis.

ECPRE 787. Diagnosis and Remediation in Reading I. 3 hr.; 3 cr. Prereq.:

ECPRE 784; coreq.: ECPRE 785. Designed to help students develop skills in exploring causes of special difficulties in reading and in planning and carrying out appropriate remedial procedures. This is a supervised practicum in which students design and implement remedial programs for children experiencing reading difficulties.

ECPRE 788. Diagnosis and Remediation in Reading II. 3 hr.; 3 cr. Prereq.:

ECPRE 787; coreq.: ECPRE 786. An advanced course involving practice both in diagnostic testing and in planning, implementing, and evaluating learning activities for children with special difficulties in reading. A supervised practicum with children is provided.

ECPRE 789. Consultation in Reading. 3 hr.; 3 cr. Prereq.: ECPRE 782. This

course focuses on assisting reading personnel to use their knowledge of developmental and remedial reading to help teachers, parents, Individualized Education Program teams, administrators, and other relevant personnel improve educational programs. It focuses on definitions of consultation, characteristics of effective consultants, models of consultation, and consultation strategies.

ECPRE 799. Supervised Independent Study of Problems and Issues in Reading. Prereq.: Permission of a program

faculty member. Course content covers a range of issues of current importance in reading. May be repeated for credit if topic is changed.

ECPRE 799.1. 1 hr.; 1 cr.

ECPRE 799.2. 2 hr.; 2 cr.

ECPRE 799.3. 3 hr.; 3 cr.

School Psychology

Coordinator: Marian C. Fish

Certificate and Master's Degree Program in School Psychology

The Graduate Program in School Psychology at Queens College is cast in the scien-

tist-practitioner model. This model seeks to integrate theoretical knowledge and applied skills in all coursework as well as in practica and internships. The goal is to prepare psychologists with high levels of ethical and professional competencies in order to provide sound psychological services in the school and other educational settings.

The Graduate Program in School Psychology is a 60-credit specialist level program that provides the skills necessary for the professional preparation of school psychologists. It meets the academic and internship requirements for New York State Certification in School Psychology and is approved as a training institution in School Psychology by the New York State Department of Education and the National Association of School Psychologists (NASP). The program leads to a qualifying Certificate in School Psychology and a degree of Master of Science in Education. It can be completed in three years of study, including a one-year, full-time internship, or on a part-time basis, with three years of part-time study and a final year of full-time internship.

The curriculum is sequenced with the first year focused on theoretical foundations and skill development, followed by more experiential components in the later years. The sequence is designed to introduce complex concepts slowly, building upon the basics. Coursework covers assessment, intervention, evaluation, professional practice, and psychological and educational foundations. Field experiences and practica with close supervision of skills are followed by an internship, where students are given the opportunity to integrate these experiences in a practical, professional environment, both in school and clinical settings. All students follow the same basic sequence of coursework, with program modifications made to meet individual needs.

A graduate of the School Psychology Program has expertise in both psychology and education, as well as a knowledge of the contributions of related disciplines. Our graduates work with regular education as well as special education students, teachers, administrators, parents, and with others in the community to develop greater understanding of all children and to contribute to constructive change in the home and in the classroom. Particular attention is given to serving the needs of children of diverse cultural and linguistic backgrounds. As a member of the school faculty, the school psychologist shares with faculty members and other professionals the responsibility for delivering services which maximize learning and personal growth in the child. The role of the school psychologist as a member of a team and as a consultant is addressed in training.

Program Objectives

Objectives of the program are to provide students with:

1. Broadly based knowledge of psychological foundations including learning, development, and biological, social, and cultural bases of behavior.

2. Knowledge of the role and functions of the school psychologist in schools and related settings.

3. Ability to work effectively with students in both regular and special education, at different ages (preschool and conventional school age), and with diverse cultural backgrounds.

4. Skills in traditional and alternative assessment procedures to identify effectively the needs of students and to evaluate the learning environment.

5. Ability to function as a consultant both at the individual and systems levels to enhance the learning and development of children, adolescents, and young adults.

6. Competency in a variety of prevention, pre-referral intervention, and remedial/counseling/therapeutic techniques for dealing with school-related difficulties.

7. Competency in designing and carrying out research and program evaluation.

8. Commitment to the professional standards and ethics related to the practice of school psychology.

Bilingual Specialization in School Psychology

Students with bilingual proficiency may wish to complete a Specialization in Bilingual School Psychology, leading to a certificate with a bilingual extension. The Specialization in Bilingual School Psychology requires 66 credits: the 60-credit school psychology sequence and two additional courses (3 credits each) emphasizing bilingual and multicultural issues. Students will also be placed in bilingual internship sites with bilingual supervisors. Students in the Bilingual Specialization will need to demonstrate proficiency in a second language through an oral interview and a written essay.

Integrated Graduate Center - Queens College School Psychology Program

Students may apply to the Integrated Graduate Center - Queens College School Psychology Program leading to a Ph.D. in Educational Psychology: School Psychology, and to New York State Certification in School Psychology. Application is made through the Graduate Center Ph.D. Program in Educational Psychology.

Faculty

Fish, Marian C., Coordinator. Professor Ph.D. 1974, Teachers College, 'Columbia University: family systems theory, family-school relations, interventions
Angrilli, Albert, *Professor Emeritus and Adjunct Professor*, Ph.D. 1958, New York University: Diplomate in School Psychology ABPP: clinical and school psychology, psychotherapy, hypnotherapy
Goh, David S., *Professor*, Ph.D. 1973,

EDUCATIONAL & COMMUNITY PROGRAMS

University of Wisconsin at Madison: school psychology, measurement, and research design

Lopez, Emilia, *Associate Professor*, Ph.D. 1989, Fordham University: school psychology, consultation, linguistically and culturally diverse students
 Ross, Roslyn P., *Associate Professor*, Ph.D. 1966, New York University: assessment, counseling, supervision, personality theory, child development

Requirements for Admission

Applicants for admission to the graduate program in School Psychology are required to meet the general requirements for matriculation for the Master of Science degree in Education. Matriculation for this degree is limited to graduates of approved colleges who have had adequate preparation in subject matter courses and in professional courses. Candidates for matriculation are expected to meet the standards with respect to residence, citizenship, health, character, and personality set forth in the School of Education section of this *Bulletin*. Candidates will be accepted for admission only once each year to begin the program in the Fall semester. Inquiries should be directed to:

Prof. Marian C. Fish
 Grad. Program in School Psychology
 Educational and Community Programs
 Queens College, CUNY
 Flushing, NY 11367-1597

Special Requirements

The prerequisite courses for the School Psychology Program are listed below:

A. All candidates are required to have had a course in each of the following areas of psychology and education:

General Psychology
 Statistics in Psychology and Education
 Psychological Testing and Measurement
 Experimental Psychology
 Abnormal Psychology
 Physiological Psychology
 Educational Psychology
 Developmental Psychology
 Principles & Problems of Education
 Curriculum & Methods of Teaching Reading

B. All candidates must have completed a satisfactory undergraduate program of study in a relevant major.

Selection Procedures

Applicants will be admitted through selection procedures that include the following:

1. A review of undergraduate records with a minimum cumulative average of 3.25 and an average of 3.25 in all courses in psychology and education.
2. Personal interviews.
3. Written recommendations from three undergraduate or graduate instructors in psychology and/or education.

All reference letters should be on the instructor's stationery and mailed directly to Prof. Marian C. Fish.

School Psychology Degree Requirements for the 1997-98 Academic Year (Three- and Four-Year Programs)

The content and sequence of the three-year program are as follows:

	<i>credits</i>
<i>Fall - first year</i>	
ECPSP 860 Human Development	3
ECPSP 772 Theory and Practice in Assessment of Intelligence & Cognitive Functioning I	3
ECPSP 770 Behavioral Assessment and Intervention	3
<i>Spring - first year</i>	
ECPSP 862 Developmental Psychopathology	3
ECPSP 773 Theory and Practice in Assessment of Intelligence & Cognitive Functioning II	3
ECPSP 774 Theory and Practice of Personality Evaluation I	3
<i>Fall -second year</i>	
ECPSP 775 Theory and Practice of Personality Evaluation II	3
ECPSP 863 Exceptionality of Human Development	3
ECPSP 778 Counseling Techniques for School Psychologists	3
<i>Spring - second year</i>	
ECPSP 777 Practicum in School Psychology	3
ECPSP 865 Learning and Instructional Strategies	3
ECPSP 867 Consultation in School Psychology	3
<i>Fall -third year</i>	
ECPSP 771 Professional Issues in School Psychology	3
ECPSP 768 Internship in School Psychology I	6
ECPSP 764 Introduction to Research in School Psychology	3
<i>Spring - third year</i>	
ECPSP 769 Internship in School Psychology II	6
ECPSP 776 Case Study Procedures	3
ECPSP 864 Research Design and Data Analysis in School Psychology	3

The content and sequence of the four-year part-time program are as follows:

	<i>credits</i>
<i>Fall-first year</i>	
ECPSP 860 Human Development	3
ECPSP 772 Theory and Practice in Assessment of Intelligence & Cognitive Functioning I	3
<i>Spring -first year</i>	
ECPSP 862 Developmental Psychopathology	3
ECPSP 773 Theory and Practice in Assessment of Intelligence & Cognitive Functioning II	3
<i>Fall - second year</i>	
ECPSP 770 Behavioral Assessment and Intervention	3
ECPSP 863 Exceptionality of Human Development	3
<i>Spring - second year</i>	
ECPSP 865 Learning and Instructional Strategies	3
ECPSP 774 Theory and Practice of Personality Evaluation I	3
<i>Fall -third year</i>	
ECPSP 775 Theory and Practice of Personality Evaluation II	3
ECPSP 778 Counseling Techniques for School Psychologists	3
<i>Spring - third year</i>	
ECPSP 777 Practicum in School Psychology	3
ECPSP 867 Consultation in School Psychology	3
<i>Fall -fourth year</i>	
ECPSP 771 Professional Issues in School Psychology	3
ECPSP 768 Internship in School Psychology I	6
ECPSP 764 Introduction to Research in School Psychology	3
<i>Spring-fourth year</i>	
ECPSP 769 Internship in School Psychology II	6
ECPSP 776 Case Study Procedures	3
ECPSP 864 Research Design and Data Analysis in School Psychology	3

School Psychology Degree Requirements for the 1998-99 Academic Year (Three- and Four-Year Programs)

The content and sequence of the three-year program are as follows:

Fall -first year

ECPS 860 Human Development	3
ECPS 772 Theory and Practice in Assessment of Intelligence & Cognitive Functioning I	4
ECPS 863 Exceptionality in Human Development	3
ECPS 779 Multicultural Issues in School Psychology	3

Spring -first year

ECPS 862 Developmental Psychopathology	3
ECPS 773 Theory and Practice in Assessment of Intelligence & Cognitive Functioning II	4
ECPS 865 Learning & Instructional Strategies	3
ECPS 774 Theory and Practice of Personality Evaluation I	3

Fall - second year

ECPS 770 Behavioral Assessment and Intervention	3
ECPS 775 Theory and Practice of Personality Evaluation II	3
ECPS 778 Counseling Techniques for School Psychologists	3

Spring - second year

ECPS 777 Practicum in School Psychology	4
ECPS 867 Consultation in School Psychology	4
ECPS 868 Advanced Counseling Practicum	2

Fall -third year

ECPS 771 Professional Issues in School Psychology	3
ECPS 768 Internship in School Psychology I	3
ECPS 764 Introduction to Research in School Psychology	3

Spring - third year

ECPS 864 Research Design and Data Analysis in School Psychology	3
ECPS 769 Internship in School Psychology II	3

The content and sequence of the four year part-time program are as follows:

Fall -first year

ECPS 860 Human Development	3
ECPS 772 Theory and Practice in Assessment of Intelligence & Cognitive Functioning I	4
ECPS 779 Multicultural Issues in School Psychology	3

Spring -first year

ECPS 862 Developmental Psychopathology	3
ECPS 773 Theory and Practice in Assessment of Intelligence & Cognitive Functioning II	4

Fall - second year

ECPS 770 Behavioral Assessment and Intervention	3
ECPS 863 Exceptionality in Human Development	3

Spring - second year

ECPS 865 Learning & Instructional Strategies	3
ECPS 774 Theory and Practice of Personality Evaluation I	3

Fall -third year

ECPS 775 Theory and Practice of Personality Evaluation II	3
ECPS 778 Counseling Techniques for School Psychologists	3

Spring - third year

ECPS 777 Practicum in School Psychology	4
ECPS 867 Consultation in School Psychology	4
ECPS 868 Advanced Counseling Practicum	2

Fall -fourth year

ECPS 771 Professional Issues in School Psychology	3
ECPS 768 Internship in School Psychology I	3
ECPS 764 Introduction to Research in School Psychology	3

Spring -fourth year

ECPS 864 Research Design and Data Analysis in School Psychology	3
ECPS 769 Internship in School Psychology II	3

Students in the Specialization in Bilingual School Psychology must also present fluency in English and a second language. Fluency is determined through a bilingual interview and a writing sample in English and the second language. Inquiries regarding the Bilingual Specialization should be directed to:

Dr. Emilia Lopez, Project Director
 Bilingual/Multicultural Services in
 School Psychology
 Grad. Program in School Psychology
 Department of Educational and
 Community Programs
 Queens College, CUNY
 Flushing, New York 11367-1597

Requirements for the Certificate and Master's Degree

A. The program for each student will be modified individually depending on the student's background and preparation. The program is a structured sequence that may be completed in three years or four years, part-time. The final year in both cases requires full-time study. A grade-point average of 3.0 must be maintained.

B. Applicants with Master's degrees in relevant areas may apply for the special Certificate Program. This program is an individually designed sequence that will require anywhere from 30 to 60 credits.

Other Requirements

New York State law mandates that all students provide documentation that they have completed seminars in a) Child Abuse Identification and Reporting and b) Alcohol and Drug Abuse before receiving certification.

Content and Sequence of the Program

The program will consist of the courses listed in the charts on page 64, which are to be taken in the order shown for the three- and four-year sequences. (Requirements as of September 1998 are shown on the chart to the left.) If a student has achieved a suitable level of competence in a particular course area through prior study, he/she may substitute an approved elective with permission of the program coordinator.

Internship Courses

Please *note*: It is necessary for internship students to purchase malpractice insurance, available at low cost through the American Psychological Association or the National Association of School Psychologists. Student membership in either professional organization is required to be eligible for malpractice insurance.

Grades for Practica

Students who do not receive B (3.0) or better in practica (ECPS 772, 773, 774, 775, 776, 777, 778, 867) may not proceed to subsequent practica and internships except with permission of the faculty.

Student Review

There will be a yearly review of students to decide whether they are progressing satisfactorily. Continuance in the program is based on scholarship as well as communication, interpersonal skills, and social judgment.

Courses in School Psychology

ECPSP 764. Introduction to Research in School Psychology. 3 hr.; 3 cr. Prereq.: Matriculation in the School Psychology Program. This course focuses on the study, understanding, and evaluation of basic research design and methodology in school psychology and the interpretation of research. This is the first of a two-course sequence (see ECPSP 864).

ECPSP 766. Field Work in School Psychology I. 3 cr. Prereq.: Written permission of the department. Students start in October and spend 2 days a week in a school placement. They follow the academic calendar of the school in which they are placed. Graded on a Pass/Fail basis only. Fall

ECPSP 767. Field Work in School Psychology II. 3 cr. Prereq.: ECPSP 766 and written permission of the department. Students spend 2 days a week in a school placement. They follow the academic calendar of the school in which they are placed until the school year ends. Graded on a Pass/Fail basis only. Spring

ECPSP 768. Internship in School Psychology I. 6 hr.; 6 cr. (As of Fall '98: 3 hr.; 3 cr.) Prereq.: Permission of department; coreq.: ECPSP 771. Students spend 5 days a week in internship settings with a minimum of 600 hours a year in a school setting. Other settings include mental health agencies and clinics. They begin in September and follow school and agency calendars. Taken in the last year of study. Graded on a Pass/Fail basis only. Fall

ECPSP 769. Internship in School Psychology II. 6 hr.; 6 cr. (As of Fall '98: 3 hr.; 3 cr.) Prereq.: Permission of department and ECPSP 768; coreq.: ECPSP 776. Students spend 5 days a week in internship settings with a minimum of 600 hours a year in a school setting. Other settings include mental health agencies and clinics. Students follow school and agency calendars and remain in their placements through June. Taken in the last year of study. Graded on a Pass/Fail basis only. Spring

ECPSP 770. Behavioral Assessment and Intervention. 3 hr.; 3 cr. This course is designed to familiarize students with principles and procedures of behavioral assessment and intervention. Major emphases are placed on the observation, recording, analysis, and modification of children's behaviors in school and other related settings. Applications of behavioral techniques in treating different disorders are also covered. In addition, students are prepared to serve as behavioral consultants

to school and mental health personnel. Fall

ECPSP 771. Professional Issues in School Psychology. 3 hr.; 3 cr. Coreq.: ECPSP 768. This is an integrative seminar that accompanies the first semester of internship. Prepares students for their professional role in the schools by covering topics that include ethical and legal behavior, models of service delivery, effective schooling practices, and current issues. The relationship of the school psychologist to other school personnel, families, and community agencies is emphasized. Fall

ECPSP 772,773. Theory and Practice in Assessment of Intelligence and Cognitive Functioning I, II. 3 hr.; 3 cr. each course. (As of Fall '98: 4 hr.; 4 cr. each course.) Prereq. for 772: a course in psychological testing and matriculation in the graduate program in School Psychology or permission of the department; coreq. for 772: ECPSP 860. Prereq. for 773: ECPSP 772; coreq. for 773: ECPSP 862. A combined laboratory and didactic experience designed to develop the student's competency in the administration and interpretation of individual and group tests of intelligence, perception, language, and neuro-developmental functioning and in communicating test findings to school personnel. Responsibilities involved in the use of tests in psychologist-client relationships in general are considered. 772 - Fall; 773 - Spring

ECPSP 774,775. Theory and Practice of Personality Evaluation I, II. 3 hr.; 3 cr. Prereq.: Matriculation in the graduate program in School Psychology or permission of department; ECPSP 860, 772. A combined laboratory and didactic experience designed to develop the student's competency in the use of projective techniques in personality evaluation and assessment. The course is also designed to increase skill in written reporting of psychodiagnostic findings. 774 - Spring; 775 - Fall

ECPSP 776. Case Study Procedures. 3 hr.; 3 cr. Prereq.: ECPSP 772, 773, 774, 775. Sample case studies are presented. Students are shown how to organize and integrate diverse materials into a comprehensive understanding of the sample child. The case materials include psychological, psychiatric, educational, social work, and medical records of children who present problems of deviant development, learning and/or social, emotional maladaptation. The course includes interviewing techniques for obtaining a psychosocial history. Referral procedures are also introduced. Students learn to report and communicate psychodiagnostic findings to clients, parents, educators, and clinical agencies. Must be taken concurrently with internship. Spring

ECPSP 777. Practicum in School Psychology. 3 hr.; 3 cr. (As of Fall '98: 4 hr.; 4 cr.) Prereq.: ECPSP 772, 773. Students work under supervision with youngsters who have learning, behavioral, or other

school related problems. Emphasis is placed on linking formal and informal assessment strategies with interventions using a problem solving approach. Students are required to spend a minimum of one day a week in a school setting. Spring

ECPSP 778. Counseling Techniques for School Psychologists. 3 hr.; 3 cr. Prereq.: Matriculation in the graduate program in School Psychology. Principles and techniques of counseling and psychotherapy, with particular emphasis on intervention strategies that are being used in the schools. Practical workshop and participation in counseling methods Fall

ECPSP 779. Multicultural Issues in School Psychology. 3 hr.; 3 cr. This course provides an introduction to and overview of cultural and social influences that impact on individuals' behaviors, attitudes, and cognitive and learning styles. Ethnicity, socioeconomic-class, and gender issues in school psychology are presented. The course also provides students with knowledge of cultural characteristics of African Americans, Hispanic Americans, Asian Americans, and Native Americans. In addition, problems in and approaches to multicultural assessment, cross-cultural consultation, and intervention with culturally diverse children and youth are discussed.

ECPSP 780. Educational and Psychological Tests and Measurements. 3 hr.; 3 cr. A fundamental course in testing and measurement in education and psychology. Areas covered include psychometric properties of tests, technical and methodological principles in test development, social and ethical implications of testing, and issues in the use and interpretation of tests. Course is limited to students in the School Psychology Program. All others must get the permission of the program. Credits for this course will not apply toward a School Psychology certificate.

ECPSP 860. Human Development. 3 hr.; 3 cr. The course of development through the lifespan is studied as the interplay between individual predispositions (genetic and biological factors, past history, current stage) and forces in the environment (other individuals, social factors, cultural tradition, training methods). Among the specific topics examined from an interactionist point of view are motivation and adaptation, the role of anxiety and other affects in regulating behavior, sense of self, attachment, and self-esteem regulation. Relevant infant and child research is reviewed. Fall

ECPSP 861,866. Seminar in Special Issues. 3 hr.; 3 cr. each course. These courses will be devoted to special topics of current interest to school psychologists. The subject matter will change as needs arise. Topics to be addressed will include interventions, behavioral theory and research, cognitive theory and research, consultation models, legal and ethical issues, etc. 861 -Fall; 866 - Spring

ECSP 862. Developmental Psychopathology. 3 hr.; 3 cr. Prereq.: Matriculation in the graduate program in School Psychology or permission of the department. This course is designed to familiarize students with deviant behavioral patterns occurring from infancy through adolescence. Social, biological, and emotional factors in the origin of these pathological conditions will be studied. Attention will be paid to psychopharmacological treatment as well as other approaches in effecting change. Spring

ECSP 863. Exceptionality of Human Development. 3 hr.; 3 cr. Prereq.: Matriculation in School Psychology Program or permission of the department; ECSP 862. Survey of types of childhood exceptionality. The concepts of health, adaptive function, and developmental crisis are reexamined in the light of various handicapping conditions. Examination of legal issues relating to handicapping conditions including current practices and procedures for management. Fall

ECSP 864. Research Design and Data Analysis in School Psychology. 3 hr.; 3 cr. Prereq.: ECSP 764 and matriculation in the School Psychology Program. An advanced course concerned with problems, procedures, and accepted practices in conducting research. A research project will be required of students. Computerized statistical techniques commonly used in analyzing and interpreting research data are covered. Spring

ECSP 865. Learning and Instructional Strategies. 3 hr.; 3 cr. Prereq.: Matriculation in the graduate program in School Psychology or permission of the department. This course focuses on theoretical approaches to human learning and explores factors that influence the learning process, including developmental issues, motivational levels, and cultural/linguistic background. Theoretical models for instructional and curricular design are discussed for regular as well as special education students. Emphasis is placed on applying learning and instructional approaches to children of different ages and backgrounds. Spring

ECSP 867. Consultation in School Psychology. 3 hr.; 3 cr. (As of Fall '98: 4 hr.; 4 cr.) This course is designed to train school psychology students to serve as consultants in the schools. Models of school-based consultation are explored. In addition, specific assessment and intervention strategies are discussed as they relate to the consultation process.

ECSP 868. Advanced Counseling Practicum. 2 hr.; 2 cr. Prereq.: ECSP 778. Coreq.: ECSP 778. This practicum provides students with practice in counseling with real clients in field settings. It gives them the opportunity to apply theoretical knowledge about counseling obtained from ECSP 778, *Counseling Techniques for School Psychologists*, to real situations. Students spend time week-

ly in the schools and learn to conceptualize cases and plan their work with clients. They present audiotaped sessions of their work in class on a regular basis where it is reviewed and critiqued. Ethical and legal issues as they relate to counseling are addressed.

Specialization in Bilingual School Psychology

The specialization in Bilingual School Psychology requires 66 credits: the 60-credit School Psychology sequence, and two additional courses (3 credits each) emphasizing bilingual and multicultural issues. The additional courses are as follows:

EECE 761. Foundations of Bilingual Education. 3 hr.; 3 cr. This course will examine the philosophy, rationale, and historical background of bilingual education. By using information provided by research in the field, participants will discuss the programs, models, and trends while exploring the sociological and political aspects of bilingual education. (See full description in EECE 761 under Bilingual Education courses.) (Students who have completed a course in bilingual education may substitute Linguistics 740, *Introduction to Second Language Acquisition and Teaching* for this requirement.)

ECSP 861. Seminar in Special Issues: Assessment of Linguistically and Culturally Diverse Students. 3 hr.; 3 cr. Students will develop competencies in assessing linguistically and culturally diverse students. A major emphasis is placed on learning appropriate procedures in assessing language proficiency, intellectual, academic, and personality-behavioral functioning of these students. Nontraditional alternative assessment approaches and nonbiased assessment are also covered.

In addition, students in the Specialization in Bilingual School Psychology will enroll in special sections of the internship:

ECSP 768.1. Internship in Bilingual/Multicultural School Psychology I. 6 hr.; 6 cr. Prereq.: Permission of the department; coreq.: ECSP 771. Students spend 5 days a week in internship settings with a minimum of 600 hours a year in a school setting. Other settings include mental health agencies and clinics. The placements are in settings with a bilingual population, and students are under the supervision of qualified bilingual supervisors. The students will meet biweekly for group supervision at the College. They begin in September and follow school and agency calendars. Graded on a Pass/Fail basis only.

ECSP 769.1. Internship in Bilingual/Multicultural School Psychology II. 6 hr.; 6 cr. Prereq.: Permission of the department and ECSP 768.6. Students spend 5 days a week in internship settings with a minimum of 600 hours a year in a school setting. Other settings include mental health agencies and clinics.

The placements are in settings with a bilingual population, and students are under the supervision of qualified bilingual supervisors. The students will meet biweekly for group supervision at the College. They begin in September and follow school and agency calendars. Graded on a Pass/Fail basis only.

Advanced Certificate Program for School Administrator & Supervisor

Coordinator: Kenneth J. Dunn

The College will admit to the program in School Administration only those whom it considers to be potentially outstanding leaders in schools and communities. The program aims to develop the personal qualities and professional skills essential for educational leadership. To this end, it provides opportunities of many kinds, including seminar courses, simulated experiences, and planned field work experiences. Each student's program is planned individually to make certain it includes the graduate studies that are needed to improve his or her background for the professional career for which he or she is preparing. Candidates are carefully selected from among those applicants who meet specific qualifications.

The program at the post-master's level leads to New York State certification as School Administrator-Supervisor. Courses are also offered that may be applied toward meeting the requirements for the New York State Certificate of School District Administrator. Students enrolled in the program should plan to complete it without interruption. They may be allowed five years to satisfy all course requirements. Requests for extensions of time must be submitted to the Office of Graduate Studies. Appeals concerning this decision should be directed to the Graduate Scholastic Standards Committee, whose decision is final.

Interested individuals should make application to the program Coordinator.

Faculty

Dunn, Kenneth J., *Coordinator, Professor*, Ed.D. 1967, Teachers College, Columbia University: administration, learning and teaching styles, administrative style, curriculum and in-service training
Sullivan, Mary H., *Instructor*, Ed.D. 1993, St. John's University: human relations, administrative theory, curriculum and supervision
Tobias, Randolph A., *Associate Professor*, Ed.D. 1976, Teachers College, Columbia University: curriculum development and instructional strategies, social studies methods, supervision and instruction

Requirements for Matriculation

The program is open only to students who have been selected as appropriate and

qualified candidates.

1. Evidence of basic professional understanding and skills, including familiarity with recent developments in the fields of a) social foundations, b) psychology, human development, and mental hygiene, and c) curriculum and teaching.

2. Demonstration of competency as a specialist in subject matter, teaching level or teacher skills, and/or supporting services to the educational process.

3. Scores on written tests, interviews, and experiences in the screening process that indicate leadership capabilities and potential growth. Recommendations from supervisors will be required.

4. Baccalaureate and Master's degrees from approved institutions. If it is deemed advisable, Queens College may specify certain further graduate courses to be completed before the candidate is admitted to the program. Evidence of scholarship at the undergraduate and graduate levels will be considered.

5. A minimum of three years of successful full-time teaching experience in a public, private, or parochial school, or at the college or university level, at least one year of which has been in the past five years, is required (unless within the past five years there have been professional contacts with school children in the position of curriculum coordinator, supervisor, counselor, etc.).

Program of Study for the Certificate

Candidates will be required to complete the basic requirements as outlined below. Additional courses may be prescribed by the Coordinator of the program or selected by the candidates to further qualify themselves in particular fields or for particular examinations.

Students who complete 30 credits in the following sequence (maintaining an average of B [3.0] or better) are eligible to receive New York State School Administrator and Supervisor Certification.

	<i>credits</i>
1. Under advisement, students must take 12 credits from among ECPAS 880, 881, 885, 886, and 887	12
2. Core Courses: ECPAS 883 and 884 are core courses that must be taken in the first year	6
3. Upon completion of ECPAS 883 and 884, students take the following four courses: ECPAS 888 and 889, and ECPAS 890 and 891. Alternatively, after satisfactory completion of ECPAS 883 and 884, students may be pre-advised to take ECPAS 894 or 895 in lieu of ECPAS 888, 889, 890, or 891	12
Total	30

Of the 30 credits required to complete the program, up to 6 credits may be taken at

other institutions and transferred into this program, if approved by the Coordinator.

Students are expected to follow the sequence listed in the column below; variations must be approved by the Coordinator.

<i>First Year</i>	<i>credits</i>
880 Administrative Theory	3
881 Curriculum & Supervision: Elementary and Secondary	3
883,884 Human Relations I and II	6
<i>First, Second, or Third Year</i>	
885 Legal Problems	3
886 Management of Teaching and Learning for Administrators	3
887 Computers for Administrators	3
<i>Second or Third Year</i>	
888,889 Problems and Practices	6
890,891 Guided Field Experience - Internship	6
894,895 Supervisory Practicum* (Limited and by selection)	3 or 6

Courses in Instructional Administration

ECPAS 880. Fundamentals and Use of Administrative Theory in Education. 3 hr.; 3 cr. Administrative theory and research. Theoretical approaches to the study of organization behavior; the nature of organizations; systems analyses; research concerned with change in systems and groups.

ECPAS 881. Curriculum and Supervision. 3 hr.; 3 cr. An examination of the trends and issues in the school curriculum with emphasis on the development of theoretical bases for the making of curriculum decisions. A critical examination of the literature on supervision in education and related fields. Current practices will be appraised in relation to the teaching/learning process.

ECPAS 883,884. The Educational Leader and Human Relations I and II. 3 hr.; 3 cr. each course. Study of the variety of supervisory and administrative relationships. Fields of psychology, social psychology, sociology, and education will be drawn upon to develop an understanding of human behavior and methods of working with others. *Courses must be taken sequentially.*

ECPAS 885. Legal Problems in Public Education: Political and Economic Implications. 3 hr.; 3 cr. Current and historic law in public education. Will inform students of basic legal principles as they affect public schools in general; in particular, students will study such areas as freedom of speech, student rights, search and seizure, torts, teacher rights, religion in the public schools, and constitutional due process.

*In lieu of one 3-credit, one-semester course.

ECPAS 886. Management of Teaching and Learning for Administrators. 3 hr.; 3 cr. This course will include an analysis of teaching strategies and of the learning patterns of individual students. A review of the research will be followed by practical applications in the classroom. Assessment instruments, observation forms, and counseling techniques designed for the improvement of instruction and staff development will be studied and evaluated. Teaching and learning style models will be emphasized. Applications for future administrators will be covered. Instructional environments, teaching strategies, learning materials, homework patterns, and classroom management techniques will be described and implemented.

ECPAS 887. Computers in School Administration. 3 hr.; 3 cr. An introduction to basic programming plus applications of computers to instruction and in school management.

ECPAS 888,889. Problems and Practices in School Administration I and II. 3 hr.; 3 cr. each course. Examination of specific and universal problems of school administration. Application of case studies, role playing, and group analysis focused on recurring themes of educational governance at the building and district levels.

ECPAS 890,891. Guided Field Experience in Administration and Supervision. 3 hr.; 3 cr. each course. Seminar plus 300 hours of field work for each course. (These courses together satisfy the 600 hours of field service required of every candidate for the New York State certificate for School Administrator and Supervisor.)

ECPAS 894,895. Supervisory Practicum I and II. 3 hr.; 3 cr. each course. Prereq.: ECPAS 883 and 884 and approval of the adviser and instructor. Advanced courses in supervision for students preparing for school leadership roles. Students will observe, facilitate, consult, and supervise first-year students under close supervision of faculty. Theoretical concepts are used to analyze small group interactions and supervisory conferences. These experiences provide the framework for individual instruction in the leadership of small groups. Students must be pre-advised to take ECPAS 894 or 895. Selection is made on the basis of prior training and background and competence in the course content, and with the approval of the program adviser.

Special Education

Coordinator: Fredda A. Brown

Special Education is a 34-credit graduate program designed to provide preparation for early childhood, elementary, and secondary teachers of students with disabilities (except the deaf, hearing-impaired, speech-impaired, and visually impaired) as defined by the New York State Education Department. Completion of the program

leads to the awarding of the Master of Science in Education degree and to New York State Certification as Teacher of Special Education, K-12.

Bilingual students may elect to complete a specialization leading to certification in bilingual special education. Such students will be required to take additional courses with emphasis on bilingual and multicultural issues. Interested individuals should write to:

Coordinator, Special Educ. Program
Educational & Community Programs
Queens College, CUNY
Flushing, NY 11367-1597

Admissions to this program are limited, and a competitive system is used in which the total record of the applicant is evaluated. Admitted students must attend an orientation meeting that is held prior to the first semester of the program. Students will be assigned an Adviser whom they must meet with during the first semester in order to plan their program, and at least once each semester thereafter to note progress. With the approval of the Adviser and the program Coordinator, appropriate courses may be substituted and up to 12 credits of course work may be transferred from another institution.

Faculty

Brown, Fredda A., Coordinator, *Professor*,
Ph.D. 1981, University of Kansas:
research with persons with developmental disabilities
Erwin, Elizabeth, *Assistant Professor*,
Ed.D. 1992, Teachers College, Columbia

Courses in Special Education

Required Courses

ECPSE 700	Foundations of Special Education	4
ECPSE 701	The Evaluation of Individuals with Disabilities	3
ECPSE 745*	Internship in Special Education	6
ECPSE 746	Research in Special Education	3
ECPSE 748	Seminar in Research in Special Education	3

Courses in Mild/Moderate Disabilities

ECPSE 710	Assessment and Instruction for Students with Mild and Moderate Disabilities	3
ECPSE 711	Learning Strategies and Curriculum for Students with Mild and Moderate Disabilities	3

Courses in Severe Disabilities

ECPSE 720	Trends and Issues in the Education of Students with Severe Disabilities	3
ECPSE 721	Curriculum Development for Students with Severe Disabilities	3
ECPSE 722	Applied Behavior Analysis in Special Education	3

Courses in Early Childhood Special Education

ECPSE 730	Trends and Issues in Early Childhood Special Education	3
ECPSE 731	Advanced Curriculum and Methods in Early Childhood Special Education	3
ECPSE 732	Building Partnerships with Families of Children with and without Disabilities	3

Elective

ECPSE 750	Workshop in Special Education	3
-----------	-------------------------------	---

*Students who pass ECPSE 745 with a grade lower than B and who, in the judgment of the program, require a more intensive and structured experience than is provided in 745, must take the following course in addition to the regular graduate program: ECPSE 754, Supervised Internship in Special Education, 3 credits.

University: early childhood special education
Truesdell, Lee Ann, *Associate Professor*,
Ph.D. 1978, Florida State University:
special education, curriculum, instruction, supervision

Matriculation Requirements for M.S. Ed. in Special Education

1. Meet the general requirements for admission to the Master of Science in Education degree program.
2. Complete an approved undergraduate program in education or hold a provisional or permanent New York State teaching certificate or its equivalent. Applicants with other preparation may be considered. Applicants who do not have elementary or secondary school teacher preparation will be required to complete 12 credits in educational foundations and methods courses and 6 credits in student teaching or its equivalent.
3. Applicants must have completed 6 credits in the teaching of reading or will be required to complete these credits before finishing the program.
4. Provide three letters of reference when submitting application.
5. Students applying to the Specialization in Bilingual Special Education must present fluency in English and a second language. Language competence will be assessed by a qualified Queens College faculty member.

Requirements for the Degree

1. Meet the College's general require-

ments for all Master's degrees.

2. Complete satisfactorily the 34-credit course sequence. Students can transfer up to 12 credits of graduate course credits for equivalent courses only, subject to review by the program and according to College policy. No transfer credit will be approved for ECPSE 710, 711, 720, 721, 730, 731, 745, 746, 748, and 754. Six credits of Independent Study in Special Education ECPSE 751 may be substituted for courses with the permission of the student's Adviser.

3. Pass a written comprehensive examination, which is taken after completion of at least two of the following courses in curriculum and instruction for individuals with disabilities: ECPSE 710, 711, 720, 721, 730, and 731. Progress in the program will require satisfactory completion of this requirement. Students may repeat this examination in order to obtain a passing grade for all questions. Students are obligated to pass this examination and complete all degree requirements within the five-year time limit set for the Master of Science in Education degree. If they fail one or more questions twice or more, they must meet with their Advisers, review their examination responses, and develop individualized plans that state the strategies by which they will prepare for the next examination. These strategies may include auditing courses and attending seminars at the QC Writing Center. The Adviser must approve this plan before the student will be allowed to take the examination again. The examination will be given each semester.

4. It is recommended that students first complete two introductory courses, ECPSE 700 and 701 (7 credits). They will then take two courses in curriculum and instruction that focus on one of three disability groups: mild and moderate (ECPSE 710, 711), severe disabilities (ECPSE 720, 721), or early childhood special education (ECPSE 730, 731). Students are also required to take a third curriculum course from among ECPSE 710, 720, and 730.

Students who select mild and moderate disabilities as a focus will take two elective courses (6 credits) from ECPSE 722, 732, and 750. Students who select severe disabilities will take ECPSE 722 and one elective course: either ECPSE 732 or 750. Students who select early childhood special education will take ECPSE 732 and one elective course: either ECPSE 722 or 750. Finally, students must complete ECPSE 745, 746, and 748.

Requirements for Specialization in Bilingual Special Education

The specialization in Bilingual Special Education requires 40 credits. Students pursuing this certification will meet all the preceding requirements for Special Education except for a third curriculum class in one of the three disability areas (ECPSE 710, 720, 730, 711, 721, 731). Instead, students will take the following three courses emphasizing bilingual and multi-

cultural issues: ECPSE 760, Teaching Bilingual Special Education; Linguistics 741, Methods and Materials in TESOL; and EECE 761, Foundations of Bilingual Education.

In addition, students will enroll in a special section of the internship: ECPSE 745.6, Internship in Bilingual Special Education.

Courses in Special Education

ECPSE 700. Foundations of Special Education. 3 hr. plus scheduled conf. and field work; 4 cr. (Formerly ECPSE 740) Education and psychology in Special Education with emphasis on developing a broad background of knowledge about individuals classified as developmentally disabled, emotionally disturbed, physically impaired, learning disabled, and sensory impaired, and information about special education law and programs, advocacy, and inclusion. Forty-five hours of field work are required.

ECPSE 701. The Evaluation of Individuals with Disabilities. 3 hr. plus scheduled conf.; 3 cr. Prereq.: ECPSE 700 and matriculation in the Special Education Program or permission of the Coordinator. (Formerly ECPSE 742) An introduction to the study and understanding of the theory of tests and measurements and basic statistical procedures as they apply in Special Education. Attention is given to the selection of appropriate tests for use with students with disabilities. Standardized achievement tests, criterion reference tests, reading tests, intelligence tests, informal classroom assessment devices, and psychological instruments are discussed. The preparation of an evaluation case study is required.

ECPSE 710. Assessment and Instruction for Students with Mild and Moderate Disabilities. 3 hr.; 3 cr. Prereq.: ECPSE 700, 701. Informal curriculum assessment procedures, curriculum design and adaptation, and effective instruction techniques will be learned through a set of interrelated activities in which the student performs assessments, plans curriculum, and instructs a small group of children exhibiting learning problems.

ECPSE 711. Learning Strategies and Curriculum for Students with Mild and Moderate Disabilities. 3 hr. plus scheduled conf.; 3 cr. Prereq.: ECPSE 710. Learning and metacognitive strategies are taught within the context of academic learning activities. Curriculum planning utilizing the integrated thematic approach will involve students in planning and teaching a curriculum unit designed to meet the individual needs of students with disabilities.

ECPSE 720. Trends and Issues in the Education of Students with Severe Disabilities. 3 hr.; 3 cr. Prereq.: ECPSE 700. This course is designed to acquaint students with the characteristics, assess-

ment strategies, methods of teaching, team approaches, and current research and life span issues related to the education of students with severe disabilities.

ECPSE 721. Curriculum Development for Students with Severe Disabilities. 3 hr.; 3 cr. Prereq.: ECPSE 720. This course is designed to provide the student opportunity to experience the curriculum planning process for students with severe disabilities. Students will critically analyze the educational program of a student with severe disabilities and then develop a new curriculum based on best practices in assessment, program development, and evaluation.

ECPSE 722. Applied Behavior Analysis in Special Education. 3 hr.; 3 cr. This course is designed to acquaint students with the use of applied behavior analysis in special education settings. The course will examine variables that influence student behaviors and environmental events. Additionally, students will learn about assessment of behavior problems, various behavioral strategies, and the use of single subject designs to evaluate behavior change in applied settings.

ECPSE 730. Trends and Issues in Early Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 700. This course will provide students with a solid foundation in the education of young children with disabilities by exploring the educational, philosophical, legal, and historical perspectives in Early Childhood Special Education. Recommended practices and current issues regarding infants, toddlers, and preschoolers will be critically examined.

ECPSE 731. Advanced Curriculum and Methods in Early Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 730. This course is designed to assist early childhood practitioners in creatively planning, implementing, and evaluating appropriate programs for young children with disabilities. Students will learn how to develop an early childhood curriculum and how to effectively adapt materials and design activities to meet children's varied interests and abilities.

ECPSE 732. Building Partnerships with Families of Children with and without Disabilities. 3 hr.; 3 cr. Prereq.: ECPSE 700. This course will address the central importance of families in children's lives as well as the need and rationale for including families in the assessment, implementation, and evaluation of programs for children with disabilities. This course will provide a foundation for building healthy home/school collaborative relationships.

ECPSE 745. Internship in Special Education. 3 hr. plus participation; 6 cr. Prereq.: ECPSE 700, 701, and any two of 710, 711, 720, 721, 730, 731. Supervised teaching of students in special education or

inclusive settings approved by the Special Education faculty. Participation consists of full-time observation and teaching for the entire semester. Seminars supplement the field experience. Course assignments are designed for demonstration of best practice in the field of Special Education. Students in need of further experience or supervised teaching will be required to complete ECPSE 754.

ECPSE 746. Research in Special Education. 3 hr. plus scheduled conf.; 3 cr. Prereq.: ECPSE 700, 701. Study, understanding and evaluation of basic research design and methodology in Special Education and the interpreting of research results for classroom instruction. Attention is given to the preparation of a plan for a field-based research project or a review of the literature relating to a Special Education topic.

ECPSE 748. Seminar in Research in Special Education. 3 hr. plus scheduled conf.; 3 cr. Prereq.: ECPSE 746. The continued study, understanding, and evaluation of research design and methodology in Special Education. A critical review of current research or implementation of a field-based research project in the area is required.

ECPSE 750. Workshop in Special Education. 3 hr. plus scheduled conf.; 3 cr. Selected topics in the field of Special Education. Each semester various topic areas are offered. The course may be repeated for credit if the topic changes. Some topics are vocational opportunities, affective education, total communication, resource room, group dynamics, mainstreaming, consultation, transdisciplinary teaming, and physical disabilities.

ECPSE 751. Independent Study in Special Education. Prereq.: Permission of and by arrangement with the Special Education faculty. Problems and topics in special education selected according to the needs of the student, in conjunction with a sponsoring faculty member. No more than 6 credits of independent study can be taken. ECPSE 751.1. 1 hr.; 1 cr. ECPSE 751.2. 2 hr.; 2 cr. ECPSE 751.3. 3 hr.; 3 cr.

ECPSE 754. Supervised Internship in Special Education. 2 participation hr., 1 seminar hr.; 3 cr. Prereq.: Matriculation in the Special Education program. Students who receive a grade of B- or C in ECPSE 745 are required to register for ECPSE 754. Additional supervised experience in teaching individuals with handicapping conditions for students who did not receive a grade of at least B in ECPSE 745. This course may be taken twice. Seminars will supplement the internship. Course assignments will depend upon the experience of the student.

Courses in Bilingual Special Education

Linguistics 741. Methods and Materials in TESOL.

EECE 761. Foundations of Bilingual Special Education.

ECPSE 745.6. Internship in Bilingual Special Education. 3 hr. plus participation; 6 cr. Prereq.: ECPSE 700, 701, 760, EECE 761, and one of ECPSE 710, 720, or 730. Supervised teaching of students with disabilities in a bilingual special education setting approved by the Special Education faculty. Participation consists of full-time observation and teaching for the entire semester. Seminars supplement the field experience. Course assignments are designed for demonstration of best practice in the field of Bilingual Special Education.

ECPSE 760. Teaching Bilingual Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 700. This course focuses on pedagogical approaches, strategies, models, and trends in the teaching of listening, speaking, reading, and writing skills to students with disabilities who are culturally and linguistically diversified.

Counselor Education

Coordinator: Lester J. Schwartz

The Master of Science in Education degree in Counselor Education is a 60-credit program that prepares students to serve as counselors in schools and agencies. Students may choose one of the following sequences: Bilingual Counseling, College Counseling, Mental Health Counseling, or School Counseling. Field work constitutes 12 credits of the 60-credit degree program.

Faculty

- Schwartz, Lester J., Coordinator, School Counseling Adviser, *Professor Emeritus*, Ph.D. 1959, Teachers College, Columbia University: counseling psychology, career development
- Rountree, Yvonne B., *Adjunct Associate Professor*, Ph.D. 1981, Yeshiva University: clinical psychology, family counseling, community mental health
- Vazquez, Jesse M., Bilingual Counseling Adviser, *Professor*, Ph.D. 1975, New York University: cross-cultural counseling, individual and group psychotherapy

Program for the Degree of Master of Science in Education in Counselor Education

All candidates for the Master's degree must take the initial 30-credit core Counseling Program sequence. Bilingual counselors must demonstrate competence in a language other than English, usually Spanish. After the core courses, students specialize in either Mental Health or School (including Bilingual and College) Counseling. Field work, readings, and research are specific for each sequence.

Students taking the School Counseling sequence will meet in full the academic preparation for the New York City license and the New York State certificate for School Counselor.

Students interested in obtaining a New York State-approved Bilingual/Multicultural Counseling Extension must complete the course, language, and fieldwork requirements stipulated.

Matriculation Requirements for the Master of Science in Education in Counselor Education

All applicants to the Master's program must meet the following requirements:

1. Completion of the following courses in undergraduate or graduate study (or exemption by means of examination in the subject): child or adolescent psychology, educational philosophy or sociology, general or introductory psychology, abnormal psychology, statistics. Under certain circumstances, applicants who do not meet all prerequisites may be admitted on condition.
2. A minimum cumulative index of *B* (3.0) or its equivalent.
3. Satisfactory standards in speech, written English, and in health, character, and personality.
4. Satisfactory ratings on admission tests, interviews, and references.
5. Three letters of recommendation.

Requirements for the M.S. in Ed. in Counselor Education

1. Satisfactory completion of the 60-credit sequence, including 24 credits of core courses required for all Master's program specializations.
2. Demonstrated mastery of the professional knowledge and competencies associated with counseling.
3. Satisfactory completion of 300 hours of required field work.
4. Satisfactory completion of a research project.

The 60-credit program for the Master of Science in Education degree can be carried out under a two-year full-time program or a four-year part-time program.

Field Work

Field work will be conducted under the supervision of experienced professionals with relevant degrees in School or Mental Health Counseling or in related fields. Each full-time student will complete a minimum of 600 hours in the field; each part-time student will complete 300 hours in the field plus 6 credits of counseling electives.

Students in the specialization for the Bilingual/Multicultural Counseling Extension must complete 300 hours of field work in a school or agency setting serving a bilingual population.

Please note: It is necessary for fieldwork students to purchase malpractice insurance, which is available at low cost.

Research Requirement

In addition to research projects that may be required for individual courses, each student will write a research thesis or a grant proposal in the area of specialization, or complete an equivalent research assignment approved by the program faculty. ECPCE 807 is designed to provide knowledge and skills in research methods and assistance in conducting the thesis project.

Substance Abuse Sequence

The following five courses constitute a Sequence in Substance Abuse Counseling:

	<i>credits</i>
ECPCE 730 Overview: General Introduction to Alcoholism and Substance Abuse Sequence	3
ECPCE 731 Family and Substance Abuse	3
ECPCE 732 Specialized Counseling Techniques for the Addictive Population: Individual and Group	3
ECPCE 733 Special Issues and Special Populations in Alcoholism/ Substance Abuse	3
ECPCE 800 Vocational Psychology and Career Education	3

This sequence meets the educational requirements for a Credentialed Alcoholism Counselor in New York State. Preference for admission will be given to matriculated students in the Graduate Counselor Education program. Others will be admitted on a space-available basis by permission of the program faculty.

Mental Health Counseling majors will take the X-credit Substance Abuse Sequence as part of their 60-credit program. The research requirement for Mental Health Counseling majors will concentrate on substance abuse. School Counseling majors may take two of the Substance Abuse courses in lieu of their two electives (6 credits). Additional courses in the Sequence would require completion of 6 credits of course work beyond the 60 credits normally required for the Master of Science in Education degree in Counselor Education.

Following are the core courses for the Master of Science Degree in Education in Counselor Education. These are required of all students in the Master's program.

Core Courses

ECPCE 700. Theory, Philosophy, and History of Counseling. 2 hr. plus conf.*; 3 cr. Introduction to the field of counseling and the work of counselors.

ECPCE 701. Practicum in Self-Awareness Training. 3 hr.; 3 cr. Graded on a Pass/Fail basis only. Experience in listening, feedback, and communication skills.

ECPCE 702. Psychosocial Development and Personality Theory. 2 hr. plus conf.*; 3 cr. Personality theory, development of personality, and etiology of deviant behavior.

ECPCE 703. Seminar Practicum in Interview Techniques and Human Service Systems. 3 hr.; 3 cr.

ECPCE 704. Theories and Techniques of Psychological Counseling. 2 hr. plus conf.*; 3 cr. Behavioral science concepts as applied to individual counseling.

ECPCE 705. Seminar Practicum in Psychological Counseling with Individuals: Applications. 3 hr.; 3 cr. Graded on a Pass/Fail basis only.

ECPCE 706. Study of Group Dynamics, Leadership, and Social Systems. 2 hr. plus conf.*; 3 cr. Techniques and theory of psychological counseling with groups. Study of leadership and social systems.

ECPCE 707. Seminar Practicum in Psychological Counseling in Groups. 3 hr.; 3 cr. Graded on a Pass/Fail basis only.

ECPCE 721. Field Work I. 2 hr. plus field work; 2 cr. Prereq.: Permission of Adviser. Student will be placed for a minimum of 100 hours per semester in a school, clinic, or agency under supervision of a field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

ECPCE 722. Field Work II. 2 hr. plus field work; 2 cr. Prereq.: Permission of Adviser. Student will be placed for a minimum of 100 hours per semester in a school, clinic, or agency under supervision of field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

ECPCE 723. Field Work III. 2 hr. plus field work; 2 cr. Prereq.: Permission of Adviser. Student will be placed for a minimum of 100 hours per semester in a school, clinic, or agency under supervision of field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

The following course may substitute for ECPCE 723:

ECPCE 729. Field Work in a School. 2 hr. plus field work; 2 cr. Prereq.: Permission of School Counseling Adviser. Student will be placed for a minimum of 100 hours per semester in a school covering any of grades 1 through 12 under supervision of field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

ECPCE 730. Overview: General Introduction to Alcoholism and Substance Abuse Sequence. 2 hr. plus conf.*; 3 cr. This course covers the etiological theories of alcoholism/substance abuse, pharmacology, process of addiction/stages of alcoholism, recovery process, and defense structures. Attention is given to special ethnic populations, treatment approaches, the counseling of individual substance abusers, and professional counselor ethics.

ECPCE 731. Family and Substance Abuse. 2 hr. plus conf.*; 3 cr. Prereq.: ECPCE 730 or faculty approval. This course covers the physiological, sociological, and psychological influences of substance abuse and the family. Attention is given to children and adult children of substance abusers and co-dependency in the family. Couples/alcoholism, domestic violence, sexual issues, and divorce are also addressed. Counseling approaches prior to and after abstinence are covered as well as cultural considerations.

ECPCE 732. Specialized Counseling Techniques for the Addictive Population: Individual and Group. 2 hr. plus conf.*; 3 cr. Prereq.: ECPCE 730 or faculty approval. This course covers treatment programs and resources, self-help groups, and critical issues in early, middle, and long-term recovery. Attention is given to specialized individual and group counseling techniques, with particular emphasis, based on case material, on the techniques of supervision.

ECPCE 733. Special Issues and Special Populations in Alcoholism/Substance Abuse. 2 hr. plus conf.*; 3 cr. Prereq.: ECPCE 730 or faculty approval. This course covers special issues in the treatment of substance abusers, such as spirituality, birth defects, AIDS, and dual diagnosis. Special populations are addressed: adolescents, women, mandated clients, and the homeless. Attention is also given to drug prevention, counselor wellness, and professional counselor ethics.

Following are courses appropriate for the School and Mental Health Specialization of the Master of Science Degree in Education in Counselor Education.

SCHOOL AND MENTAL HEALTH SPECIALIZATIONS

ECPCE 800. Vocational Psychology and Career Education. 2 hr. plus conf.*; 3 cr. Theory and methods of vocational and career counseling including applications to the chemically dependent and other groups with special needs.

ECPCE 801. Seminar Practicum in Career Counseling. 3 hr.; 3 cr.

ECPCE 802. Special Problems in Psychological Counseling. 2 hr. plus conf.*; 3 cr. Study of current special problems including depression, substance abuse, gerontology, suicide, etc. Spring

ECPCE 803. Seminar in Multicultural Issues in Psychological Counseling. 3 hr.; 3 cr. Experience in developing supervisory and peer counseling systems in culturally diverse educational and community settings on consultation with the instructor.

ECPCE 804. Techniques of Educational and Psychological Evaluation. 2 hr.

*Conference hour relates to field work associated with practica.

plus conf.*; 3 cr. Integration of vocational theory, learning theory, and measurement theory as used in counseling.

ECPCE 805. Seminar Practicum in Testing and Measurement. 3 hr.; 3 cr. Supervised experience.

ECPCE 806. Organization, Administration, and Evaluation of Counseling Services. 2 hr. plus conf.*; 3 cr. Study of the structure and function of schools and mental health services. Emphasis on the counselor as consultant and administrator.

ECPCE 807. Seminar Practicum in Research in Psychological Counseling. 3 hr.; 3 cr. Graded on a Pass/Fail basis only.

ECPCE 820. Field Work in School or Mental Health IV. 2 hr. plus field work; 2 cr. Prereq.: Permission of Adviser. Student will be placed for a minimum of 100 hours per semester in a school, clinic, or agency under supervision of field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

ECPCE 821. Field Work in School or Mental Health V. 2 hr. plus field work; 2 cr. Prereq.: Permission of Adviser. Student will be placed for a minimum of 100 hours per semester in a school, clinic, or agency under supervision of a field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

ECPCE 822. Field Work in School or Mental Health VI. 2 hr. plus field work; 2 cr. Prereq.: Permission of Adviser. Student will be placed for a minimum of 100 hours per semester in a school, clinic, or agency under supervision of a field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

Counselor Education Program with the Bilingual/Multicultural Extension

This 60-credit program leads to a Master of Science in Education degree in Counselor Education with the Bilingual/Multicultural Extension. The program fulfills the academic requirements for permanent New York State Certification for School Counseling and for the New York City License. The program includes the following course, language, and field work requirements:

1. The student must demonstrate proficiency in a target language (Spanish, Chinese, or other languages). Language competence will be assessed by a qualified Queens College faculty member. English proficiency is assessed as part of the standard admissions process for all applicants through the required written essay, the initial program interview, and the Test of English as a Foreign Language (TOEFL), if necessary.

2. Students must complete ECPCE 803, Seminar in Multicultural Issues in Psycho-

logical Counseling, and ECPCE 807, Seminar Practicum in Research in Psychological Counseling. Research projects in ECPCE 807 must focus on issues related to bilingual/multicultural populations in an educational or agency setting.

3. Field Work: Students specializing in the Bilingual/Multicultural Extension must complete 300 hours of field work in a school or agency setting serving a bilingual population under supervision of a qualified field supervisor.

SPECIAL AND ELECTIVE COURSE OFFERINGS

ECPCE 818. Special Topics in Counseling. 2 hr. plus conf.; 3 cr. A course with changing content relating to topics of current relevance to the field of counseling.

ECPCE 832. Psychology of Human Sexuality. 2 hr. plus conf.; 3 cr. Psychosexual development, reproduction, sexual responsiveness, and dysfunctions. Theories and methods of sex counseling for different age groups.

ECPCE 334. Advanced Course in Family Education: Parenting Models. 2 hr. plus conf.*; 3 cr. Exploration of models of effective parenting in single, multiple, and blended families.

*Conference hour relates to fieldwork associated with practica.

ENGLISH

Chair: Steven F. Kruger

Director of Graduate Studies: David H. Richter

Dept. Office: Klapper 607, 997-4600

The Graduate English program of Queens College is staffed by faculty devoted to critical research and creative publication. Its faculty have recently been honored with grants and awards from the Fund for the Improvement of Post-Secondary Education, the Guggenheim Foundation, the National Endowment for the Humanities, the Rockefeller Foundation at Bellagio, and the Woodrow Wilson International Center for Scholars. Current books by Queens English faculty include Fred Buell's *National Culture and the New Global System*, Kimiko Hahn's *The Unbearable Heart*, Steven Kruger's *AIDS Narratives*, Barbara Leavy's *In Search of the Swan Maiden*, and David Richter's *The Progress of Romance*.

The graduate program provides faculty, library, courses, and facilities for advanced study in the following disciplines:

1. Literary, rhetorical, and linguistic theory
2. Textual criticism, descriptive and enumerative bibliography, techniques of scholarship
3. History of English and American literature
4. History and analysis of the English language
5. Practical analysis, interpretation, and evaluation of works of literature
6. Creative writing

The program enables students to bring their vocabulary, techniques, and judgment in these disciplines to the point of mastery: that is, to a point at which they feel secure in and capable of independent pursuit of knowledge among the primary and secondary materials of the field. In the degree structure of the City University, the Queens College program leads to the M.A. degree in English. The first 30 units of course work may be counted toward the Ph.D. in the City University. Such courses must be taken while enrolled in the M.A. program.

The Queens program provides training in creative writing. This course of studies is described below. It does not provide training in comparative literature. The needs and interests of the individual student receive full attention, however, and participation in related programs at sister institutions in the City University is encouraged. A full-time student can complete the requirements for the M.A. degree in twelve months, although in most cases a longer time is needed. All requirements must be completed within four calendar years of admission. The time period is calculated from the date of the first graduate course for which credit is granted, whether it was taken at Queens or at another institution.

Faculty

- Kruger, Steven F., Chair, *Professor*, Ph.D. 1988, Stanford University: late Medieval poetry and culture
- Richter, David H., Director of Graduate Studies, *Professor*, Ph.D. 1971, University of Chicago: eighteenth-century studies, theory of fiction, literary criticism, modern fiction
- Allen, Jeffery R., *Assistant Professor*, Ph.D. 1992, University of Illinois, Chicago: creative writing
- Barker, Gerard A., *Professor*, Ph.D. 1961, Stanford University: eighteenth-century fiction and drama, history of the novel
- Bowen, Barbara E., *Associate Professor*, Ph.D. 1986, Yale University: Renaissance literature, Afro-American literature
- Buell, Frederick H., *Professor*, Ph.D. 1970, Cornell University: twentieth-century literature, creative writing (poetry)
- Comley, Nancy R., *Professor*, Ph.D. 1977, Brown University: theory of rhetoric and composition, semiotics
- D'Avanzo, Mario L., *Professor*, Ph.D. 1963, Brown University: English Romanticism, American transcendentalism, American Renaissance
- Dickstein, Morris, *Distinguished Professor*, Ph.D. 1967, Yale University: Romantic poetry, D. H. Lawrence, contemporary literature (especially fiction)
- Epstein, Edmund L., *Professor*, Ph.D. 1967, Columbia University: modern British literature, linguistics, and stylistics
- Friedman, Stanley, *Associate Professor*, Ph.D. 1963, Columbia University: sixteenth-century non-dramatic literature, Shakespeare, Dickens
- Frosch, Thomas R., *Professor*, Ph.D. 1968, Yale University: Romanticism
- Geis, Deborah R., *Associate Professor*, Ph.D. 1988, University of Michigan: modern and contemporary drama, film, contemporary American literature
- Green, William, *Professor*, Ph.D. 1959, Columbia University: Shakespeare, Renaissance drama, modern British and American drama
- Gross, Beverly, *Associate Professor*, Ph.D. 1966, University of Chicago: twentieth-century novel, theory of fiction
- Hahn, Kimiko, *Associate Professor*, M.A. 1984, Columbia University: poetry, Asian writing
- Held, George, *Associate Professor*, Ph.D. 1967, Rutgers University: British and American literature 1885-present
- Kaplan, Fred, *Distinguished Professor*, Ph.D. 1966, Columbia University: Victorian literature, Romantic literature, Dickens, Carlyle, Henry James
- Kelly, William P., III, *Associate Professor*, Ph.D. 1977, Indiana University: nineteenth-century American literature, critical theory, intellectual history
- Kier, Kathleen E., *Associate Professor*, Ph.D. 1980, Columbia University: American literature
- Kleinbard, David J., *Professor*, Ph.D. 1969, Yale University: literature and psychology, modern literature, creative writing
- Kowal, Michael, *Associate Professor*, Ph.D. 1962, Yale University: nineteenth- and twentieth-century fiction and poetry, history of criticism
- Leavy, Barbara Fass, *Professor Emerita*, Ph.D. 1969, New York University: Romanticism, literary criticism, folklore
- McCoy, Richard C., *Professor*, Ph.D. 1975, University of California at Berkeley: Renaissance literature, literature and society, origins of the novel
- McKenna, Catherine, *Professor*, Ph.D. 1976, Harvard University: Celtic languages and literature
- Molesworth, Charles H., *Professor*, Ph.D. 1968, State University of New York at Buffalo: modern and contemporary poetry, Milton, seventeenth-century English poetry
- O'Brien, Anthony J., *Associate Professor*, Ph.D. 1968, Harvard University: twentieth-century poetry and fiction, African, Caribbean, and African-American writers
- Peritz, Janice, *Associate Professor*, Ph.D. 1978, Stanford University: writing theory and practice, contemporary critical theory, English literature 1750-1850
- Raben, Estelle M., *Assistant Professor Emerita*, Ph.D. 1983, St. John's University: modern drama, literature, and science
- Sargent, Michael G., *Professor*, Ph.D. 1979, University of Toronto: Medieval studies
- Schechter, Harold G., *Professor*, Ph.D. 1975, State University of New York at Buffalo: American literature, popular culture
- Schotter, Richard D., *Professor*, Ph.D. 1970, Columbia University: playwrighting, modern British, American, and Continental drama
- Stone, Donald D., *Professor*, Ph.D. 1968, Harvard University: Victorian literature, history of the novel
- Summerfield, Judith, *Professor*, Ph.D. 1986, New York University: semiotics and composition
- Tucker, Amy E., *Associate Professor*, Ph.D. 1979, New York University: American literature
- Tytell, John, *Professor*, Ph.D. 1968, New York University: modern literature
- Waters, Maureen A., *Associate Professor*, Ed.D. 1975, Columbia University: Irish literature
- Weidman, Bette S., *Associate Professor*, Ph.D. 1968, Columbia University: nineteenth-century American literature, American studies
- Weir, John P., *Assistant Professor*, M.F.A. 1988, Columbia University: twentieth-century fiction, creative writing
- Whatley, E. Gordon, *Professor*, Ph.D. 1973, Harvard University: Old and Middle English literature, Medieval hagiography
- Zimmerman, Susan, *Associate Professor*, Ph.D. 1975, University of Maryland: Renaissance drama
- Zimroth, Evan, *Associate Professor*, Ph.D. 1972, Columbia University: poetry, creative writing

Master of Arts Degree Program

Requirements for Matriculation

This list is in addition to the general College requirements.

THE LITERATURE SEQUENCE

1. An average grade of *B* in all undergraduate work and in all English courses.
2. A minimum of 24 undergraduate credits in English or American literature or creative writing; at the discretion of the department, fewer credits may be acceptable for full matriculation.
3. Three satisfactory letters of recommendation, two of which must be from instructors in English.
4. Students whose first language is not English and who were educated in a country where English is not the official language are required to take the Test of English as a Foreign Language (TOEFL). A score of 600 or better is recommended for students to be able to do advanced work in English.
5. Evidence of a knowledge of at least one foreign language acceptable to the department.

THE CREATIVE WRITING SEQUENCE

Applicants must meet the requirements of the regular M.A. Program in English, with the following modifications:

1. At least one undergraduate creative writing course with a grade of *B* or better.
2. Submission and acceptance by the department of a substantial manuscript of original creative writing, before or when the application is sent in.
3. At least two of the requisite three letters of recommendation from creative writing instructors or recognized writers familiar with the applicant's work.

Requirements for the Master of Arts Degree

THE LITERATURE SEQUENCE

The student must:

1. Take a minimum of 30 credits in English (which may include certain related courses, with the permission of the department) with an average grade of *B* or above. This program must include a graduate course in methodology; a course in Old English, Middle English, or the English language; and a graduate course in literary criticism - unless the student has already had an equivalent course as an undergraduate. Students will not receive credit for more than four courses on the 600 level for the M.A. degree, and the CUNY Doctoral Program in English will not accept more than two.
2. Pass a reading exam in French, German, Italian, Russian, Spanish, or a classical language. A student may also satisfy the language requirement by obtaining a grade of *B-* or better in an undergraduate or General Studies course at Queens that requires extensive reading of literature in one of these languages, or by obtaining a

grade of *B-* or better in a similar graduate course at Queens; in the latter case, the student will receive three credits toward the degree.

3. Write a satisfactory thesis on an approved subject in English or American literature or the English language. The thesis may not be undertaken until the candidate has passed one or more courses on the 700 level with a grade of at least *B*. A student may also satisfy the thesis requirement by submitting three extended documented papers completed in courses. These must be of at least 4,500 words; must be in fields not closely related; and must be accompanied by certificates from the instructors for whom they were written, indicating that the papers are adequate both in form and content to be substituted for the thesis. The student must indicate to the instructor by the fifth week of classes an intention to prepare a term paper for eventual submission to meet this requirement. (Thesis credit cannot be granted for course papers retroactively.)

4. Pass an oral examination in the field of the candidate's thesis (not a defense of the thesis) and related areas, the limits to be determined on an individual basis by the thesis director and the director of graduate studies. A student who chooses to submit three papers in place of a thesis will be given an oral examination in three fields approved in advance by the director of graduate studies and suggested by the topics of the papers; one must fall before 1800. Students who fail are permitted to retake the examination once only.

THE CREATIVE WRITING SEQUENCE

Candidates must meet the requirements of the regular M.A. Program in English with the following modifications:

1. In place of the course in Literary Criticism, students may elect English 760, 761, or 762. The course in methodology will not be required.
2. Of the required minimum of 30 credits in English, the candidate's program will normally include 12 credits of writing workshops in one or two genres. These, plus the Advanced Writing Project (Thesis - see below), will total 15 credits in creative writing. The remaining 15 credits will be taken in English and American literature, including courses which are required as in 1) under the Literature Sequence above.
3. The Advanced Writing Project (Thesis) will be a substantial and publishable manuscript of poems, a novel, a collection of novellas or short stories, a group of short plays, or a full-length play.
4. There will be no oral examination.

Procedures

Inquiries concerning admission, course selection, thesis preparation, assistantships and fellowships, transfer credits, and other matters pertaining to the program should be addressed to the director of graduate studies.

Relation to the City University Ph.D. Program

1. The first 30 graduate credits in English at Queens College may be counted toward the Ph.D. in English literature in the City University, except that no more than six credits in courses on the 600 level may be so counted. The University doctoral program in English is described in the *Bulletin* of the Graduate School of the City University of New York.

2. Candidates who expect to proceed to the Ph.D. in the City University should apply for admission directly to the Ph.D. program instead of to Queens. Inquiries should be addressed to the Executive Officer of the Ph.D. Program, 33 West 42nd Street, New York, NY 10036.

Program for the Master of Science in Education Degree

Requirements for Matriculation

The following are additions to the general requirements:

A cumulative index and English index of at least *B*, as well as a *B* index in education are required for matriculated status. Students who do not meet the above requirements may be permitted to enter as probationary matriculants. Probationary status will be removed when the first 12 credits of approved course work have been completed with a minimum average of *B*.

Requirements for the Degree

1. Candidates in this program have two advisers, one in the Department of Education and one in the Department of English; both advisers must be consulted before registering in the program, and both must sign the approved program of studies. The Education Adviser should be consulted *first*.

2. Course requirements for students specializing in English include the following: 15 credits in English, 6 credits of which must be in courses on the 700 level (including English 701 as described in item 3 below). Students who have not previously taken courses equivalent to English 636 and 662 or 673 must include those courses in the 15 credits.

3. English 701 should be taken by every student as early as possible in this program.

Courses in English

Courses on the 600 level are designed for students who have not already had work in the area concerned, and are open to qualified undergraduates with permission of the department.

613. Introduction to Old English. 2 hr. plus conf.; 3 cr. Language and literature of the Anglo-Saxons.

618. Introduction to Middle English. 2 hr. plus conf.; 3 cr.

619. Major Works of the Middle Ages. 2 hr. plus conf.; 3 cr.††

620. Major Writers of the Renaissance Exclusive of Shakespeare. 2 hr. plus conf.; 3 cr.††

621. Major Writers of the Seventeenth Century. 2 hr. plus conf.; 3 cr.††

622. Major Writers of the Eighteenth Century. 2 hr. plus conf.; 3 cr.††

623. Major Romantic Writers. 2 hr. plus conf.; 3 cr. Poetry and prose, exclusive of the novel.?

624. Major Victorian Writers. 2 hr. plus conf.; 3 cr. Poetry and prose, exclusive of the novel.††

627. Major American Writers before 1918. 2 hr. plus conf.; 3 cr. Poetry and prose, exclusive of the novel.?

629. Major Modern Writers. 2 hr. plus conf.; 3 cr. British and American nondramatic literature since about 1918.†

635. Major English and American Novelists. 2 hr. plus conf.; 3 cr. The novel from the eighteenth century to the present.?

636. History of Literary Criticism. 2 hr. plus conf.; 3 cr. Readings in the major criticisms from Plato and Aristotle to the present.?

638. Modern Drama. 2 hr. plus conf.; 3 cr. American, British, and European dramatic literature and theatre from Ibsen to the present.†

662. History of the English Language. 2 hr. plus conf.; 3 cr. Structure and development of modern English.7

673. New Approaches to English Grammar. 2 hr. plus conf.; 3 cr. Recent theories and techniques in linguistics.†

681. Special Studies. 2 hr. plus conf.; 3 cr. A study of literature and a related topic. Subject will vary from semester to semester and will be announced in advance. In recent years the following courses have been offered: Influence of Myth, Influence of the Bible, Black Literature, Literature and Psychology, Great Books of the Twentieth Century, Literature and Politics, Literature and Cinema, Literature and Theatre.†

701. Seminar in Graduate Methodology. 2 hr. plus conf.; 3 cr. Development of proficiency in literary research and bibliographical methods through individual research projects involving frequent library assignments. Normally to be taken in the first semester of graduate work, and certainly before the writing of the thesis.?

Note: Students should not, without the permission of the department, take any of the following courses unless they have had preparation in the area, such as an undergraduate elective, a 600-level graduate course, or the equivalent. Courses entitled "Studies in" may be repeated for credit if the subject is different.

714. Studies in Old English. 2 hr. plus conf.; 3 cr.

719. Studies in Medieval Literature. 2 hr. plus conf.; 3 cr.††

720. Studies in Renaissance Literature. 2 hr. plus conf.; 3 cr.††

721. Studies in Seventeenth-Century Literature. 2 hr. plus conf.; 3 cr.††

722. Studies in Eighteenth-Century Literature. 2 hr. plus conf.; 3 cr.††

723. Studies in Romantic Literature. 2 hr. plus conf.; 3 cr.††

724. Studies in Victorian Literature. 2 hr. plus conf.; 3 cr.†

726. Studies in Early American Literature. 2 hr. plus conf.; 3 cr.††

727. Studies in American Literature, 1820-1920. 2 hr. plus conf.; 3 cr.†

729. Studies in Modern Literature. 2 hr. plus conf.; 3 cr.†

736. Studies in Criticism. 2 hr. plus conf.; 3 cr.††

742. Studies in Shakespeare's Plays. 2 hr. plus conf.; 3 cr.†

Courses numbered 751-759 are open *only* to candidates in the Creative Writing Sequence.

751. Workshop in Fiction. 2 or 3 hr. plus conf.; 3 cr. May be repeated for credit.?

753. Workshop in Poetry. 2 or 3 hr. plus conf.; 3 cr. May be repeated for credit.77

755. Workshop in Drama. 2 or 3 hr. plus conf.; 3 cr. May be repeated for credit.††

757. Workshop in Special Topics in Creative Writing. 2 hr. plus conf.; 3 cr. An intensive study of one or more writing genres, with appropriate readings and writing practice; e. g., literary essay, children's literature, narrative poetry, science fiction, etc. May be repeated for credit.

759. Advanced Writing Project (Thesis). 3 hr.; 3 cr. Prereq.: Completion of course work. Preparation of the required creative writing project under the supervision of an instructor.?

760. Fiction in Theory and Practice. 2 hr. plus conf.; 3 cr. An intensive study of the theory of fiction, with close reading of a number of stories, novellas, and/or novels and readings in literary criticism. (This is not a writing workshop course but one in the critical reading of fiction. It is designed especially for creative writers.)

761. Poetry in Theory and Practice. 2 hr. plus conf.; 3 cr. An intensive study of poetical theory, with close reading of a number of poets and readings in literary criticism. (This is not a writing workshop course but one in the critical reading of poetry. It is designed especially for creative writers.)

762. Drama in Theory and Practice. 2 hr. plus conf.; 3 cr. An intensive study of the theory of drama, with close reading of a number of plays and readings in literary

criticism. (This is not a writing workshop course but one in the critical reading of drama. It is designed especially for creative writers.)

775. Studies in English Linguistics. 2 hr. plus conf.; 3 cr.††

781. Special Seminars. 2 hr. plus conf.; 3 cr. Intensive analysis of a major figure, type, trend, or problem, under the guidance of a specialist. The subject will vary from semester to semester and will be announced in advance together with any special prerequisites.†

788. Cooperative Education Placement. Prereq.: Permission of the director of graduate studies. Experiential learning through placement. Opportunity to test and demonstrate academic learning in an organizational setting. Students receive academic credit as well as a stipend from the placement. A learning contract as well as an academically related project will be worked out with an adviser.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

788.6. 6 hr.; 6 cr.

791. Thesis Course. 3 hr.; 3 cr. Prereq.: Completion of course work. Students should not register for this course until they have consulted the Graduate Adviser, tentatively established a topic, and obtained the agreement of a faculty member to act as supervisor. If the thesis is not completed by the end of the semester during which the student is registered for this course, a grade of *Incomplete* will be given, which must be made up no later than by the end of the four-year period allotted for completion of the Master's degree.7

795. Independent Study. Hr. to be arranged, 3 cr. Prereq.: Permission of the director of graduate studies and the instructor. Tutorial for work in a special subject not covered by regular course offerings. May be repeated for credit if the topic is changed. Open only to candidates for the M.A. in English.?

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

EUROPEAN LANGUAGES & LITERATURES

Chair: Peter Carravetta

Dept. Office: Ring Hall 207, 997-5980; Fax 997-5072

The Department of European Languages and Literatures offers the Master of Arts degree in French and Italian. The degree leads to teaching careers in secondary education and college, and to admission to doctoral programs in these languages or comparative literature. Courses cover numerous aspects of the literature from the Medieval through the contemporary periods, viewed through various methods of literary criticism. Courses are also given in the history of the language, advanced translation, civilization, and the cinema. Seminars are set aside for methodology, selected authors or literary topics, and special problems. The Department of European Languages and Literatures, in cooperation with the School of Education, also offers the Master of Science in Education degree in French and Italian.

Faculty

- Carravetta, Peter, Chair, *Professor*, Ph.D. 1983, New York University: Modern Italian culture, history of criticism, theory of literature, post-modernism
- Haller, Hermann W., Italian Adviser, *Professor*, Ph.D. 1971, University of Bern: Romance philology, comparative linguistics, Italian dialectology
- Sungolowsky, Joseph, French Adviser, *Professor*, Ph.D. 1963, Yale University: eighteenth- and nineteenth-century French literature
- Sawicki, Gloria, M.S. in Education Adviser, *Lecturer*, Ph.D., 1994, SUNY at Stony Brook: foreign language instruction, contemporary French civilization (on leave 1997-98)
- Brown, Royal S., *Professor*, Ph.D. 1975, Columbia University: twentieth-century French literature, music, and cinema
- Lonigan, Paul R., *Professor*, Ph.D. 1967, Johns Hopkins University: French Medieval and Renaissance literature, philology
- Paulicelli, Eugenia, *Associate Professor*, Ph.D. 1991, University of Wisconsin at Madison: Italian Renaissance literature, cultural studies, women writers, literature and the visual arts
- Picken, Robert A., *Associate Professor*, D. Phil. 1965, Oxford University: seventeenth-century French literature, women writers (on leave 1997-98)
- Russell, Rinaldina, *Professor*, Ph.D. 1971, Columbia University: Italian Medieval and Renaissance literature, women writers

Master of Arts Program

Graduate Advisers: Hermann W. Haller (Italian), Joseph Sungolowsky (French)

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. A strong undergraduate concentration in either French or Italian, consisting normally of a minimum of 20 undergraduate elective credits.
2. The credentials of each applicant are to be examined by a suitable departmental committee which shall have the authority to accept or reject the candidate. This committee may request an interview with a candidate for admission if it feels it necessary to do so.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Students must consult the Graduate Adviser in their language for assistance and guidance in working out an approved program of studies.
2. Thirty credits are required for the Master of Arts degree. Completion of a thesis is optional. Students who wish to complete the thesis are required to take 791 and 792 as part of the 30-credit requirement. A minimum of 24 credits must be taken in the major language. The remaining credits may be taken with permission in a second language other than English.
3. All students are required to take the appropriate seminar (781) and course (701).
4. Students will be required to demonstrate their reading knowledge of another language other than English, in addition to their major language. A classical language may be substituted by special permission.
5. A comprehensive examination, both written and oral, will be administered in the major language, in which students will be tested on their knowledge of the important authors and literary movements. A student may not attempt this examination more than twice.
6. A thesis based on original research (791,792, Special Problems) may be substituted for two courses. This thesis will normally be written in English, or, by special permission, in the foreign language of the major field of the student's concentration.

Master of Science in Education Program

Acting Graduate Adviser: Joseph Sungolowsky; Kiely Hall 207, 997-5980

The Master of Science in Education Program (French and Italian) responds to the needs of teachers and prospective teachers of foreign languages. The degree program combines course work in 1) culture, literature, and language, 2) foreign language

education, and 3) professional education. The courses in culture, literature, and language are given by the Department of European Languages and Literatures. The courses in foreign language education and professional education are offered by the School of Education.

For admission requirements to Secondary Education programs, see page 58.

Requirements for Matriculation

In addition to the general admission requirements stated on page 16 of the Graduate *Bulletin*, applicants should have:

- A. Strong undergraduate concentration in the language of specialization consisting of at least 21 credits above course 204.
- B. Either an undergraduate minor in Secondary Education or completion of the following sequence of courses as part of the Secondary Education Advanced Certificate (see page 59):

	<i>credits</i>
SEYS 536. Educational Foundations	3
SEYS 552. Educational Psychology	3
SEYS 562. Seminar in Teaching	
Foreign Languages	3
SEYS 573. Student Teaching	6

Requirements for the Master of Science Degree

The 30 credits required for the degree are to be distributed as follows:

- A. Six courses in the major language:

Two courses (6 cr.) in language and linguistics
 Four courses (12 cr.) in literature and civilization

- B. Four courses in Secondary Education:

1. One course from the area of Foundations of Education: SEYS 701-708 (Prereq.: SEYS 201 or 536); 3 cr.
2. One course from the area of Psychological Foundations: SEYS 709, 710, 717, 718, 719, 738, or 768 (Prereq.: SEYS 222 or 552); 3 cr.
3. SEYS 743, Methods of Teaching Foreign Languages in Secondary School (Prereq.: SEYS 351 or 562); 3 cr.
4. SEYS 785, Methods of Research in Foreign Language Instruction (Prereq.: SEYS 743 or SEYS 790, a thesis based on original research in language or literature, directed by an adviser in the major language; 3 cr.

C. Students should meet with the Graduate Adviser as soon as possible to plan their program of study and submit it for approval.

Courses in French

The specific topic in each course entitled "Studies in . . ." will be announced at registration. Each "Studies in . . ." course may be repeated for credit provided the topic is different.

701. History of the French Language. 2 hr. plus conf.; 3 cr.

704. Problems in French Language. 2 hr. plus conf.; 3 cr.

708. French Medieval Literature. 2 hr. plus conf.; 3 cr.

710. Rabelais and Montaigne. 2 hr. plus conf.; 3 cr.

711. French Renaissance Literature. 2 hr. plus conf.; 3 cr.

713,714. French Classical Theatre of the Seventeenth Century. 2 hr. plus conf.; 3 cr. each semester. First semester: Corneille and Racine. Second semester: Moliere.

715. Non-Dramatic Literature of the Seventeenth Century. 2 hr. plus conf.; 3 cr.

716. Voltaire and the "Philosophes." 2 hr. plus conf.; 3 cr.

717. The Eighteenth Century. 2 hr. plus conf.; 3 cr.

719,720. French Novel of the Nineteenth Century. 2 hr. plus conf.; 3 cr. each semester. First semester: Balzac and Stendhal. Second semester: Flaubert and Zola.

721. The Poetry and Theatre of the Nineteenth Century. 2 hr. plus conf.; 3 cr.

722. Baudelaire and the Symbolists. 2 hr. plus conf.; 3 cr.

724. Contemporary French Literature. 2 hr. plus conf.; 3 cr.

728. Contemporary French Theatre. 2 hr. plus conf.; 3 cr.

778. Advanced Translation in French. 2 hr. plus conf.; 3 cr. The course will deal with translation in theory and in practice and will also include linguistics and stylistics. The translation will be from English to French and from French to English.

779. Studies in French Cinema. 4 hr.; 3 cr. The course will examine different aspects of the cinematic art. The approaches include: 1) Movements (neo-realism, new wave, etc.); 2) Genres; 3) Literature into films; 4) The cinema as a socio-cultural phenomenon; 5) Cinematic stylistics. Films will be shown in French. Students will be expected to produce substantial works of film analysis.

780. Trends and Events in French Civilization. 2 hr. plus conf.; 3 cr. A study of the events and ideological trends of the civilization produced by France. Students will read and report on primary texts in fields such as political history, economics, sociology, and on significant artistic and cultural developments.

781. Seminar: Methodology and Selected Literary Topics. 2 hr. plus conf.; 3 cr.

782. Studies in French Literature. 2 hr. plus conf.; 3 cr. This course is intended as a seminar in the study of French literature. It is an open topics course; the title will be announced at the beginning of each semester in which it is offered. It can be repeated for credit, provided the topic is different.

791,792. Special Problems. 3 cr. each semester. Individual study, under the supervision of an instructor, of a topic agreed on, normally involving research in literary history or criticism, and resulting in an acceptable thesis. No credit will be given for these courses until the thesis has been approved. No more than three credits in each course may be counted toward the degree.

Courses in Italian

The specific topic in each course entitled "Studies in . . ." will be announced at registration. Each "Studies in . . ." course may be repeated for credit provided the topic is different.

701. History of the Italian Language. 2 hr. plus conf.; 3 cr.

704. Problems in Italian Language. 2 hr. plus conf.; 3 cr. This course can be repeated for credit, provided the topic is different.

707,708. Humanism and the Renaissance. 2 hr. plus conf.; 3 cr. each semester.

707. Special attention will be given to the historical and cultural situation in *Quattrocento* Italy; Poliziano, Lorenzo de' Medici, the great centers of Florence, Naples, Rome, and Padua; the chivalric poems of Pulci and Boiardo.

708. The *questione della lingua*; the treatise writers; Machiavelli, Ariosto, and Tasso. The *novelle* of Bandello, Firenzuolo; the Counter-Reformation and the Academies.

711. Italian Literature from its Origins to the Trecento. 2 hr. plus conf.; 3 cr.

713,714. Dante's *Divina Commedia*. 2 hr. plus conf.; 3 cr. each semester.

715. The Early Italian Lyric and Petrarch. 2 hr. plus conf.; 3 cr.

716. Boccaccio's *Decameron* and the Italian Novella. 2 hr. plus conf.; 3 cr.

721. Ariosto and Tasso. 2 hr. plus conf.; 3 cr.

722. Machiavelli and Guicciardini: Historians, Men of Letters, and Political Thinkers. 2 hr. plus conf.; 3 cr.

723. Italian Literature in the Age of the Baroque. 2 hr. plus conf.; 3 cr.

725. Italian Comedy from the Renaissance to the End of the Eighteenth Century. 2 hr. plus conf.; 3 cr.

726. Aspects of Nineteenth- and Twentieth-century Theatre. 2 hr. plus conf.; 3 cr.

752. The Art and Humanism of Manzoni. 2 hr. plus conf.; 3 cr.

753. Leopardi and Foscolo. 2 hr. plus conf.; 3 cr.

754. Carducci, D'Annunzio, Pascoli. 2 hr. plus conf.; 3 cr.

755. Contemporary Italian Poetry. 2

hr. plus conf.; 3 cr.

760. History of Italian Literary Criticism, from the Renaissance to De Sanctis. 2 hr. plus conf.; 3 cr.

761. Italian Literary Criticism since 1870. 2 hr. plus conf.; 3 cr.

762. The Modern Italian Novel. 2 hr. plus conf.; 3 cr.

763. The Contemporary Italian Novel. 2 hr. plus conf.; 3 cr.

778. Advanced Translation in Italian. 2 hr. plus conf.; 3 cr. The course will deal with translation in theory and in practice and will also include linguistics and stylistics. The translation will be from English to Italian and from Italian to English.

779. Studies in Italian Cinema. 4 hr.; 3 cr. The course will examine different aspects of the cinematic art. The approaches include: 1) Movements (neo-realism, new wave, etc.); 2) Genres; 3) Literature into films; 4) The cinema as a socio-cultural phenomenon; 5) Cinematic stylistics. Films will be shown in Italian. Students will be expected to produce substantial works of film analysis.

780. Trends and Events in Italian Civilization. 2 hr. plus conf.; 3 cr. A study of the events and ideological trends of the civilization produced by Italy. Students will read and report on primary texts in fields such as political history, economics, sociology, and on significant artistic and cultural developments.

781. Seminar: Methodology and Selected Literary Topics. 2 hr. plus conf.; 3 cr.

782. Studies in Italian Literature. 2 hr. plus conf.; 3 cr. This course is intended as a seminar in the study of Italian literature. It is an open topics course; the title will be announced at the beginning of each semester in which it is offered. It can be repeated for credit provided the topic is different.

791,792. Special Problems. 3 cr. each semester. Individual study, under the supervision of an instructor, of a topic agreed on, normally involving research in literary history or criticism, and resulting in an acceptable thesis. No credit will be given for these courses until the thesis has been approved. No more than three credits in each course may be counted toward the degree.

Courses in Reserve

French 702. French Stylistics.

French 703. Advanced Phonetics.

Italian 702. Italian Stylistics.

Italian 703. Advanced Phonetics.

Italian 705,706. History of Italian Literature.

Italian 712. Dante's Minor Works.

Italian 751. The Pre-Risorgimento Period.

FAMILY, NUTRITION & EXERCISE SCIENCES

Chair: Jacqueline M. Newman

Deputy Chairs: Margaret K. Franco,
Elizabeth D. Lowe

Graduate Program Coordinators: Lakshmi
Malrouit, Michael M. Toner

Dept. Office: Remsen 306, 997-4150; Fax
997-4163

Graduate programs in Family, Nutrition, and Exercise Sciences (FNES) have several emphases including: curriculum and teaching in movement science and physical education designed for educators and clinical practitioners in schools, hospitals, and child-care centers; educational services in the community, business, and industry designed for those who wish to teach in community settings such as adult education, programs for the elderly, and public or private agencies; exercise science designed for students preparing for careers in corporate/executive fitness, cardiac rehabilitation, and general health promotion; nutrition education designed for students who work or teach in hospitals, nursing homes, schools, or community settings; and teacher education in family and consumer sciences/home economics designed for students whose primary interest is in secondary school teaching.

The Department has approval from the American Dietetic Association (ADA), and its program allows qualified students to meet requirements of the Dietetic Internship Program (formerly known as AP-4). Students interested in this aspect of nutrition education who wish to meet ADA requirements through this program must have a DPD verification. For further information, contact a graduate program coordinator.

Faculty

Newman, Jacqueline M., Chair, *Professor*, Ph.D. 1980, New York University: food and nutrition, Chinese food habits, changes with acculturation, food habits of other ethnic groups, the elderly, the obese, and food history

France, Margaret K., Deputy Chair, *Assistant Professor*, M.S. 1961, University of North Carolina: kinesiology, biomechanics, teacher education

Lowe, Elizabeth D., Deputy Chair, *Associate Professor*, Ph.D. 1979, University of Illinois: textiles and apparel, fashion theory, sociocultural aspects of fashion

Malrouit, Lakshmi, Graduate Program Coordinator of Family & Consumer Sciences, *Assistant Professor*, Ph.D. 1992,

Oregon State University: consumer studies, housing for the elderly, inter-generational housing

Toner, Michael M., Graduate Program Coordinator of Exercise Science and Physical Education, *Associate Professor*, Ph.D. 1979, Ohio State University: exercise physiology, temperature regulation during exercise

Catelli, Linda A., *Associate Professor*, Ed.D. 1979, Teachers College, Columbia University: curriculum and teaching, action research and movement science

Fardy, Paul S., *Professor*, Ph.D. 1967, University of Illinois: physical activity and cardiovascular health, cardiac rehabilitation, and health promotion

Kant, Ashima K., *Assistant Professor*, Ph.D. 1987, University of Maryland: food and nutrition, nutritional epidemiology

Lin, Li-Wen, *Assistant Professor*, Ph.D. 1992, Purdue University: family studies, intergenerational interdependence, changing role of women, issues in marriage and family

Ludman, Elaine Kris, *Associate Professor*, Ed.D. 1979, Teachers College, Columbia University: food and nutrition, geriatric nutrition, nutrition in special populations

Magel, John R., *Professor*, Ph.D. 1966, University of Michigan: exercise physiology, metabolic and cardiovascular response to acute and chronic physical training, especially swimming physiology

McArdle, William D., *Professor*, Ph.D. 1965, University of Michigan: exercise physiology, the effects of physical activity on cardiovascular dynamics, body composition, and temperature regulation

Miller, Marcia C., *Lecturer*, Ed.D. 1983, Teachers College, Columbia University: food and nutrition, adolescent nutrition, food habits and patterns, nutrition education

Program for the Master of Science in Education Degree

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. An undergraduate average of B (3.0) or better in the undergraduate major.

2. Completion of an undergraduate major in FNES or a related area or permission of a FNES graduate program coordinator.

3. Students who hold provisional certification and complete the Master of Science in Education degree will have met all the requirements for permanent certification except the experience requirement. Students who do not hold provisional certification will not be eligible for permanent certification. Students who seek to meet requirements for provisional certification must see a graduate program coordinator.

4. Approval of the department.

5. An interview may be required.

6. Students whose background is

deemed deficient or not current may be required to make up deficiencies as specified by the department.

Requirements for the Degree of Master of Science in Education

These requirements are in addition to the general requirements for the Master of Science in Education degree.

1. Students must complete a minimum of 30 credits with an academic average of B (3.0) or better.

2. An approved course from the areas of the foundations of education or the psychological foundations of education and either SEYS 738 or 737.

3. All elective courses *must* be approved in advance by a graduate program coordinator.

4. Descriptions of the individual areas of specialization and their required courses are listed below.

Curriculum and Teaching: Movement Science and Physical Education

This specialization focuses on the theoretical study of curriculum and teaching integrated with the substantive study of human movement and its professional applications to educational and clinical practice. It prepares educators to serve in leadership roles for the prime purpose of designing programs and teaching strategies in the area of human movement. Required courses include: FNES 600,705, 708, 710, 730, 740, SEYS 738, and one course each at the 700 level in Foundations of Education and Psychological Foundations of Education (SEYS). A transitional course of study is available for individuals in other fields who wish to be certified to teach Physical Education.

Educational Services in the Com- munity, Business, and Industry

A sequence of courses for those students preparing for careers in educational services must be planned by the student in consultation with a graduate program coordinator, whose approval is required. Required courses include: FNES 636,711, 751, 795, SEYS 787; and one course from the following: SEYS 700-720, 735, or 736.

Exercise Science

This sequence of courses is directed toward those students preparing for careers in corporate/executive fitness, cardiac rehabilitation, and general health promotion, teachers and coaches who work in fitness-oriented programs, and those individuals who want to work in commercial and clinical settings where their prime responsibility is initiating, directing, and evaluating programs to promote enhanced health and fitness. Course work is blended with clinical experience in the human performance laboratory, which is fully equipped for measurement in cardiovascular, respirato-

ry, and muscular fitness and body composition analysis. Clinical research experiences in the health implications of regular exercise and in-depth practical experiences through field work and internships are available in a variety of school and fitness settings. Required courses include: FNES 705, 710, 720, 721, 722, 723, 724, 725, 726.

Nutrition Education

Courses in this sequence enhance the clinical background of dietitians/nutritionists who are educating or will educate clients in hospitals, nursing homes, out-patient clinics, community programs, schools, wellness programs, and funded programs. Required courses include: FNES 636, 711, 767, 768, 795, and SEYS 787.

Teacher Education in Family and Consumer Sciences/Home Economics

A sequence of courses for individuals currently teaching and those planning to teach Home and Career Skills/Home Economics who wish to fulfill the Master's degree requirement for permanent teacher certification. Required courses include: FNES 636, 707, 711, 745, 751, 795, and SEYS 737.

A transitional course of study is available for individuals in other fields who wish to be certified to teach Home and Career Skills/Home Economics. Students must consult a graduate program coordinator regarding the prerequisites.

Courses

600. Basis of Motor Control. 3 hr.; 3 cr. A survey of the basic neural processes that govern and the neuro-anatomical structures that underlie the control of movement. Special attention given to some common neurological impairments. Fall

634. Adult and Occupational Education in Family and Consumer Sciences. 3 hr.; 3 cr. History, philosophy, and resources in adult and occupational education in the United States with emphasis on legislation that has been developed to fund programs related to Family and Consumer Sciences. ††

636. Writing for the Professional in FNES. 3 hr.; 3 cr. Preparation of copy for press and news releases, promotional material, newspapers, magazines, and business publications. Fall

705. Research in Physical Education. 2 hr. plus conf.; 3 cr. Prereq.: FNES 710. Basic methodologies and techniques used in physical education research including historical, descriptive, and experimental methods. Fall, Spring

707. Cultural and Ethnic Foods. 2 lec., 2 lab. hr.; 3 cr. Prereq.: Undergraduate course work in foods and nutrition. Study of the food patterns of varying cultures and ethnic groups, and of the nutritional, economic, and sociological implications of

these patterns. Field trips included. Fall

708. Seminar in Health, Physical Education, and Movement Science. 2 hr. plus conf.; 3 cr. Topic announced each semester. May be repeated for credit for different topic. Fall, Spring

710. Application of Quantitative Methods in FNES. 2 rec., 1 lab. hr.; 3 cr. Prereq.: A course in elementary statistics or demonstrated proficiency in descriptive statistics. Application of descriptive, correlational, and inferential statistical methods.

711. Contemporary Issues in FNES. 3 hr.; 3 cr. Prereq.: Permission of department. Curricula and programs in FNES as they are affected by social and professional issues. Spring

720. Scientific Foundations of Physical Fitness and Training. 2 rec., 1 lab. hr.; 3 cr. The principles underlying programs to develop specific aspects of physical fitness are examined within the framework of physiological adaptations to exercise. Fall

721. Principles of Electrocardiography and Stress Testing. 2 hr. plus conf.; 3 cr. Study of the fundamentals of electrocardiography with special emphasis on its application to exercise stress testing. Fall, Spring

722. Exercise, Nutrition, and Weight Control. 3 hr.; 3 cr. Interrelationships between exercise, nutrition, energy, metabolism, and weight control. Fall, Spring

723. Physical Activity and Cardiovascular Health. 3 hr.; 3 cr. Review of research relating physical activity to coronary heart disease, with special emphasis on mortality/morbidity, reversal of atherogenesis, cardiovascular disease risk factors, and myocardial function. Spring

724. Adult Fitness and Exercise Prescription. 3 hr.; 3 cr. Prereq.: FNES 721 or permission of instructor. Use of exercise to evaluate and improve cardiovascular function in adults in health and disease. Fall, Spring

725. Measurement of Physical Fitness and Body Composition. 3 hr.; 3 cr. Prereq.: FNES 720. Laboratory and field methods for assessing the various aspects of physical fitness. Fall, Spring

726. Internship in Adult Fitness and/or Cardiac Rehabilitation. Hr. to be arranged; 3 cr. Prereq.: Completion of 24 cr. in the Exercise Science Program and/or permission of instructor. In addition to regular seminar meetings on campus, the on-site hourly requirement varies according to the clinical nature of the internship program. This course will provide an in-depth, highly structured, practical experience in a formalized program dealing with fitness and health enhancement in healthy adult populations as well as populations involved in rehabilitative programs. The internship integrates the basic academic classroom

and laboratory learning of the university setting and applies this knowledge to existing community, corporate, and/or clinically based programs. (Some internships are paid; some are not.) Fall, Spring

728. New Trends in Textiles and Apparel. 3 hr.; 3 cr. Prereq.: FNES 121, Textiles. A survey of research and development and distribution of textile and apparel products in relation to consumer needs. ††

730. Mechanical Analysis of Human Movement. 3 hr.; 3 cr. An analysis of the mechanics of human motion, based upon the application of principles and laws of physics. Spring

740. Basic Principles of Motor Learning and Performance. 2 rec., 1 lab. hr.; 3 cr. Psychological and physiological factors relating to the facilitation of learning and performance of motor skills. Fall

741. Drugs: A Family, School, and Community Problem. 3 hr.; 3 cr. A broad approach to the extremely complex drug abuse problem in society today - including the medical, legal, psychological, and social aspects of the problem - to create an awareness and better understanding of the problem, how it affects the individual, the family, the community, and society. ††

745. The Child in the Family. 3 hr.; 3 cr. Prereq.: FNES 147, Family Relations. The role of the child in the family from pre-school through adolescence. Familial practices evaluated in terms of their effect on the child's development. ††

749. Contemporary Home and Family Living. 3 hr.; 3 cr. Prereq.: FNES 147, Family Relations. Research and practices about family and interpersonal relations in contemporary living. ††

751. Resources for Consumer Education. 3 hr.; 3 cr. Prereq.: FNES 151, The Family and Consumer Studies. Materials and methods in teaching consumer education with special emphasis on the role of individuals and families as consumers.

762. Nutrition Counseling. 3 hr.; 3 cr. Prereq.: FNES 365. Nutrition, Counseling, and Assessment, and 366, Medical Nutrition Therapy. Principles of dietary counseling for the general population and for individuals with special health problems. ††

765. Resources for Nutrition Education. 3 hr.; 3 cr. A detailed survey and assessment of resources for nutrition education applicable to a wide variety of audiences.

767. Advanced Diet Therapy. 3 hr.; 3 cr. Prereq.: FNES 365, Nutrition Counseling, and Assessment, and 366, Medical Nutrition Therapy. This course examines the rationale of therapeutic diets and their physiological bases. Current trends in the practice of developing special diets for per-

†-Offered either Fall or Spring; see Class Schedule.
††-May be offered; see Class Schedule.

sons under medical care will be stressed.

768. Advanced Nutrition. 3 hr.; 3 cr. Prereq.: FNES 368, Advanced Nutrition. Recent advances in nutrition and interpretation. A systematic survey of journals and other sources. Fall

770. Community Nutrition. 3 hr.; 3 cr. Prereq.: FNES 264, Nutrition II. A survey of the content, organization, and administration of the publicly and privately sponsored nutrition programs and services offered to the community and of the legislation regulating and affecting these programs. Research studies evaluating such programs will also be examined. Field trips included.

771,772. Internship in Family, Nutrition, and Exercise Sciences I, II. Hours and credits for each course: 20 hr. per week including seminar; 3 cr. Prereq.: Permission of department; for 772, 771. Application and analysis of content area learning through internship. Students will work in approved field site placements under the supervision of experienced professionals. The accompanying seminar focuses on roles and responsibilities of professionals, application of knowledge, and education of client populations.

773,774. Internship in Dietetics I, II. Hours and credits for each course: 40 hr. internship per week plus seminar; 6 cr. Prereq.: Permission of department; for 774, 773. Application and analysis of content area learning in a formal program of in-depth, highly structured, practical internships. Students will work in one or more approved field site placements (clinical, community, and management) under the supervision of experienced Registered Dietitians, Community Supervisors, and/or Food Service Management professionals. The accompanying seminar focuses on application of knowledge, roles and responsibilities of professionals, and education of client populations. Only 6 credits of Dietetics Internship may be counted toward the M.S. in Education degree.

775. Advanced Food Service Management. 3 hr.; 3 cr. Prereq.: FNES 275, Institutional Management; 378, Quantity Food Purchasing, Production; and Equipment, or equivalents. An advanced approach to three main areas of food service management: personnel, finance, and labor relations. Through lecture, case study, and analysis of current research reports, the principles of finance, managerial accounting, and the use of the computer are explored, as are general theories and concepts of management/ personnel communications, labor relations, and legal problems in the food service industry.

777. Problems and Practices in Food Service Management. 3 hr.; 3 cr. Prereq.: FNES 275, Institutional Management. An integrative approach to the problems and practices of food service management, focusing on the contributions of various scientific disciplines to a study of the stages of

production, processing, packaging, and preparation of food for consumption. Special emphasis is given to food sanitation and safety and their effects on the individual, the environment, and ecology.

781,782. Seminar in Family and Consumer Sciences. 3 hr.; 3 cr. each semester. Selected topics of current interest will be announced in advance of those semesters in which the course is offered. Spring

788. Cooperative Study. Prereq.: Permission of department. Cooperative Study performed by students participating in the Cooperative Education Program involves employment of the student in one of a variety of FNES-related jobs with the direct supervision of the employer and overview guidance provided by a faculty adviser. Cooperative Study supplements the traditional classroom and laboratory programs of study. The student prepares a report for the faculty supervisor upon completion of the Cooperative Study experience. No more than 6 credits may be taken in Cooperative Study.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

788.6. 6 hr.; 6 cr.

791,792. Special Problems. Prereq.: Permission of department. Independent study under supervision of a member of the department. For students recommended by the department for advanced work not otherwise provided in the department or by the School of Education. No more than 6 credits may be taken in Special Problems.

791.1. 1 hr.; 1 cr.

791.2. 2 hr.; 2 cr.

791.3. 3 hr.; 3 cr.

792.1. 1 hr.; 1 cr.

792.2. 2 hr.; 2 cr.

792.3. 3 hr.; 3 cr.

795. Research in Family and Consumer Sciences. 3 hr.; 3 cr. Prereq.: SEYS 787, Seminar in Family and Consumer Sciences Research, and permission of department. Using the proposal developed in SEYS 787. the research is implemented. This course includes computer use, analysis of data, and the writing of a research article. Fall

SEYS 738. The Teaching Process. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational psychology. Examination of current literature relating to the analysis of teaching. Study of recent research and other materials on the nature of teaching.

SEYS 787. Seminar in Family and Consumer Sciences Research. 3 hr.; 3 cr. Prereq.: Completion of no fewer than 6 nor more than 12 graduate credits; FNES 636, Writing for the Professional in FNES, and 710, Application of Quantitative Methods, or a course in statistics. Theories, methods, and tools applied to research and proposal writing in FNES. Development of a

research proposal. Spring

Courses in Reserve

701. History and Principles of Health and Physical Education.

703. Planning Facilities for Physical Education in Schools and Community.

704. Contemporary Issues and Problems in Physical Education.

706. Contemporary Issues and Problems in Health Education.

707. Dance Education in the United States.

709. Workshop in Secondary School Physical Education.

712. The Role of Sport in Contemporary American Society.

727. Clothing and Social Science Theory.

743. Physical Education for the Mentally Retarded, Learning Disabled, and Emotionally Disturbed.

744. Physical Education for the Physically Handicapped and Sensorially Impaired.

746. Practicum in Special Physical Education.

750. Understanding Human Sexuality.

751. Seminar on Drug Use and Abuse.

GEOLOGY

Chair: Allan Ludman

Assistant Chair for Graduate Advisement:
Daniel Habib

Dept. Office: Science Bldg. D216, 997-3300

Department E-mail:
GEOLOGY@QCVAXA.ACC.QC.EDU

The department offers a program leading to the Master of Arts degree in Geology with specialties in the areas of climatology/oceanography, economic geology, experimental mineralogy and petrology, geomorphology and quaternary studies, environmental geology and geochemistry, igneous and metamorphic petrology, paleontology/palynology, sedimentation, and sedimentary petrology. Regional tectonic and sedimentary studies include the North Atlantic, the northern Appalachians, the Caribbean, South America, and Europe.

The department's location provides abundant space for laboratories and equipment. Full facilities for specimen preparation are available, as are facilities for X-ray diffraction and fluorescence, electron transmission and scanning electron microscopy, graphite furnace atomic absorption spectroscopy, ion-coupled plasma spectrometer, and high-pressure studies. Field studies are carried out under faculty guidance.

Geology faculty participate fully in the City University of New York Ph.D. program in Earth and Environmental Sciences. The department is also associated with the City University Oceanography Program and shares a research vessel and modern oceanographic instruments with other departments. Cooperative research projects exist with the American Museum of Natural History, the Lamont-Doherty Earth Observatory, and the Smithsonian Institution.

Exciting projects now being carried out by students and faculty include: Study of sewage effluent contamination in the benthic food web in Long Island Sound; the use of recycled materials for construction in New York Harbor; hurricane patterns on the East Coast in the past and future; long-term climate changes and weather patterns; deciphering of geologic and deformation history in Westchester County and in Maine; determining ages and isotopic relations of billion-year-old rocks from all over the world; the effects of meteorite impact (both statistically and paleontologically); and earthquake hazards in eastern North America. Current funding for research is from the National Science Foundation, the U. S. Department of Environmental Protection, New York State, and PSC/CUNY Research Awards. Students who have successfully completed the program have found employment in industry and the government, or have entered Ph.D. programs.

Faculty

- Ludman, Allan, Chair, *Professor*, Ph.D. 1969, University of Pennsylvania: field geology, metamorphic petrology, tectonics. ALLAN_LUDMAN@QC.EDU
- Habib, Daniel, Assistant Chair for Graduate Advisement, *Professor*, Ph.D. 1965, The Pennsylvania State University: dinoflagellates, biostratigraphy, sedimentology of organic matter, environmental palynology. DXHS@GEOLOGY@QC1.QC.EDU
- Alexandrov, Eugene A., *Professor Emeritus*, Ph.D. 1965, Columbia University: economic geology and geochemistry of mineral deposits, metallogenetic provinces and epochs, ore microscopy, methods of geological exploration, field studies of mineral deposits
- Blackwell, Bonnie A., *Assistant Professor*, Ph.D. 1987, University of Alberta: geochronology in archeological, paleontological and Quaternary site, environmental geochemistry, paleoenvironmental reconstruction, geoscience education. BONN@QCVAXA.ACC.QC.EDU
- Brock, Patrick W. G., *Associate Professor*, Ph.D. 1963, University of Leeds: field geology, igneous and metamorphic petrology, structural geology, geomorphology. GEOLOGY@QCVAXA.ACC.QC.EDU
- Brueckner, Hannes K., *Professor*: Ph.D. 1968, Yale University; Senior Research Associate, Lamont-Doherty Earth Observatory: structural geology, geotectonics, isotope geology, geochemistry. HANNES@LAMONT.LDEO.COLUMBIA.EDU
- Coch, Nicholas K., *Professor*, Ph.D. 1965, Yale University: sedimentology, coastal geology, environmental geology. GEOLOGY@QCVAXA.ACC.QC.EDU
- Finks, Robert M., *Professor*, Ph.D. 1959, Columbia University; Research Associate in Paleobiology, Smithsonian Institution; Geologist, U.S. Geological Survey: invertebrate paleontology and paleoecology. GEOLOGY@QCVAXA.ACC.QC.EDU
- Mattson, Peter H., *Professor*, Ph.D. 1957, Princeton University; Visiting Senior Research Associate, Lamont-Doherty Earth Observatory: structural geology, igneous and metamorphic petrology, geology of island arcs. MATTSON@QCVAXA.ACC.QC.EDU
- McHugh-Gonzalez, Cecilia M.G., *Assistant Professor*, Ph.D. 1993, Columbia University; Research Associate, Lamont-Doherty Earth Observatory: marine geology, sedimentology, sedimentary petrology, geomorphology. CMMQC@QCVAXA.ACC.QC.EDU
- McIntyre, Andrew, *Professor Emeritus*, Ph.D. 1969, Columbia University; Adjunct Senior Research Associate, Lamont-Doherty Earth Observatory: climatology and marine biology, oceanography
- Schreiber, B. Charlotte, *Professor Emerita*, Ph.D. 1974, Rensselaer Polytechnic

- Institute; Adjunct Senior Research Associate, Lamont-Doherty Geological Observatory: sedimentology, sedimentary petrology and stratigraphy, oceanography
- Speidel, David H., *Professor*, Ph.D. 1964, The Pennsylvania State University: geochemistry, petrology, environmental geochemistry. SPEIDEL@QCVAXA.ACC.QC.EDU
- Thurber, David L., *Professor Emeritus*, Ph.D. 1964, Columbia University; Visiting Research Professor, Federal University of Bahia (Brazil): environmental geochemistry, geochemical hydrology, geochemistry of weathering, geochronology, stable isotope geology

Program for the Master of Arts Degree

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. Undergraduate geology training in each of the following subjects:

- Physical geology (including geomorphology)
- Historical geology or stratigraphy
- Invertebrate paleontology or faunal stratigraphy
- Structural geology
- Mineralogy (including elementary crystallography)
- Petrography or optical mineralogy (involving familiarity with the petrographic microscope)
- Field geology (an approved field course)

The Departmental Graduate Committee will waive the above requirements-with the exception of Physical Geology and Historical Geology--for students with a strong background in one or more of the laboratory sciences who may wish to pursue studies in special fields such as geophysics, geochemistry, paleontology, earth sciences, or environmental sciences.

2. One year each of college calculus (differential and integral), physics, and chemistry. In addition, at least one semester of college biology is required of students desiring to pursue a graduate program in "soft-rock" geology.

3. Students are required to remove deficiencies by taking the necessary undergraduate courses without credit. Deficiencies must be removed before the student proceeds beyond 12 credits of graduate work in geology.

4. Advanced standing (not exceeding 12 credits) may be granted to students who have taken graduate courses in geology at other institutions with a minimum grade of B or the equivalent.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Residence: A minimum of two full

semesters.

2. Satisfactory completion of an approved course of study for a minimum of 30 credits in graduate geology courses, including a thesis. Individual programs are organized to permit specialization in most areas of geology and related earth sciences. Students must take Geology 701 and Geology 702 during their first year.

The Departmental Graduate Committee must approve the course of study for each student. At the discretion of the committee, pertinent courses in other science departments may be included in this category. In exceptional cases, the committee may waive required courses or prerequisites.

3. Thesis: The thesis problem and mentor must be approved by the Departmental Graduate Committee, which will also certify the acceptance of the completed thesis.

4. Certification: The committee shall certify to the Office of Graduate Studies the satisfactory completion of all academic requirements for the Master of Arts degree by the candidate.

Courses in Geology

Courses on the 500 level may not be applied toward the Master of Arts in Geology. Courses on the 700 level may presume knowledge normally provided in the requirements for matriculation. Students should consult with their advisers prior to registering for these courses.

501. Advanced Physical Geology. 3 lec., 3 lab. hr.; 4 cr. Required field trip(s). Geological materials, internal and external structure and dynamics of the earth, and origin and evolution of the earth's present landscapes.

502. Advanced Historical Geology. 2 lec., 2 seminar hr.; 3 cr. Prereq.: Geology 501 or equivalent. Required field trip(s). The origin and history of the earth as a planet; the use of evidence in reconstructing its crustal history, geography, and past environments; the evolution of life; regional geology of North America.

503. Modern Aspects of Geology. 3 rec., 3 lab. hr.; 4 cr. Prereq.: Two semesters of geology. An introduction to the basic geological processes and structures, followed by discussions of selected topics in geochemistry and geophysics.††

504. Environmental Problems and Solutions. 4 hr. (2 lec., 2 lab. hr.); 3 cr. Field trips. The scientific analysis of important environmental issues is presented and various solutions are discussed. Included are case history examples of human impact on the physical environment, such as toxic waste disposal, sludge management, pollution of the potable groundwater supply, sewage effluent, contamination of estuaries and anthropogenic cause of redtides, among others. Proposals are offered on land-use planning and on strategies for energy consumption, agriculture, and manufacturing.

507,508. Special Studies in Geology. Hr. to be arranged; 3 cr. Prereq.: One year of geology and permission of department. These courses are designed for graduate students interested in geology beyond the elementary level. Course requirements are normally met by successful completion of an advanced undergraduate geology course plus completion of a special project.??

509. Environmental Geology of the New York Metropolitan Region. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Geology 501 or equivalent. Geological processes affecting the quality of the environment. Laboratory work involves the study of maps, aerial photographs, and other data in order to analyze geologic problems and write environmental impact statements. Field trips may be included.††

510. Coastal Geology. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Geology 501 or equivalent. Geological processes, problems, and management decisions in the coastal zone of the United States. Laboratory work involves analysis of samples, maps, and aerial photographs. Field trips may be required.††

512. Oceanography of New York and Adjacent Waters. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Geology 501 or permission of instructor. An introduction to the processes and problems of the physical, geological, chemical, and biological oceanography of the northwest Atlantic. Lab sessions utilize oceanographic data to study specific areas. Field trips may be included.††

515. Geology of New York State. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Geology 501 or equivalent. Required field trip(s). The development of the bedrock, surficial geology, and landscapes of New York State over geologic time. Laboratory work involves analysis of samples, geological maps, and sections.††

516. Geology in the Field. 2 lec. and 6 lab. hr. or 1 day in the field per week, 4 cr. Prereq.: Geology 501 or equivalent. The mode of occurrence and identification of rock types and the development of landscapes are studied in the field. Field work involves obtaining, recording, and interpreting data from a diverse set of geologic terrains.††

701. Advanced Principles of Physical Geology. 3 lec., 3 lab. hr.; 4 cr. Required field trip(s). Prereq.: Permission of instructor. Modern concepts of Earth composition, processes, physiography, and internal structure.?

702. Advanced Principles of Historical Geology. 3 lec., 3 lab. hr.; 4 cr. Required field trip(s). Prereq.: Permission of instructor. Modern concepts of sedimentology, stratigraphy, paleontology, and basin analysis. Field and laboratory techniques used in the analysis of regional rock sequences.†

705. Computer Modeling in Geology: Special Topics. 2 lab. hr.; 1 cr. Prereq.: Permission of department. This course will

be offered as a complement to geology courses in which many of the applications involve the use of computers and modeling. Examples are geotechnics and soil mechanics, hydrology and groundwater geology, environmental geology, etc. Students will be expected to have some knowledge of computers and programming, and to have as a prerequisite or corequisite basic knowledge of the appropriate geological specialty. May be taken as a laboratory component to another course or as independent study.††

710. Structural Geology. 3 lec., 2 lab. hr.; 4 cr. Physical properties of rocks and rock behavior in different tectonic environments; deformation by fracturing; folding deformation; collapse structures; gravitational gliding; interpretation of linear and planar elements; petrofabric analysis. Fundamental concepts of geotectonics.††

712. Geotectonics. 2 lec. or 2 sem., 2 lab. hr.; 3 cr. A study of various aspects of the petrology, structural features, and stratigraphy of major tectonic elements, such as orogenic belts, intracratonal basins, rift-zones, island arcs, and mid-oceanic ridges; their significance in the development of the earth's crust. Detailed analysis of selected world regions.††

714. Geophysics. 3 lec. or sem. hr.; 3 cr. Principles of seismology: elastic constants; types and propagation of elastic waves. Exploration and earthquake seismology; gravity and magnetic fields of the earth, development of a comprehensive earth model based on geophysical data and concepts.††

715. Introductory Field Geology. 2 cr. Two to three weeks of supervised field work, with the results presented in a geologic map accompanied by a written report, cross sections, and appropriate diagrams and illustrations. Geology 715 must be followed by Geology 716 to meet the geology field course requirement.††

716. Advanced Field Geology. 2 cr. Prereq.: Geology 715. Two to three weeks of supervised field work, with the results presented in a geologic map accompanied by a written report, cross sections, and appropriate diagrams and illustrations. The report and map are expected to be prepared at a more advanced level than those of Geology 715.††

717. Field Methods. 6 lab. hr.; 2 cr. Methods of collection, analysis, and presentation of field data, navigation, mapping, and plane tabling.††

718. Field Geology. 4 cr. A comprehensive geologic field investigation at the graduate level involving a minimum of three weeks supervised field work and a detailed field report of acceptable standards with geologic map, diagrams, and illustrations.††

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

720. Mineralogy. 2 lec., 2 lab. hr.; 3 cr. Crystal chemistry; mineral genesis and crystal growth; physiochemical principles governing crystal structures; mineral properties related to crystal structures; study of methods of analysis.7

722. X-ray Diffraction Analysis. 2 lec., 2 lab. hr.; 3 cr. Theory and application of X-ray diffraction; methods of qualitative and quantitative mineral analysis; mineral structure analysis.77

723. Advanced Research Methods in Geology. 1 lec., 3 lab. hr.; 3 cr. Principles and methods of qualitative and quantitative analysis of geological materials. Laboratory problems include using such methods of analysis as differential thermal analysis, infrared spectroscopy, electron microscopy, and electron microprobe.††

724. Igneous Petrology. 2 lec., 3 lab. hr.; 3 cr. Principles of igneous petrology based on chemical thermodynamics and phase equilibria systems established by geochemical laboratory investigations; problems of rock classification and nomenclature; fundamentals of structural petrology; petrogenesis in space and time; study of hand specimens and thin sections with advanced laboratory techniques.††

726. Metamorphic Petrology. 2 lec., 2 lab. hr.; 3 cr. Chemical principles and physical conditions of metamorphism, based on thermodynamic and experimental data. Mode of occurrence and classification of metamorphic rocks. Detailed study of metamorphic minerals and mineral assemblages.††

730. Paleontology of the Invertebrates. 2 lec., 1 sem., 2 lab. hr.; 4 cr. An advanced treatment of the functional morphology, systematics, evolutionary history, and paleoecology of invertebrate animals through geologic time. Laboratory techniques in the use of fossils as primary data of organic evolution and indicators of paleoenvironments. (Open to qualified students in biology.)††

732. Paleoecology. 2 lec., 2 lab. hr.; 3 cr. The reconstruction and analysis of plant and animal communities of the past, their historical development as communities, and their interactions with the environment. The fossil evidence for animal behavior, food chains, predator-prey relationships, symbiosis, parasitism, and environmental control of species distribution. Field and laboratory techniques.††

734. Micropaleontology. 2 lec., 2 lab. hr.; 3 cr. The study of several groups of animal and plant remains of microscopic dimensions. Collection of samples; recovery of microfossils from samples; sorting and classification; stratigraphic and economic value; ecologic studies.††

736. Palynology. 2 lec., 2 lab. hr.; 3 cr. The systematic study, laboratory preparation, and geologic significance of the microscopic remains of plants and closely related organisms, such as plant spores and

pollen, dinoflagellates, and acritarchs.††

740. Sedimentology. 2 lec., 3 lab. hr.; 3 cr. Sediments, sedimentary processes, and sedimentary environments. Laboratory and field techniques in the analysis of sediment facies and sequences.??

742. Stratigraphy. 2 lec., 2 lab. hr.; 3 cr. Principles of stratigraphy; the stratigraphic record and nomenclature; faunal stratigraphy and correlation. Systematic stratigraphy of North America: Pre-Cambrian problems; geosynclinal, cratonal, and non-marine sedimentation of the Paleozoic Era; Mesozoic and Cenozoic stratigraphy; paleontological aspects.††

743. Sedimentary Petrology. 2 lec., 2 lab. hr.; 3 cr. Origin, texture, composition, and classification of sedimentary rocks, with emphasis on modern analytical techniques; study of thin sections, grain mounts, and hand specimens.††

745. Hydrology. 2 lec., 3 lab. or 1 rec. hr.; 3 cr. Introduction to the hydrologic cycle and processes related to the movement of water in the surficial environment: precipitation, evaporation and transpiration, infiltration, runoff and stream flow. Numerical calculations and problems will be emphasized. Discussion of case studies that describe hydrologic systems in differing climatic and geologic settings.††

746. Groundwater Hydrology. 3 hr.; 3 cr. Prereq.: Geology 745 or permission of department. Physical principles of groundwater flow, Darcy's law, flow equations, flow nets, pumping tests, methods of groundwater investigation, groundwater geology. Numerical calculations and problems will be emphasized. Discussion of case histories that describe different types of groundwater systems.††

747. Coastal and Estuarine Geology. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Permission of instructor. Field and laboratory examination of the geology, oceanography, and geomorphology of temperate and tropical coastal zones. Field work may include shipboard operations.††

748. Environmental Geology of the Coastal Zone. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Geology 747 or permission of instructor. A laboratory and field examination of the environmental geology of temperate and tropical coastal zones. Field exercises, aerial photo interpretation, and environmental impact statements will be used to analyze specific problem areas.††

749. Seminar on Urban Coastal Management. 3 lec. hr.; 3 cr. Prereq.: Geology 748 or permission of instructor. Case-history analysis of a wide variety of coastal management problems in urban estuaries and along urban shorelines. Student presentations are based on site studies, interviews, and analysis of the relevant literature.??

750. Environmental Geology. 2 lec., 3 lab. hr.; 3 cr. Geologic processes, struc-

tures, and human modifications of geologic systems that affect the quality of the environment. Laboratory and field examination of geologic problems and introduction to site evaluation and environmental impact analysis techniques.††

752. Map Interpretation. 1 lec., 4 lab. hr.; 3 cr. Interpretation and analysis of topographic, geologic, and other maps. Uses and interpretation of air photographs and radar and satellite imagery.††

770. Principles of Geochemistry. 3 lec. hr.; 3 cr. Chemical processes involved in the development of the earth and distribution of the elements in the earth's crust, atmosphere, and oceans.††

771. Geochemistry. 2 lec., 3 lab. hr.; 3 cr.††

772. High Temperature Geochemistry. 3 lec. hr.; 3 cr. The principles of thermodynamics are reviewed and applied to geological processes at high temperatures and high or low pressures.††

773. Low Temperature Geochemistry. 3 lec. hr.; 3 cr. Chemical equilibria in aqueous systems and at low temperature are studied and applied to weathering, sedimentary processes, and ore formation.††

780. Marine Geology. 3 lec. hr.; 3 cr. The form and origin of the ocean floor, the distribution of sediments, the structure of the oceanic crust and mantle. Chemical and physical aspects in oceanography are also discussed.††

788. Cooperative Education Placement. Prereq.: Permission of department. Experiential learning through placement. Opportunities to test and demonstrate academic learning in an organizational setting. Students receive academic credit as well as a stipend from the placement. No more than 6 credits may be taken in Cooperative Education Placement.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

788.6. 6 hr.; 6 cr.

790. Seminar. Study of selected aspects of geology. Emphasis is placed on areas not directly covered in the regular courses and on the use of original sources. Course may be repeated once.

790.1. 1 hr.; 1 cr.

790.2. 2 hr.; 2 cr.

790.3. 3 hr.; 3 cr.

791. Independent Study. Hr. to be arranged; 1 cr. Prereq.: Permission of instructor. Advanced study of a subject or laboratory technique under the guidance of a faculty member. The course may be taken only once.

792. Independent Study. Hr. to be arranged; 2 cr. Prereq.: Permission of instructor. Advanced study of a subject or laboratory technique under the guidance of a faculty member. The course may be taken only once.

793. Independent Study. Hr. to be arranged, 3 cr. Prereq.: Permission of instructor. Advanced study of a subject or laboratory technique under the guidance of a faculty member. The course may be taken only once and cannot be taken and used to satisfy the requirements of the Master of Arts degree in Geology if either 791 or 792 is credited toward the degree requirements.

795. Thesis Research. Preparation of a thesis under the guidance of a faculty mentor. No more than 3 credits may be counted toward the Master of Arts degree in Geology.

795.1. 1 hr.; 1 cr.

795.2. 2 hr.; 2 cr.

795.3. 3 hr.; 3 cr.

799. Special Topics in Geology. This course will cover topics of current interest in a particular field in the geologic sciences. Topics may vary. The course may be repeated for credit if the topic is changed.

799.1. 1 hr.; 1 cr.

799.2. 2 hr.; 2 cr.

799.3. 3 hr.; 3 cr.

HEALTH & PHYSICAL EDUCATION

THE COURSES PREVIOUSLY OFFERED BY THE HEALTH AND PHYSICAL EDUCATION DEPARTMENT ARE NOW OFFERED THROUGH THE DEPARTMENT OF FAMILY, NUTRITION, AND EXERCISE SCIENCES.

HISPANIC LANGUAGES & LITERATURES

Chair: Andrés Franco

Dept. Office: Kiely 243, 997-5660;
Fax 997-5669

The Department of Hispanic Languages and Literatures offers the Master of Arts degree in Spanish. The degree leads to teaching careers in secondary education and college, and to admission to doctoral programs in Spanish or comparative literature. Courses cover numerous aspects of Spanish and Spanish-American literature viewed through various methods of literary criticism. Courses are also given in the history of the language, advanced translation, civilization, and the cinema. Seminars are set aside for methodology, selected authors or literary topics, and special problems. The Department of Hispanic Languages and Literatures, in cooperation with the School of Education, also offers the Master of Science in Education degree in Spanish.

Faculty

Franco, Andrés, Chair, *Associate Professor*, Ph.D. 1969, New York University:

Spanish literature of the nineteenth and twentieth centuries, Golden Age theatre, Cervantes

De Torre, Emilio E., Graduate Adviser for M.A. Program, *Associate Professor*, Ph.D. 1979, City University of New York: twentieth-century Spanish literature

Green, Jerald R., Graduate Adviser for M.S. in Ed. Program, *Professor*, Ed.D. 1967, Teachers College, Columbia University: foreign language education, Spanish phonology, twentieth-century Spanish cultural history

Chang-Rodríguez, Eugenio, *Professor Emeritus*, Ph.D. 1956, University of Washington: Spanish-American literature, language, and civilization

Díez-Martínez, Luis A., *Professor Emeritus*, Ph.D. 1970, King's College, University of London: Spanish-American literature, contemporary Spanish literature

Glickman, Nora, *Professor*, Ph.D. 1978, New York University: twentieth-century Spanish-American literature, Spanish and Latin American cinema

Kozer, José, *Professor*, M.A. 1971, City University of New York: contemporary Spanish and Spanish-American poetry

Llorens, Irma, *Assistant Professor*, Ph.D. 1992, Princeton University: Spanish-American literature, women writers, literature of the Hispanic Caribbean

Picciotto, Robert S., *Associate Professor*, Ph.D. 1964, Indiana University: poetry and poetics, history of ideas, Borges

Rabassa, Gregory, *Distinguished Professor*, Ph.D. 1954, Columbia University:

Brazilian and Spanish-American literature, translation

Verdín, Guillermo, *Professor Emeritus*, Doctor en Filosofía y Letras 1964, Universidad Complutense de Madrid: Spanish philology, Medieval and Golden Age literature

Master of Arts Program

Graduate Adviser: Emilio De Torre

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. A strong undergraduate concentration in Spanish consisting normally of a minimum of 20 undergraduate elective credits.
2. The credentials of each applicant are to be examined by a suitable departmental committee which shall have the authority to accept or reject the candidate. This committee may request an interview with a candidate for admission if it feels it necessary to do so.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Students must consult the Graduate Adviser for assistance and guidance in working out an approved program of studies.
2. Thirty credits are required for the Master of Arts degree. Completion of a thesis is optional. Students who wish to complete the thesis are required to take 791 and 792 as part of the 30-credit requirement. A minimum of 24 credits must be taken in Spanish. With special permission the remaining credits may be taken in other departments.
3. All students are required to take Spanish 701 and Spanish 781.
4. Students will be required to demonstrate their reading knowledge of another Romance language, in addition to their major language. Latin or German may be substituted by special permission.
5. A comprehensive examination, both written and oral, will be administered in Spanish, in which students will be tested on their knowledge of the important authors and literary movements in Spain and Spanish America. A student may not attempt this examination more than twice.
6. A thesis based on original research (791, 792, Special Problems) may be substituted for two of the courses. This thesis will normally be written in English, or, by special permission, in Spanish.

Master of Science in Education Program

Graduate Adviser: Jerald R. Green

The Master of Science in Education Program (Spanish) responds to the needs of

teachers and prospective teachers of foreign languages. The degree program combines course work in 1) culture, literature, and language, 2) foreign language education, and 3) professional education. The courses in culture, literature, and language are given by the Department of Hispanic Languages and Literatures. The courses in foreign language education and professional education are offered by the School of Education.

For admission requirements to Secondary Education programs, see page 58.

Requirements for Matriculation

In addition to the general admission requirements stated on page 16 of the *Graduate Bulletin*, applicants should have:

- A. Strong undergraduate concentration in Spanish, consisting of at least 21 credits above Spanish 204.
- B. Either an undergraduate minor in Secondary Education or completion of the following sequence of courses as part of the Secondary Education Advanced Certificate (see page 59):

	<i>credits</i>
SEYS 536. Educational Foundations	3
SEYS 552. Educational Psychology	3
SEYS 562. Seminar in Teach. Spanish	3
SEYS 573. Student Teaching	6

Requirements for the Degree

The 30 credits required for the degree are to be distributed as follows:

- A. Six courses in Spanish:
 - Two courses (6 credits) in language and linguistics
 - Four courses (12 credits) in literature and civilization
- B. Four courses in Secondary Education:
 1. One course from the area of Foundations of Education: SEYS 701-708 (3 credits).
 2. One course from the area of Psychological Foundations (SEYS 709, 710, 717, 718, 719, 738, or 768 (3 credits).
 3. SEYS 743. Methods of Teaching Foreign Languages in Secondary School (3 credits).
 4. SEYS 785. Methods of Research in Foreign Language Instruction. (Prereq.: SEYS 743) (3 credits).

or

- SEYS 790. A thesis based on original research in language or literature, directed by an adviser in Spanish (3 credits).

C. Students should meet with the Graduate Adviser as soon as possible to plan their program of study and submit it for approval.

Courses in Spanish

The specific topic in each course entitled "Studies in . . ." will be announced at registration. Each "Studies in . . ." course may be repeated for credit provided the topic is different.

701. History of the Spanish Language. 2 hr. plus conf.; 3 cr.

704. Problems in Spanish Language. 2 hr. plus conf.; 3 cr.

707. Medieval Spanish Literature: Epic and Lyric Poetry. 2 hr. plus conf.; 3 cr.

708. Medieval Spanish Prose Literature. 2 hr. plus conf.; 3 cr.

709. Cervantes: *Don Quijote*. 2 hr. plus conf.; 3 cr.

710. Cervantes: *Novelas Ejemplares* and Other Works. 2 hr. plus conf.; 3 cr.

711. Spanish Fiction of the Siglo de Oro. 2 hr. plus conf.; 3 cr.

712. Studies in the Poetry of the Siglo de Oro. 2 hr. plus conf.; 3 cr.

714. Theatre of the Siglo de Oro. 2 hr. plus conf.; 3 cr.

715. Studies in Spanish Baroque Literature. 2 hr. plus conf.; 3 cr.

718. Spanish Thought of the Sixteenth and Seventeenth Centuries. 2 hr. plus conf.; 3 cr.

725. The Literature of Spanish America: The Colonial Era. 2 hr. plus conf.; 3 cr.

726. Spanish-American Romanticism and Realism. 2 hr. plus conf.; 3 cr.

727. Studies in Modernismo. 2 hr. plus conf.; 3 cr.

728. Spanish-American Literature: The Inter-War Years. 2 hr. plus conf.; 3 cr. Study of the main trends in Spanish-American literature from the end of Modernismo to the 1940s.

729. The Spanish-American Essay. 2 hr. plus conf.; 3 cr.

730. Contemporary Spanish-American Fiction. 2 hr. plus conf.; 3 cr.

731. Contemporary Spanish-American Poetry. 2 hr. plus conf.; 3 cr.

732. Spanish-American Theatre. 2 hr. plus conf.; 3 cr.

740. Spanish Romanticism. 2 hr. plus conf.; 3 cr.

741. Spanish Narrative in the Nineteenth Century. 2 hr. plus conf.; 3 cr.

745. Spanish Poetry of the Twentieth Century. 2 hr. plus conf.; 3 cr.

746. Spanish Theatre of the Twentieth Century. 2 hr. plus conf.; 3 cr.

748. Spanish Narrative of the Twentieth Century. 2 hr. plus conf.; 3 cr.

778. Advanced Translation in Spanish. 2 hr. plus conf.; 3 cr. The course will deal with translation in theory and in practice and will also include linguistics and stylistics. Translations will be from English to Spanish and from Spanish to English

779. Studies in Spanish and Latin American Cinema. 4 hr.; 3 cr. The course

will examine different aspects of the cinematic art. The approaches include: 1) Movements (neo-realism, new wave, etc.); 2) Genres; 3) Literature into films; 4) The cinema as a socio-cultural phenomenon; 5) Cinematic stylists. Films will be shown in the original language. Students will be expected to produce substantial works of film analysis.

780. Trends and Events in Hispanic Civilization. 2 hr. plus conf.; 3 cr. A study of the events and ideological trends of the civilization produced by Spain and Latin America. Students will read and report on primary texts in fields such as political history, economics, sociology, and significant artistic and cultural developments.

781. Seminar: Methodology and Selected Literary Topics. 2 hr. plus conf.; 3 cr.

782. Studies in Spanish and Spanish-American Literature. 2 hr. plus conf.; 3 cr. This course is intended as a seminar in the study of Spanish and Spanish-American literature. It is an open topics course; the title will be announced at the beginning of each semester in which it is offered. It can be repeated for credit provided the topic is different.

791,792. Special Problems. 3 cr. each sem. Individual study under the supervision of an instructor, of a topic agreed on, normally involving research in literary history or criticism, and resulting in an acceptable thesis. No credit will be given for these courses until the thesis has been approved. No more than three credits in each course may be counted toward the degree.

795. Independent Study. Hr. to be arranged; 3 cr. Prereq.: Second year standing and permission of the Graduate Adviser and the instructor. Tutorial for work in a special subject not covered by regular course offerings. May be repeated for credit if the topic is changed. Open only for candidates for the Master of Arts in Spanish.

Courses in Reserve

702. Spanish Literary Theory.

703. Advanced Phonetics.

713. The Theatre before Lope De Vega.

716. The Literature of the Spanish Mystics.

721. Literature of the Eighteenth Century in Spain.

743. Spanish Thought of the Nineteenth and Twentieth Centuries.

HISTORY

Chair: Frank A. Warren

Graduate Adviser: Frank J. Merli

Dept. Office: Powdermaker 200, 997-5350

The Master's Program in History can meet a variety of intellectual and professional needs: as preparation for doctoral study, as the academic requirement for permanent New York State teacher certification, and as an opportunity for students to upgrade their current job credentials and enrich their intellectual life. The department's graduate faculty have outstanding records of publication in many areas. Among their members are two Distinguished Professors: Professor Paul Avrich, an authority on Russian history and anarchism, and Professor Phillip Cannistraro, an authority of Italian and Italian-American history. Professor Ralph Della Cava, who offers courses in Latin American history and the Post-Stalin Soviet Union, is currently working on a major research project on religion and civil society in the post-Stalin Soviet Union, financed by a grant from the National Council for Soviet and East European Research. Professor Marion Kaplan, who teaches women's history and German history, is working with a grant from the National Endowment for the Humanities on a book on women and families in Nazi Germany.

Faculty

Warren, Frank A., Chair, *Professor*, Ph.D. 1961, Brown University: twentieth-century American history

Merli, Frank J., Graduate Adviser, *Associate Professor*, Ph.D. 1964, Indiana University: nineteenth-century diplomatic history

Alteras, Isaac, *Professor*, Ph.D. 1971, City University of New York: Jewish history

Avrich, Paul H., *Distinguished Professor*, Ph.D. 1961, Columbia University: modern Russia, revolutionary movements, anarchism

Cannistraro, Phillip V. *Distinguished Professor*, Ph.D., New York University: Italian history

Carlebach, Elisheva, *Associate Professor*, Ph.D. 1986, Columbia University: Jewish history

Della Cava, Ralph S., *Professor*, Ph.D. 1968, Columbia University: nineteenth and twentieth-century Brazil, modern Latin America

Frangakis-Syrett, Elena, *Associate Professor*, Ph.D. 1985, King's College, University of London: modern Greek history

Gordon, Jay, *Assistant Professor*, Ph.D. 1967, University of London: West Africa in the nineteenth century

Gruder, Vivian R., *Professor*, Ph.D. 1966, Harvard University: eighteenth-century revolutionary France

Haan, Robert L., *Associate Professor*, Ph.D.

1960, University of Michigan: Dutch history, early modern Europe

Hershkovitz, Leo, *Professor*, Ph.D. 1960, New York University: New York City history, legal history

Hirshon, Stanley P., *Professor*, Ph.D. 1959, Columbia University: Civil War and reconstruction, U.S. 1877-1900

Kaplan, Marion A., *Professor*, Ph.D. 1977, Columbia University: modern Europe, women's history

Kinsbruner, Jay, *Professor*, Ph.D. 1964, New York University: early nineteenth-century Latin America

McManus, Edgar J., *Professor*, Ph.D. 1959, Columbia University: American colonial and constitutional history

O'Brien, John M., *Professor*, Ph.D. 1964, University of Southern California: Medieval, church, Alexander the Great

Peterson, Jon A., *Associate Professor*, Ph.D. 1967, Harvard University: U. S. urban history

Pine, Martin L., *Professor*, Ph.D. 1965, Columbia University: Italian Renaissance

Prall, Stuart E., *Professor*, Ph.D. 1960, Columbia University: Tudor and Stuart England, English constitutional history

Rossabi, Morris, *Professor*, Ph.D. 1970, Columbia University: Chinese history, Central Asian and Mongol history

Syrett, David, *Professor*, Ph.D. 1966, University of London: eighteenth-century Anglo-American military and naval history

Wreszín, Michael, *Professor*, Ph.D. 1961, Brown University: post-Civil War American political and intellectual history

Master of Arts Program

Within the Master's program, the department follows the contemporary trend in going beyond a national and Western framework of study and employs a variety of approaches - political, economic, social, and intellectual - requiring a considerable methodological range. The department aims to acquaint students with the goals, methods, and results of historical research. The department directs the attention of students to the possibilities of combining work in history with work in other departments and to the creation of individualized programs of study (to be arranged in consultation with the departmental Graduate Adviser). Attention is also directed to history courses that may be useful in related fields such as library science, museum management, historical preservation, and the like.

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. The applicant must be approved by the Departmental Committee on Graduate Studies. Approval is based on the satisfactory completion of sufficient work in history or related fields to pursue graduate work in history.
2. An applicant whose undergraduate

preparation is considered inadequate by the Departmental Committee may be admitted as a qualifying nonmatriculated student. Satisfactory completion of approved courses will be required before the student can matriculate. Undergraduate courses taken to make up for inadequate preparation cannot be counted toward the M.A. degree. Graduate courses, provided they are approved by the Graduate Adviser, may be counted toward the M.A. degree. In some instances, students whose undergraduate preparation in history is judged inadequate may be required to take additional hours in graduate history to remove those deficiencies.

3. Each applicant must present evidence of a reading knowledge of a foreign language approved by the department and demonstrated to its satisfaction. The department currently accepts French, German, and Spanish, but with the written approval of the student's adviser and the departmental Graduate Adviser, another language may be substituted if it is required for thesis research. (Students who contemplate further professional training in history are advised to check the specific language requirements for the doctorate at the universities of their choice.)

4. Applicants whose first language is not English and who were educated in a country where English is not the official language must submit proof of having achieved a score of 575 or better on the Test of English as a Foreign Language (TOEFL).

Departmental Regulations for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Usually no more than three courses of one semester each may be taken outside the Department of History and only with the written consent of the student's Graduate Adviser.

2. Each student is assigned a Graduate Adviser with whom he or she plans the course of study.

3. A student must complete 30 hours of graduate history courses, which must include both a seminar and a course in historiography. The department recommends that the two required courses be completed as early as possible to avoid scheduling difficulties.

4. A thesis is required.

5. Each student must pass a comprehensive examination in the major field of study, and in such other fields as the department requires.

Courses in History

Note: Prior to selecting courses for registration, students must check the courses listed below with department announcements distributed shortly before registration and with latest course offerings posted in the department.

701. Historiography. 2 hr. plus conf.; 3 cr. Studies in the methodology of historical investigations as evidenced in major works on history. Required of graduate students in the M.A. in history program. Spring

707. War in European History. 2 hr. plus conf.; 3 cr. Studies in history of European warfare from antiquity to the modern period.?

707.1. War in American History. 2 hr. plus conf.; 3 cr. Studies in the history of American warfare from the colonial period to the present. Emphasis will be placed on the growth and functions of American military institutions.?

710. Studies in Ancient History. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in ancient history. Special emphasis is placed on historical method and interpretation.

713. The Church in the Middle Ages. 2 hr. plus conf.; 3 cr. The history of Christianity in Western Europe to the eve of the Protestant Revolution, with attention to the Church's role in intellectual, social, and political life, and to Medieval religious organization, doctrine, and dissent.

714. Studies in Medieval History. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in medieval history.

719. Studies in Modern French History. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in recent French history.?

720. Studies in Tudor History. 2 hr. plus conf.; 3 cr. A study of political, economic, social, and religious institutions, with emphasis on the Tudor constitution.††

721. Studies in Stuart History. 2 hr. plus conf.; 3 cr. A study of political, economic, social, and religious institutions with emphasis on the Puritan and Glorious Revolutions.††

723. Great Britain in the Victorian Age. 2 hr. plus conf.; 3 cr. Studies in the development of British political and social institutions and in the growth of British power during the Victorian period.††

724. Studies in Modern British History. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in British history since the Victorian era.††

725. The World Wars of the Twentieth Century. 2 hr. plus conf.; 3 cr. Emphasis is on processes of change affecting the political, economic, and social structure of Europe, science and technology, and Europe's international relationships.†

727. Europe and the Contemporary World: 1945 to the Present. 2 hr. plus conf.; 3 cr. Emphasis on West European recovery, the East European revolutions, the Cold War, the end of European colonial empires, and political and social problems raised by contemporary science and technology. Spring

732. Russian History to 1917. 2 hr. plus conf.; 3 cr. A study of the principal political and social developments in Russia from Peter the Great to the October Revolution.??

733. The Soviet Union. 2 hr. plus conf.; 3 cr. A study of political and social developments in Russia since the October Revolution.?

734. Women in Modern European History. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor. This course is intended as an introduction to European women's history from the Industrial Revolution into the post-World War II era. Readings concentrate on Britain, Germany, and France, and survey the general history of women in modern Europe, as well as outline recent methods of inquiry and topics of debate. The course takes a thematic approach within a (roughly) chronological framework.??

735. Studies in German and Central European History. 2 hr. plus conf.; 3 cr. Selected topics in German, Austrian, and East Central European history. Spring

736. Modern Italy. 2 hr. plus conf.; 3 cr. The development of modern Italy from the late 18th century to the founding of the postwar Italian Republic. The theme is the search for national-identity. An examination of the rise of Italian national consciousness, the movement for unification, and the process of state-building, followed by a study of the Liberal State (1870-1915), including such issues as parliamentary development, the Southern Problem, and the rise of the Left. The course then looks at the rise of Fascism and Mussolini's regime, World War II and the anti-Fascist resistance, and the origins of the Republic.

738. Chinese History in the Nineteenth Century. 2 hr. plus conf.; 3 cr. An examination of the political, social, and economic developments from the eve of the Opium War to the Boxer Uprisings.††

739. Chinese History since 1900. 2 hr. plus conf.; 3 cr. A study of important developments from the Boxer Uprisings to the present.††

742. History of Japan. 2 hr. plus conf.; 3 cr. Traces the major changes in Japanese history, with an emphasis on the more recent period.††

745. Studies in Latin American History. 2 hr. plus conf.; 3 cr. Readings and discussions of selected topics in the history of Latin America. Content will vary and, with permission of instructor and Graduate Adviser, the course may be repeated for credit.

747. The Political, Economic, and Social History of Latin America to 1825. 2 hr. plus conf.; 3 cr. A survey of the institutional, economic, and societal forces shaping Latin America from the discovery and conquest to the era of national emancipation.

748. The Political, Economic, and Social History of Latin America Since

1825. 2 hr. plus conf.; 3 cr. A survey of the institutional, economic, and societal forces shaping the nations of Latin America during the national period.

753. Studies in Brazilian History. 2 hr. plus conf.; 3 cr. Readings and discussions of selected topics in the history of Brazil.

756. Studies in Jewish History. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in Jewish history. (Reading knowledge of either Hebrew or Yiddish is desirable but not required.)††

761. American Colonial Society. 2 hr. plus conf.; 3 cr. Studies of the English colonies in North America from the beginnings of exploration and settlement to the eve of the American Revolution. In the perspective of related European developments, stress is placed on political, social, and economic growth and transformation.??+

762. The Era of the American Revolution. 2 hr. plus conf.; 3 cr. An analysis of the English and American scene from 1750 to 1789. The focus is upon the events leading to the American Revolution, the War of Independence, the framing of the Constitution, and the foreign and domestic affairs of the Continental Congress.††

763. The United States in the Early National Period, 1789-1828. 2 hr. plus conf.; 3 cr. An examination of the Federalist and Jeffersonian administrations of these years. Special attention is given to economic, ideological, sectional, and international problems that found expression in constitutional issues, the rise of parties, and early formulation of national policy.

766. Studies in Afro-American History. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in the history of black people in America. May be repeated for credit with consent of instructor if topic changes. Spring

767. The Civil War and Reconstruction. 2 hr. plus conf.; 3 cr. An examination of conflicting interpretations of the causes of the war, the course of the war, and the problems of reconstruction.††

769. Studies in the Progressive Movement. 2 hr. plus conf.; 3 cr. An investigation of the sources of the reform impulse and its influence on American development from the Spanish-American War to World War I.††

771. The Depression and the New Deal. 2 hr. plus conf.; 3 cr. Political, social, and economic changes in the United States from 1929 to the outbreak of World War II.††

772. Making of the American Empire. 2 hr. plus conf.; 3 cr. A study of the role of foreign policy in the expansion of the United States from the Revolution to the Spanish War. Fall

†-Offered either Fall or Spring; see Class Schedule.
††-May be offered; see Class Schedule.

773. The United States in World Affairs. 2 hr. plus conf.; 3 cr. The history of American foreign policy since 1895. The emergence of the United States as a world power, and selected problems in American diplomacy arising from war and peace in the twentieth century. Spring

774. History of American Business. 2 hr. plus conf.; 3 cr. The history of business in American life, emphasizing the development of organization systems and management techniques as well as the interrelation of business with other social institutions.††

775,776. Constitutional History of the United States. 2 hr. plus conf.; 3 cr. each semester. The historical background of the Constitution and its evolution through the leading decisions of the Supreme Court. Emphasis will be given to the role of the Court in the development of the American federal system, the protection of rights guaranteed by the Constitution, and the juristic theories under which the Court has operated. History 775 covers the period to 1865; 776 from the Civil War to the present. 775-Fall; 776-Spring

777. The City in American History to 1890. 2 hr. plus conf.; 3 cr. An examination of the origins, development, and significance of American cities and their role as "crucibles of culture" from the colonial era to the late nineteenth century.††

777.1. The City in American History since 1890. 2 hr. plus conf.; 3 cr. Studies in the transformation of the metropolis in twentieth-century America.††

783. New York City in the Colonial and Early National Periods. 2 hr. plus conf.; 3 cr. A study of the history, role, and influence of New York City during the formative years of American development. Attention is given to the principal archival and manuscript sources.††

784. Sources of New York City History. 2 hr. plus conf.; 3 cr. An intensive examination of the chief archival resources basic for the study of the early history of New York City. Research papers and reports are prepared and presented by the student.††

786. The American Urban Environment, 1830-1930. 2 hr. plus conf.; 3 cr. A history of the urban physical environment and the efforts to shape it since the early nineteenth century. Emphasis will be placed upon public health, civil engineering, landscape architecture, architecture, and early city planning.††

790. Studies in the History of Africa. 2 hr. plus conf.; 3 cr. Readings and discussion of selected topics in the development of Africa from the early Bantu dispersals to the era of independence. With the consent of the instructor, the course may be repeated for credit.

792. Seminar in Latin American History. 2 hr. plus conf.; 3 cr. Prereq.: A reading knowledge of Spanish or Portuguese, and

permission of instructor. Studies of a group of related topics chosen in consultation with the instructor. May be repeated for credit if the topic is different.††

795. Seminar in European History. 2 hr. plus conf.; 3 cr. Studies of selected key issues and topics in European history and the historical debates about those issues. Stress is on methodology, interpretation, and the clash of opinion among historians. Topics vary each semester, and the focus may be Europe, the non-Western world, or points of contact and exchange between them. The course is required for graduate students in the M.S. in Education program in Secondary Social Studies Education. The course may not be repeated for credit.

796. Seminar in American History. 2 hr. plus conf.; 3 cr. Studies of a group of related topics chosen in consultation with the instructor. Scholarly techniques are emphasized, including methods of investigation and the use of original sources. Required of graduate students specializing in the field of American history.††

797. Seminar in American History: Special Problems. 2 hr. plus conf.; 3 cr. Studies of selected key issues and copies in American history and the historical debates about those issues. Stress is on methodology, interpretation, and the clash of opinion among historians. Topics vary each semester, and the focus may be the United States, Latin America, or points of contact and exchange between them. The course is required for graduate students in the M.S. in Education program in Secondary Social Studies Education. The course may not be repeated for credit.

798. Individual Readings for Graduate Credit. Hr. to be arranged; 3 cr. With permission of the individual instructor concerned, the student's adviser, and the Departmental Graduate Committee, a student may enroll for 3 hours of credit in a program of directed readings. This course is designed to supplement existing course offerings and is not proposed as a substitute for the more formal course and seminar work in a field of graduate study. Students requesting this course must be prepared to convince the Departmental Graduate Committee that it will form part of a logical sequence of professional preparation. Fall, Spring

799. Problems in History. 2 hr. plus conf.; 3 cr. New courses and graduate seminars in different fields are currently being offered. Consult the department before registration or see announcements on the History Department Bulletin Board, Powdermaker Hall, Room 200.

Courses in Reserve

708. The Ancient Near East

709. The Classical World

711. Social and Economic History of the High Middle Ages

717. Studies in the French Revolution

718. History of France in the Nineteenth Century

722. Great Britain in the Hanoverian Age

731. Studies in Modern European Intellectual History

740. Chinese Historiography

741. Studies in Modern Chinese History

743. Modern Mexico

744. Economic History of Spain, Portugal, and Latin America until 1810

749. Church and State in the History of Latin America

751. History of Ideas in Spain, Portugal, and Latin America to 1810

752. History of Ideas in Latin America, 1810 to the Present

754. The Caribbean World in the Twentieth Century

759. Theories of the Universe from Ancient to Modern Times

760. Studies in the History of Modern Science

765. Jacksonian Democracy

770. Main Currents in Modern American Thought

778. The South since Reconstruction

781. Studies in American Social, Intellectual, and Cultural History to 1870

782. Studies in American Social, Intellectual, and Cultural History since 1870

787. American Biography

791. Introduction to Latin American Research and Historiography

HOME ECONOMICS

THE COURSES PREVIOUSLY OFFERED BY THE HOME ECONOMICS DEPARTMENT ARE NOW OFFERED THROUGH THE DEPARTMENT OF FAMILY, NUTRITION, AND EXERCISE SCIENCES,

GRADUATE SCHOOL OF LIBRARY & INFORMATION STUDIES

Chair and Director of the School:
Marianne A. Cooper

Graduate Adviser: Karen P. Smith

Dept. Office: Rosenthal 254, 997-3760

Faculty

- Cooper, Marianne A., Chair and Director, *Associate Professor*, D.L.S. 1980, Columbia University: information sources and services (sciences); management of special libraries and information centers; information science
- Smith, Karen P., Graduate Adviser, *Associate Professor*, Ed.D. 1982, Teachers College, Columbia University: history of children's literature; school media centers; work with children and adolescents
- Blake, Virgil L.P., *Associate Professor*, Ph.D. 1985, Rutgers University: public librarianship, bibliographic organization, technical services
- Brody, Roberta, *Assistant Professor*, Ph.D. 1996, Rutgers University: reference, geographic information systems, business information sources and services
- Cool, Colleen, *Assistant Professor*, Ph.D. , M.A. 1979, Annenberg School of Communication, The University of Pennsylvania: information technology, reference librarianship, communication
- Kibirige, Harry M., *Associate Professor*, Ph.D. 1979, University of Pittsburgh: information science; data processing; systems analysis
- Surprenant, Thomas T., *Professor*, Ph.D. 1979, University of Wisconsin at Madison: educational technology; automation; administration
- Warwick, Rochelle, *Lecturer*, Sixth-year Advanced Certificate, Rutgers University: foundations of library information science, information technology, multimedia information resources

Academic Librarianship Adviser

Bonk, Sharon, *Professor and Chief Librarian*, M.A. 1969, University of Minnesota: American studies, library science

Adjunct Faculty

Cohen, David, *Adjunct Professor*, M.S.L.S., Columbia University; Certificate in Advanced Librarianship 1960, Columbia University: multicultural librarianship; materials and services for young people; school media centers

Cohen, Jackson, *Adjunct Associate Profes-*

sor, Ph.D., 1988, Rutgers University: information science; information sources and service (sciences); reference librarianship (general)

- Cohen, Sharon, *Adjunct Assistant Professor*, M.L.S., 1989, Queens College, Ed.D. Teachers College, Columbia University: young adult sources and services
- Friedman, Arthur, *Adjunct Assistant Professor*, M.L.S. 1978, Queens College: organization and management; media centers and services
- Holden, Susan, *Adjunct Lecturer*, M.L.S. 1986, Long Island University: literature for children and young adults
- Holford, Pearl, *Adjunct Lecturer*, Preservation Administration, Columbia University, M.L.S., Queens College: library science/library services
- Kruger, Linda, *Adjunct Associate Professor*, D.L.S. 1980, Columbia University: books and printing; bibliographic organization
- Miller, Michael, *Adjunct Lecturer*, M.S. in Educational Technology 1966, Lehigh University; M.L.S. 1991, Rutgers University: reference, social sciences
- Rasmussen, Rosemary, *Adjunct Lecturer*, M.L.S. 1974, Pratt Institute: information services for children and young adults
- Sink, Robert, *Adjunct Associate Professor*, M.L.S. 1979, Pratt Institute: archives, records management
- Smith, John B., *Adjunct Professor*, D.L.S. 1991, Columbia University: library science/library services, administration and management
- Van Rossem, Karen, *Adjunct Lecturer*, M.A. in Librarianship 1976, San Jose State University: newspaper librarianship; online information services
- Zinky, Gloria, *Adjunct Lecturer*, M.L.S. 1991, Queens College: humanities

Society's ever-growing demand for information of all types and in all forms has changed forever the concept of librarianship. Library and information studies encompasses the full spectrum of knowledge -whether written on parchment or stored on a computer disc - and its dissemination to professional and corporate audiences, to government personnel, to educators and students, as well as to the public at large.

The Committee on Accreditation of the American Library Association defines library and information studies to "be concerned with recordable information and knowledge and the services and technologies to facilitate their management and use. Library and information studies encompasses information and knowledge creation, communication, identification, selection, acquisition, organization and description, storage and retrieval, preservation, analysis, interpretation, evaluation, synthesis, dissemination, and management." The Queens College Graduate School of Library and Information Studies endorses this definition.

Librarianship as an organized profes-

sion has a long tradition. The remains of libraries have been excavated from the ruins of ancient Egypt and Assyria. Academic libraries trace their lineage to late medieval times. Even public libraries, which we think of as an outgrowth of the mid-nineteenth century, had their prototypes among the Romans. Special and corporate libraries are largely twentieth-century developments, as are school library media centers. The emergence of national libraries signals a country's intellectual "coming of age."

Libraries have served many essential purposes. Among the earliest is the acquisition and organization of records. Since the monastic period, libraries have furnished resources in support of education. Later libraries served as publication centers. In time they assumed depository status under new copyright procedures, preserving important national publications.

Modern libraries and information centers have inherited these tasks while adding new functions. Since the turn of the century, more attention has been focused on user and community needs (reference, information and referral, and advisory services). A current concern is improved access to resources, both physical - through more efficient storage and distribution of resources - and intellectual - through more refined methods of indexing, subject analysis, and retrieval.

The technological revolution and the proliferation of information have transformed the roles of librarians and information specialists by creating new challenges and exciting opportunities. Connecting people and ideas through networks and information highways positions librarians to be pivotal protagonists in shaping the society of the twenty-first century.

History

The Graduate School of Library and Information Studies traces its origin to the opening of the Queens College Library Education Program in 1955. Conducted under the general direction of the College Library, in cooperation with the Education Department, that program offered a one-year curriculum for the preparation of school librarians. Graduates received an M.S. in Education, as well as a certificate in school librarianship. In 1964 a program in public librarianship was introduced, the Master of Library Science degree was authorized, and both the school and the public library programs were assigned to the new Department of Library Science, which had been organized as an independent academic department.

The Department continued to expand, and by 1968 graduates were beginning to work in a variety of information environments. The program also began to incorporate aspects of information science and media studies. The M.L.S. program was first accredited by the American Library Association in 1970. In 1976 a program leading to a Certificate of Post-Master's

Studies in Librarianship was introduced. Designed for graduate librarians, this program is registered by the New York State Education Department.

The expanding professional interests and objectives of the Department led in 1979 to a change of name and status, and the Department became the Graduate School of Library and Information Studies.

As the profession continued to move into the electronic age, the School has steadily expanded its curricular offerings to reflect the changing technological environment. Its quarters in the Benjamin S. Rosenthal Library point to continued dynamic growth and development.

The School is well equipped with modern technological facilities. Computer laboratories, with telecommunication connections to the on-campus computer system and to the CUNY mainframe as well as to outside database vendors, are available for teaching and student use. Media laboratories are equipped for production of instructional technology materials. The student lounge, seminar room, and faculty and administrative offices are similarly equipped with telecommunications infrastructure. Other technological facilities are available on campus.

The City University of New York and the Graduate School of Library and Information Studies have vigorously pursued the recruitment of a culturally and ethnically diverse student body. Presently, there are approximately 67 languages spoken by the students on campus, which reflects the multicultural nature of New York City.

Mission

"Discimus ut serviamus" (We learn in order that we may serve), the motto of Queens College, expresses as well the mission of its Graduate School of Library and Information Studies - the only accredited library and information studies program within the City University of New York. Queens College envisages its "community" as "the neighborhood which immediately surrounds us . . . the entire borough of Queens . . . the City, the State, and the Nation." Additionally the School has particular allegiance to the library and information profession throughout the world.

As a public, tax-supported institution in a large metropolitan center, the School has a special obligation to educate a multicultural, multiethnic, and multilingual student body and subsequently benefit every segment of the population from children to senior citizens, from academic researchers to all in society who require special services. The School, through its Master of Library Science and post-master's programs, fulfills this obligation by preparing its graduates to meet the changing needs of the profession and society at large in the current dynamic global information age. Graduates assume a full range of positions in school, academic, public, and special libraries, as well as in archives, information centers, and other information-based organizations. In their careers, they are

expected to translate non-textual, electronic, graphic, and other knowledge gained in the classroom into organizational, administrative, research and communication practice to satisfy the information needs of users. The significance of interdisciplinary studies for an eclectic graduate profession such as library and information studies is also recognized by the School, which makes every effort to advise its students of the desirability and feasibility of obtaining an understanding of a wide range of subjects.

The School, like its parent institution, also has a responsibility to contribute and transmit new knowledge and information to society through research and scholarship that may have immediate or long-term benefits. Recognizing that "knowledge" and "information" may exist in a variety of formats and media, the School strives to provide students with a repertoire of skills to cope with an information-rich society.

Goals

The School endeavors to:

1. Provide an intellectual environment, both theoretical and practical, emphasizing knowledge, skills, and attitudes requisite for students to function successfully as professionals in libraries, information centers, and other information-based organizations.
2. Develop in students an understanding of the fundamental theories and practices of library and information studies to produce an appropriate response to society's changing information needs.
3. Cultivate in students a systematic, analytic, and critical approach to solving professional problems in library and information studies.
4. Encourage students' interests in other disciplines that affect and are influenced by library and information studies.
5. Stimulate in students a willingness to serve as information professionals by continuing to acquire and transmit knowledge, by studying the community served, and by communicating effectively.
6. Further the multicultural, multilingual, and social responsibilities of the profession by developing and participating in community-related programs.
7. Provide an environment which stresses innovative professional knowledge, skills, and technological expertise.
8. Contribute to the global advancement of the profession through excellence in faculty and faculty-supervised research and publication.
9. Promote the profession and the services it renders by stressing participation of both students and faculty in professional organizations.

Objectives

1. To acquire knowledge and appreciation of the role of library and information studies through history, with emphasis on adapting to changing global, political, social, cultural, economic, and technological environments.

2. To develop an open-minded attitude towards change along with the exercise of mature professional judgment as to its feasibility and desirability.

3. To comprehend the importance of the communication process and to develop skills for effective professional relationships with users, colleagues, supervisors, and non-professional assistants in a multi-cultural, multiethnic, multilingual, technological society.

4. To learn and apply the fundamental theories and practices essential to understanding the information requirements of individuals and groups.

5. To accommodate all needs of specific clientele by creating flexibility and sensitivity to the information needs of special constituencies (e.g., cultural, ethnic, and linguistic minorities, the economically stressed, the physically challenged) and to learn how these needs can be met.

6. To utilize theories and practices for the creation, dissemination, analysis, interpretation, and use of information in all formats in libraries, information centers, and other information-based organizations.

7. To understand the principles and techniques of management essential to the operation of libraries, information centers, and other information-based organizations.

8. To evaluate and apply appropriate technologies to the management of libraries, information centers, and other information-based organizations.

9. To know the importance of the structure and purpose of information organizations, services, and networks and of building cooperative relationships with various agencies on the local, national, and international levels.

10. To understand the principles and techniques of research in order to evaluate and apply them to simulated and real problems in library and information studies.

11. To perform fieldwork under the supervision of faculty and professional staff in libraries, information centers, and information-based organizations.

12. To benefit from educational and professional opportunities that will permit career specialization.

13. To recognize the importance of the right of access to information in an open society, and to accept the special responsibilities involved in upholding the ethics of the field.

14. To understand the changing role of libraries, information centers, and other information-based organizations in the developing national information infrastructure.

Student Services and Awards

An active student organization serves the student body through an online discussion group, by publishing a newsletter, and through various professional and social programs. A student chapter of the American Library Association sponsors programs of professional and social interest, and the Alumni Association supports the school

through fund-raising and by informing graduates of new developments.

The School, at its graduation ceremony, honors outstanding students with four awards: (1) the Lori Fischer Award for the student with the highest grade-point average; (2) the Linda Richardson Award in recognition of the student emulating the personal and intellectual qualities of Linda Richardson; (3) the David Cohen Multicultural Award honoring the student or alumnus(a) who has exhibited a firm commitment to serving cultural, ethnic, and/or linguistic minorities; and (4) the Betsy Movchine Award for the student who has contributed most to the betterment of student life in the past year. A Distinguished Alumni Award that recognizes a graduate's significant contributions to library/information services was inaugurated in 1996.

Admissions Policies and Procedures

Students who may register for graduate courses in the School of Library and Information Studies include those approved for the Master of Library Science program (see below for requirements for admission) and those approved for individual courses (see column 3 for non-matriculated status). The School admits students for both the Fall and Spring terms. Since deadlines for applications for each semester may vary, please telephone the GLIS office (718-997-3790) for current information. Applications may be obtained from the School and the Graduate Admissions Office, Powdermaker Hall, Room 100F, Queens College, CUNY, Flushing, NY 11367-1597.

Admission Requirements

The following are required for admission to the Master of Library Science program:

1. A baccalaureate degree or equivalent from a college of recognized standing. An official transcript of undergraduate and graduate credits from all institutions attended must be sent directly to the Graduate Admissions Office.

2. An undergraduate record indicating good preparation in the humanities, sciences, and social sciences. Good preparation is interpreted to mean a minimum academic index of *B* (3.0) in work relevant to the library science program. Applicants who do not meet the minimum requirements of good preparation as stated above are invited to present other evidence of their potential for successful graduate study.

3. Three letters of recommendation attesting to the applicant's capacity to complete successfully a program of graduate studies.

4. An essay of at least 500 typewritten words indicating applicant's background and career goals. The essay must provide evidence of clear and grammatical writing.

5. Proof of proficiency in the English language is required of all applicants:

- 1) whose first language is not English, and
- 2) who were educated in a country where

English is not the official language. This requirement is not based upon country of citizenship or permanent residency, but on the two stated conditions. Such applicants must fulfill this requirement by taking the Test of English as a Foreign Language (TOEFL) administered by the Educational Testing Service, Box 6151, Princeton, NJ 08541-6151, USA. A score of at least 550 on the TOEFL is required for admission to the School. Score reports must be received before a student can be admitted. Those whose score falls below 600 will be required to take and pass the graduate College English as a Second Language (GESL) course, which does not count for graduate work.

6. Applicants whose undergraduate grade-point averages fall below 3.0, but who otherwise merit consideration for admission, may be required to take the Graduate Record Examination (GRE). In such cases, the GRE must be taken prior to admission.

7. Applicants with undergraduate GPA's below 3.0 who hold advanced degrees are not required to take the GRE.

8. Applicants for admission to the program for school media specialist must have completed, either as part of their undergraduate work or otherwise, a sequence of courses in professional education that satisfies the minimum requirement for provisional certification as a teacher in New York State.

9. A personal interview with the Director of the School, the Graduate Adviser, or a member of the School's Admission Committee will be required before a decision on admission is made.

10. Competency in word processing is required. Students may be admitted without this competency, but they must acquire it before the end of their first semester. A school adviser should be consulted for information about which tutorial packages are recommended. There is a tutorial package available in its computer laboratory. Only word-processed papers will be accepted after the student's first semester at the School.

Note: The qualifications of all candidates for admission will be reviewed by the Committee on Admissions of the Graduate School of Library and Information Studies. Openings will be filled on a competitive basis: admission cannot be guaranteed to all who meet the stated requirements. All required documentation must be sent to the Graduate Admissions Office.

Matriculation

Acceptance for Matriculation with Conditions: Under certain circumstances, students with an undergraduate average marginally below *B* may be matriculated under the condition of "Probation." A student admitted on probation must achieve a *B* (3.0) average in the first 12 credits of graduate work. Students admitted on probation who fail to attain fully matriculated status after completing 12 graduate credits will not be permitted to continue.

Continuous Matriculation

Students are expected to maintain a continuous matriculation. Those who do not wish to register for course work in a given semester should notify the School in writing as soon as possible.

For graduate students there is no official leave of absence classification. Students who do not register for a given semester are considered inactive. Such status is not noted on the official transcript and does not extend the time limit for the degree or certificate (four years for completion). Inactive students who wish to return to the School must file a Re-entry Application with the Office of Graduate Admissions (Powdermaker Hall, Room 100) at least six weeks before the semester of return. A re-entry fee is required.

A student will lose matriculated status when it becomes mathematically impossible to achieve a *B* average in the allotted 36 credits.

A student who has completed 36 credits toward the master's degree but who has not maintained a *B* average must obtain permission from the Office of Graduate Studies to register for additional courses to raise the grade average. Such courses must be taken at Queens College.

A student must be registered for the semester in which the degree is awarded.

Non-Matriculated Status

Some students may register in the School as non-matriculants with permission of the Graduate School of Library and Information Studies. Students who are fully matriculated in another accredited library school may, with permission from their home institution and from the Director or Graduate Adviser at Queens College, register for individual graduate library science courses. In addition to the above, selected applicants who do not qualify for matriculated status may be admitted as non-matriculants.

Courses taken as a non-matriculated student may be credited toward the M.L.S. degree if a grade of *B* (3.0) or better is attained. When a non-matriculant wishes to matriculate, a maximum of 12 credits for courses taken as a non-matriculant will be evaluated by the School.

Registration

Students may not register until their programs have been approved by the Graduate Adviser in the School.

A student who has been awarded a Master's degree and wants to enroll for additional courses must file an application for admission as a graduate non-matriculant with the Graduate Admissions Office by the appropriate deadline date.

A non-matriculant must obtain permission to register from the School's Graduate Adviser. Application forms can be secured either by mail or in person from the School or the Graduate Admissions Office (Powdermaker Hall, Room 100). The application form must be filed with the Graduate

Admissions Office by August 15 for the Fall semester and January 15 for the Spring semester, together with student copies of all transcripts of work taken at the undergraduate and graduate levels. Non-matriculated students will be informed of their approval for registration and will receive instructions about registration from the Graduate Admissions Office or the Graduate School of Library and Information Studies.

Academic Requirements

Our curriculum has been designed as a coordinated, sequential program. Two major components comprise the curriculum: the required basic program - a group of core courses integrating the subject matter common to the field - and the elective program of specialized and advanced courses. Within this structure it is possible to design generalist programs for the student who does not want to specialize, as well as specialized single- or multi-purpose programs as described below. Specialized programs may include courses in other departments at Queens and at other units of the City University of New York.

The curriculum also provides opportunities for internship experiences and independent study.

Requirements for the Master of Library Science Degree

The program of courses leading to the Master of Library Science degree consists of 36 credits completed with an overall average of at least *B* (3.0 index). All requirements for the degree must be completed within four years after admission to the program or four years after the first course was credited, including credits earned as a non-matriculant or credits transferred. Extensions of time may be granted under compelling circumstances. The M.L.S. degree is offered in two programs: School Media Specialist (Library) (604) and General (602). For regulations on non-matriculated status (950 program), contact the School.

Basic Core Sequence

The basic sequence consists of five courses required of all students. All entering students are expected to take first the following four courses, which constitute the core of the curriculum. Deviation from this sequence must be approved by the Graduate Adviser.

- GLIS 700 The Technology of Information
- GLIS 701 Fundamentals of Library and Information Science
- GLIS 702 Information Sources and Service: General
- GLIS 703 Introduction to Technical Services

Research Project

In addition to the four courses above, all

students must complete satisfactorily a fifth required course, which will be an investigatory or research project in conjunction with GLIS 709 - Research and Bibliographic Methods. Students who have previously completed a master's thesis may apply to fulfill this requirement in GLIS 791 - Independent Study. Students eligible to take GLIS 791 should consult with the Graduate Adviser.

Satisfactory completion of a project is mandated by the New York State Department of Education for receipt of the M.L.S. degree. The student's project report must give evidence of ability to integrate the individual courses making up the M.L.S. program.

Programs for Specialization

Beyond the five required courses in the basic sequence, a variety of courses reflecting special areas of interest in library and information studies are offered. Students should consult the Graduate Adviser on the choice and scheduling of such courses.

The M.L.S. degree program does not require, except for specialization in the School Media Specialist-Library Program, particular specialized offerings. The School Media Specialist-Library Program (604), leading to New York State certification, has previous professional education requirements and a course sequence requirement, which is described below. All courses must be selected with the approval of the Graduate Adviser.

For all other students in the M.L.S. program (General 602), specialized courses are available for professional interests -by types of libraries and information-related agencies, and/or functions within them, by type of user and by media. Types of libraries may include public, academic, research, and special libraries, as well as information-related agencies such as data base producers and vendors. Functions may include administration, reference information services, technical services, and data base management. The types of user category may include work with children and young adults; media may include serials, audiovisual materials, and computer software.

Queens College permits up to 12 graduate course credits to be taken outside of the School. Such courses must have the *prior* approval of the Graduate Adviser as well as of the other department or institution and must be appropriate to the student's program for the M.L.S. degree.

School Media Specialist (Library) Program Requirements

Graduates designated as School Media Specialists (Library) are associated with media centers attached to educational institutions. In this context, they serve the needs of students (K-12) for informational, educational, and recreational materials as well as the needs of teachers and other personnel seeking information and materials related to their professional responsibilities. By defini-

tion, School Media Specialists (Library) must be competent in matching the most appropriate communication media to instructional, developmental, and recreational needs.

Students who choose this track must have had sufficient work in an academic area and must have made a commitment to obtaining the minimal requirements for a New York State provisional teacher's certificate. Following completion of all courses for graduation, students are personally responsible for obtaining state certification. Additionally, all students will be required to take GLIS 795 (Internship) and arrange for field-based experience in conjunction with GLIS 765 and 767.

This sequence emphasizes the development of skills needed to evaluate and select materials relevant to specific clientele and to motivate and guide students in the use of information and materials. Attention is focused on the degree to which materials recommended for children and young people reflect the concerns, objectives, and values of society.

Many courses in this program are appropriate for those who intend to work in public libraries.

Required Courses for School Media Specialist (Library)

In addition to the basic requirements described above, this required course sequence includes:

- *GLIS 705 Organization and Management
- GLIS 737 Literature for Children and Adolescents
- *GLIS 761 Organization and Management: Media Centers
- GLIS 763 Nonbook Materials: Sources and Service
- GLIS 765 Resources for the School Curriculum
- GLIS 767 Reading Motivation Techniques for Children and Adolescents
- GLIS 795 Internship

Certificate of Post-Master's Studies in Library/Information Services

The program leading to the Certificate in Post-Master's Studies in Library/Information Services is designed for graduate librarians who want to improve their competencies in present positions or to prepare for new positions as administrators, subject specialists, information officers, or technical specialists in libraries and related organizations, including media, educational resources, information, and referral centers).

The one- to three-year 30-credit program will be individually designed by each student with a faculty member in accordance with the curriculum described in this *Bulletin*. An integral part of the pro-

*Either course may be taken to fulfill the requirements of the School Media Specialist (Library) program.

gram will be a major research or investigatory project in the student's field of interest. The program is registered by the New York State Education Department.

Admission Requirements

- A master's degree in Library and Information Studies from an American Library Association (ALA) accredited library school.
- A minimum of two years of professional experience in library/information services or evidence of highly specialized needs that warrant advanced studies.
- An interview with a representative of the School.
- A 500-word statement of the candidate's professional objectives, specifying the student's special needs or interests.
- Three letters of reference from library/information service professionals and/or instructors in library and information studies.

Specialization

An individually tailored program will be formulated by each student and his or her faculty adviser, in accordance with the curriculum. Areas of specialization may include:

Academic and Research Librarianship
Health Sciences Librarianship
Information Systems Design and Management
Literature for Children and Young Adults
Multicultural Librarianship
Public Librarianship
Reference-Information Services
School Media
Special Libraries Information Centers
Technical Services
Work with Children and Young Adults
Electronic Resources and Services

General Requirements

The Certificate in Post-Master's Studies in Library and Information Studies will be awarded upon the completion of ten three-credit courses with a grade in each course of *B* or better. Each course must be part of an approved program of studies which includes independent research or an independent special project and the completion of a thesis based on this research or project. All requirements must be completed within a three-year period.

Scholastic Standards

Grades

The following grades are used in the Graduate Division of Queens College: *A+*, *A*, *A-*, *B+*, *B*, *B-*, *C+*, *C*, *C-*, *F*. The following special grades are also used:

W (Withdrawn Passing): This grade is given when a student withdraws formally after the eighth week of the semester with a passing grade in the course work completed.

WF (Withdrawn Failing): This grade is given when a student withdraws formally after the eighth week of the semester with

a failing grade in the course work completed.

WU (Withdrawn Unofficially): This grade is given when the student ceases to attend classes without formally withdrawing from the course. *WU* is equivalent to a failure.

P is a passing grade that is valid only in those few courses designated as permitting this grade.

Z is a temporary grade assigned when an instructor does not submit a grade.

Audit (Aud.) indicates that a student registered and paid for a course and attended classes, but was not required to do course work and will receive no credit for the course. Courses that have been audited may *not* later be repeated for credit, nor will credit be granted for an audited course.

Incomplete Work

The following grades apply to incomplete work:

Incomplete (Inc.): This grade, which must be requested by the student, is given by the instructor to indicate that a student had made a satisfactory record in course work but, for good and sufficient reason, is unable to complete the course. A graduate student receiving this grade must complete the work of the course by the end of the next two regular semesters in attendance. Requests for extensions of this time limit must be addressed to the Office of Graduate Studies (Powdermaker Hall, Room 100K). If the work of the course is not completed, the grade remains on the transcript without penalty.

Absent (Abs.): This is a temporary grade indicating that the student missed the final examination, which was the only work in the course that was not completed. The *Absent* grade is given only when it is expected that the student will be able to achieve a passing grade in the course by taking a make-up examination. A graduate student receiving this grade is required, with the permission of the departmental chair, to take a make-up final examination by the end of the next two regular semesters in attendance. A fee of \$15 is charged when a special make-up examination is given.

Withdrawal Procedure

Withdrawals during the first eight weeks are considered program adjustments, and no special approval is required. Students who wish to withdraw from a graduate course after the eighth week of the semester must do so formally by filing a Course Withdrawal form in the Registrar's Office (Jefferson Hall, Room 100).

Note that a course dropped during the first three weeks of the semester may result in refund of some portion of the tuition fee. The activity fee is not refundable unless the student has formally withdrawn from classes prior to the official first day of classes.

Note: Students may not graduate with an unresolved grade of *Abs.* on the record.

Important Note Regarding Completion of Courses

Full-time graduate students who are eligible to receive New York State Tuition Assistance Program (TAP) awards for the first time in Fall 1981 or thereafter must meet the program pursuit and academic progress requirements to be considered in good academic standing. The penalty for loss of good academic standing is suspension of the award. (Refer to the Financial Aid section of this *Bulletin*, pages 20-23.)

Required Grade Average, Probation, and Dismissal

All programs must be completed with a minimum average of at least *B* (3.0). A matriculated graduate student whose grade-point average falls below 3.0 during the course of the program will be placed on probation. The student will then have up to 12 graduate credits within which to raise the grade-point average to 3.0. If this level is not achieved, the student will be dismissed.

A matriculated graduate student who is dismissed must remain out of the College for at least one semester. If such a student wishes to return, the student must file a formal application for re-entry and pay a nonrefundable re-entry fee by the appropriate deadline. The student must also petition the Office of Graduate Studies for permission to re-enter. Requests for re-entry will be reviewed on an individual basis.

If a student is required by the College to leave a program a second time, for any reason, the student will *not* be permitted to re-enter.

Students who have completed the total credits required by their degree or certificate program may not take additional credits at another institution to raise the grade-point average. At the completion of the total credits allotted to a program, if a student does not have a 3.0 average and wishes to register for additional courses at Queens College in order to raise the grade-point average, permission to do so must be obtained from the Office of Graduate Studies. Courses taken at other colleges are not computed in the grade-point average.

Transfer Credits

Courses offered for transfer credit must be closely related to the goals of the library science program and to the individual's career objectives. Such courses must be consistent with an approved program of studies for each student. Courses that are not appropriate will not be accepted.

Determination of specific course eligibility for transfer credit rests with the Graduate Adviser in consultation with the appropriate specialization adviser(s). The regulations below are maximal allowances and are not mandatory.

■ Request for transfer of credit must be initiated by a student during the first semester's course work in the library science program. Students are required to

complete a Request for Transfer of Credit form, which may be obtained from the Graduate School of Library and Information Studies.

■ Courses to be considered for transfer of credit must be taken within the four-year time limit required for the completion of the degree.

■ Courses applied toward any degree already granted, graduate or undergraduate, cannot be considered for transfer purposes. Undergraduates at Queens who have completed library and information studies courses will be given credit for such courses, providing the total number of credits accumulated for the baccalaureate degree exceeds the requirements for graduation.

■ Courses taken at institutions other than Queens College must have prior approval in order to be applied as credit toward the M.L.S. degree.

■ Only courses with a grade of *B* (3.0) or better may be transferred.

■ A maximum of 12 credits may be considered for transfer credit for graduate work satisfactorily completed elsewhere.

Courses in Library and Information Studies

700. The Technology of Information. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. This course will introduce the student to the conceptual and practical elements of visual and computer literacy for the library and information science profession. Particular attention will be paid to their place and role in libraries and information centers. A laboratory session following each class will give students the opportunity to apply some of the concepts learned in class and to learn and strengthen basic skills. Fall, Spring

701. Fundamentals of Library and Information Science. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Overview of the curriculum; historical introduction to librarianship and information science as a profession; professional literature; role and structure of libraries and information centers in the conservation and dissemination of knowledge to various clientele; nature of research in library and information science. Fall, Spring

702. Information Sources and Service: General. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Study and application of general reference, bibliographic, and other information sources (print and electronic); techniques and procedures for serving the needs of various clientele; criteria for evaluating these sources and service and for developing appropriate collections. Fall, Spring

703. Introduction to Technical Services. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. The focus will be on the principles of providing access to items using the current cataloging code and the provision of subject access to items through subject headings lists and classification

systems. Study and practical exercises in all areas of technical services. Fall, Spring

705. Organization and Management. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Fundamentals of administration; functions of management (planning, organizing, staffing, controlling, and communicating) in various types of libraries and information centers.

709. Research and Bibliographic Methods. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703; completion of 24 course credits. Survey of research methods in library and information studies; supervised individual project to fulfill research requirement of the New York State Department of Education. Fall, Spring

711. Collection Development. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Design of collection policy; criteria for selection and maintenance; evaluation techniques; resource sharing; organization and management of collection development.

713. Information Sources and Service: Science and Technology. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Study and application of reference, bibliographic, and other information sources (print and electronic) in science and technology; techniques and procedures for serving the needs of various clientele; criteria for evaluating these sources and service and for developing appropriate collections.

715. Information Sources and Service: Social Sciences. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Study and application of reference, bibliographic, and other information sources (print and electronic) in the social sciences; techniques and procedures for serving the needs of various clientele; criteria for evaluating these sources and service and for developing appropriate collections.

717. Information Sources and Service: Humanities. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Study and application of reference, bibliographic, and other information sources (print and electronic) in the humanities; techniques and procedures for serving the needs of various clientele; criteria for evaluating these sources and service and for developing appropriate collections.

719. Government Information Sources. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Structure of the U. S. government in relation to its official publications; selection, acquisition, organization, and use of federal documents of the United States, with some attention to American state and municipal documents, as well as foreign and United Nations publications; print and electronic access.

721. Advanced Technical Services. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. A survey course including several ancillary activities required for maximum access to the materials in a library collection. Principal topics are acquisitions, circulation policies and procedures, preservation and conservation, online public access catalogs, interlibrary loan procedures, and the administration of the technical services department.

723. Problems in Organization of Materials. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Advanced problems in cataloging and subject analysis applying AACR2, Dewey, and Library of Congress systems; cataloging and subject analysis for new and special types of materials; utilization of centralized and automated processing; comparative study of other cataloging and subject analysis techniques; individualized student projects.

725. Bibliographic Control of Non-Print Materials. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. The course will introduce the principles of bibliographic control as they are applied to non-print materials in libraries and other information agencies. Topics covered include the background and development of current practices, bibliographic description of the full range of non-print materials, and subject access.

727. Serials Librarianship. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. This course will address problems in serials librarianship for all types of libraries, covering purposes, organization and arrangement, collection development and acquisitions, bibliographic control and cataloging, reference tools and subject access, administration, budgeting and accounting, and personnel.

731. Development of Books and Printing. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Early writing systems; manuscripts and other forerunners of the typographic book, the hand-produced book and related arts; the impact of the steam press; new printing processes growing out of twentieth-century technology.

733. Fundamentals of Library Conservation and Preservation. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. This course surveys the threats to unique materials in the library/information center's collection and introduces the basic methods employed to ensure the survival of these materials. The focus is on in-house procedures and techniques. Administration of the conservation/preservation program and emerging technologies are included. A materials fee will be charged.

735. History of Children's Literature to the Twentieth Century. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.:

GLIS 700, 701, 702, 703. The development of literature for children in Great Britain and North America, with major emphasis on the period from 1700 to 1900.

737. Literature for Children and Adolescents. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Introduction to forms and types of literature; criteria for excellence; techniques for analysis and evaluation; and identification of appeal and suitability for different types of readers.

739. Literature for the Young Adult. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Survey of literature written for young people ages 12-17. Includes historical development of the field, discussion of the specific genre, and consideration of the reading interests and needs of the young adult.

740. The Information Environment in Contemporary Society. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. An introduction to information products and services and how they relate to societal issues. The following will be studied: the interdisciplinary nature of research, industries that generate information products, human communication, information networks, the economics of information, intellectual property issues, and information policy.

741. Information Systems Analysis and Design. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. This course is designed to provide students with an understanding of the concepts and methodology of systems analysis both organizational and automated. The course emphasizes problem solving and decision making skills and developing criteria for judgment. Current and developing uses of automation in libraries and information centers will be discussed and demonstrated.

743. Information Access Systems: Indexing, Abstracting, and Other Access Systems. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Introduction to the theory, methodology, and implementation of text-based access systems. Identification, selection, and organization of concept bearing terms to generate patterns for document analysis, storage and information retrieval. Both manual and electronic information systems will be used to demonstrate patterns of storage and retrieval including graphics user interfaces, indexes, abstracts, and thesauri.

745. Online and Optical Information Systems. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. The course will cover the structures, content, acquisitions, and search methods of the following three types of databases: remote online databases obtained through a vendor, locally loaded databases available through campus or organizational computer installations, and locally stored databases on stand alone or networked optical devices. At least

three hours of supervised online searching. A materials fee will be charged.

747. Selected Technology Applications in Information Management. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701; prereq. or coreq.: GLIS 702, 703. The goals of this course are, first, to introduce students to some of the latest developments in information technology of immediate relevance to information professionals; second, to provide students with hands on laboratory experience of the systems selected. Units and contents offered may be changed from time to time to reflect new developments to the information arena.

749. Libraries and the Internet. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. This course will introduce the student to the Internet on both a conceptual and practical basis. Special attention will be directed to the utilization of the Internet in libraries and information centers and to its overall societal problems and promise. A series of exercises will provide the student with the rudiments of access to and use of the Internet.

760. Public Library Services for Children and Young Adults. 2 hr. plus conf. or supervised lab.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703, or permission of instructor. Planning and applications of public library services for children and young adults. Topics include program planning, collection development, community networking, management issues, and training.

761. Organization and Management: Media Centers. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Organizational structure, theory, and managerial practice of libraries emphasizing nonbook materials; standards, personnel, budget, selection, information, and technical service.

763. Nonbook Materials: Sources and Service. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Evaluation, selection, and utilization of nonbook materials to serve various clientele in school media centers, libraries, and other information agencies.

765. Resources for the School Curriculum 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Selection, evaluation, and utilization of instructional materials to support the curriculum on all grade levels, with special attention to current educational developments.

767. Beading Motivation Techniques for Children and Adolescents. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Development of techniques and skills in reading guidance, including individual performance and group criticism of book talks, storytelling, and poetry reading.

771. Organization and Management: Public Libraries. 2 hr. plus supervised

lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Introduction to key elements of organization and management, including personnel, services, public relations, budgeting, and building construction/renovation.

773. Public Library Services for Children and Young Adults. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703, or permission of instructor. Planning and applications of public library services for children and young adults. Topics include program planning, collection development, community networking, management issues, and training.

775. Librarianship in a Multicultural Society: Materials and Services. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Evaluation, selection, and utilization of book and nonbook materials to serve minority and ethnic clientele; traditional and innovative approaches to programming. Spring

780. Organization and Management: Academic and Research Libraries. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Structure of academic and research libraries in relation to their functions and clientele; standards, personnel, finance, buildings, and equipment; services; networking and community relations; automation; reporting; public relations.

781. Organization and Management: Special Libraries and Information Centers. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Organization and management of special libraries and information centers in corporate, governmental, institutional, and academic settings; effect of the environment on each library's functions.

784. Health Sciences Librarianship. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703, and permission of the School. All phases of medical and allied health sciences librarianship, with emphasis on medical community relationships; use of reference materials; current information-retrieval systems; and the selection and control of serial, monographic, and non-print materials in biomedicine; online experience with computerized bibliographic retrieval.

786. Business Information Sources. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Survey, evaluation, and application of information sources in business and finance; techniques and procedures for serving the needs of various clientele; special issues in corporate information centers.

788. Law Librarianship. 2 hr. plus supervised lab. and/or conf. hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703. Survey, evaluation, and application of legal research; special issues in law librarianship.

790.1. *VT: Seminar. 1 hr.; 1 cr. Prereq.:

GLIS 700, 701, 702, 703, and permission of the School. Topics to vary from semester to semester, according to trends and developments in the profession; announcements to be made in advance. Fall, Spring

790.2. *VT: Seminar. 2 hr.; 2 cr. Prereq.: GLIS 700, 701, 702, 703, and permission of the School. Topics to vary from semester to semester, according to trends and developments in the profession; announcements to be made in advance. Fall, Spring

790.3. *VT: Seminar. 3 hr.; 3 cr. Prereq.: GLIS 700, 701, 702, 703, and permission of the School. Topics to vary from semester to semester, according to trends and developments in the profession; announcements to be made in advance. Fall, Spring

791. Independent Study. Hr. to be arranged; 3 cr. Prereq.: GLIS 700, 701, 702, 703, and permission of the School. Pursuit of a particular research or investigatory project under the direction of a member of the School faculty; admission by special application. Fall, Spring

795. Internship. Fieldwork; hr. to be arranged; 3 cr. Prereq.: GLIS 700, 701, 702, 703, and permission of the School. Experience in a library or information agency approved by the School under the direct supervision of an experienced librarian or information specialist and in accordance with a program jointly approved by the School and the supervisor. Fall, Spring

LINGUISTICS & COMMUNICATION DISORDERS

Chair: Helen S. Cairns

Associate Chair and Director of Graduate Programs in Linguistics: Robert M. Vago

Associate Chair and Communication Sciences Program Director: Joel Stark

Director of Graduate Programs in Communication Disorders: Robert Rosenbaum

Dept. Office: Kissena 347, 997-2870

The Department of Linguistics and Communication Disorders offers degrees for the Master of Arts in Speech-Language Pathology; the Master of Arts in Audiology+; the Master of Arts in Applied Linguistics; and the Master of Science in Education Degree in Teaching English to Speakers of Other Languages (TESOL), as described below.

Faculty

Cairns, Helen S., *Chair, Professor*, Ph.D. 1970, University of Texas: adult psycholinguistics, language development in the child

Vago, Robert M., *Associate Chair and Director of Graduate Programs in Linguistics, Professor*, Ph.D. 1974, Harvard University: phonology and language attrition

Stark, Joel, *Communication Sciences Program Director, Professor*, Ph.D. 1956, New York University: speech-language pathology, child language development disorders and disabilities

Rosenbaum, Robert, *Director of Graduate Programs in Communication Disorders, Assistant Professor*, M.A. 1953, State University of Iowa: speech-language pathology

Brune, Patrick, *Instructor*, M.S. 1989, University of Nebraska-Lincoln: augmentative communication

Cairns, Charles E., *Professor*, Ph.D. 1968, Columbia University: phonology, psycholinguistics, adult literacy

Fiengo, Robert W., *Professor*, Ph.D. 1974, Massachusetts Institute of Technology: syntax and the acquisition of syntax

Gelfand, Stanley A., *Professor*, Ph.D. 1973, City University of New York: speech perception, acoustic immittance, reverberation

Gerber, Sima, *Assistant Professor*, Ph.D. 1987, City University of New York: pragmatics, child language

Halpern, Harvey, *Professor*, Ph.D. 1962, New York University: speech and lan-

+Applications for admission not being accepted for the 1997-98 academic year.

*Indicates a variable. title.

- guage problems of brain-injured adults
Klein, Elaine C., *Associate Professor*, Ph.D. 1990, City University of New York: TESOL and applied linguistics
- Kraat, Arlene, *Associate Professor*, M.A. 1970, University of Indiana: augmentative communication
- Martohardjono, Gita, *Assistant Professor*, Ph.D. 1993, Cornell University: TESOL and applied linguistics
- Mazor, Marvin, *Assistant Professor*, Ph.D. 1971, New York University: clinical audiology
- Newman, Michael, *Assistant Professor*, Ed.D. 1993, Teachers College, Columbia University: TESOL and Applied Linguistics
- Rapp, Michelle, *Instructor*, M.A. 1991, Queens College: speech-language communication disorders, dysphagia
- Schneider, Phillip, *Assistant Professor*, Ed.D. 1980, Columbia University: stuttering, vocal articulation
- Seliger, Herbert W., *Graduate Adviser, Professor*, Ed.D. 1969, Teachers College, Columbia University: second language acquisition and applied linguistics
- Stevens, Alan M. *Professor*, Ph.D. 1964, Yale University: phonology and Indonesian languages
- Toueg, Renee, *Instructor*, M.S. 1963, Pennsylvania State University: adult, child language disorders

Doctor of Philosophy Programs

Adviser: Helen S. Cairns

The City University of New York offers programs for the degree of Doctor of Philosophy in Speech and Hearing Sciences and in Linguistics. The doctoral programs are described in the *Bulletin* of the CUNY Graduate School, which can be obtained from the Graduate School and University Center, 33 West 42 Street, New York, NY 10036. Further information can also be obtained from the program offices.

Master's Degree in Speech-language Pathology

Program Director: Robert Rosenbaum

The program in Communication Disorders prepares students to become speech-language pathologists. It includes course work in speech, language, and hearing science as well as in professional areas. Candidates with incomplete undergraduate preparation will be required to make up deficiencies before enrolling in graduate courses.* Candidates will meet the academic and supervised clinical practicum requirements of the American Speech-Language-Hearing Association for certification as speech-language pathologists. Candidates will also be

*Contact the program for more complete information.

eligible for the New York State Certificate for Teaching the Speech and Hearing Handicapped and the New York State Department of Education professional licensure pathology.

The Queens College Speech, Language, and Hearing Center, in its own specially designed building, serves as the departmental clinical laboratory. Students spend their first year of clinical practicum at the Center, where they are intensively supervised. Advanced students are assigned to clinical practica at selected hospitals and special schools for extended externship experience. An Augmentative Communication Center trains students to use modern technology in the treatment of disorders.

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. A grade-point average of *B* or better.
2. At least 15 credits in courses appropriate to the study of communication. Courses are selected to satisfy ASLHA certification standards (see adviser).
3. A S-credit course in Bio./Phys. Sci., 3 credits in Math, 6 credits in Behavioral and/or Social Sciences to satisfy ASLHA certification standards (see adviser).
4. At least three letters of recommendation from undergraduate instructors, normally two from faculty in communication sciences and disorders and one from a faculty member in another area. Applicants who have been employed full time following receipt of their undergraduate degree may wish to submit letters from employment supervisors. An interview may be required.
5. Results of the Graduate Record Examination.
6. Applicants who present international credentials or whose native language was not English must receive a minimum score of 650 on the TOEFL.
7. A personal essay.
8. The credentials of each applicant will be examined by the departmental Graduate Studies Committee, which will accept, accept with conditions, or reject candidates.
9. The number of applicants approved for matriculation is limited by the training facilities available; therefore, applicants who otherwise meet minimum requirements for matriculation may not necessarily be admitted.

Requirements for the Communication Disorders Program

These requirements are in addition to the general College requirements for the Master of Arts degree.

1. Candidates in Speech-Language Pathology must complete between 48 and 54 credits and be enrolled as full-time students for four semesters (exclusive of the Summer).
2. In addition to course work, candidates must plan to schedule at least 12-14 hours a week at the Speech-Language-Hearing Center for supervised clinical

practice during the first year. (During the second year, students are assigned to off-campus externships.)

3. Candidates must maintain a *B* or better grade-point average. In addition, full-time candidates must satisfactorily complete four semesters of clinical practice. The practicum courses, LCD 729 and 749, are graded on a Pass/Fail basis.

Program for the Master of Arts Degree in Applied Linguistics

Program Director: Robert Vago

The goal of this program is to train graduate students to be effective teachers of adult learners of English as a second or foreign language.

Requirements for Admission

These requirements are in addition to the general requirements for admission.

1. Completion of a B.A. with a 3.0 GPA minimum.
2. Applicants must demonstrate satisfactory standards of spoken and written English. For applicants whose first language is not English: a) Interviews are required of those applicants who hold an undergraduate or graduate degree from an accredited American institution of higher education; b) All other applicants must submit proof of having achieved a score of 650 or higher on the Test of English as a Foreign Language (TOEFL). The Graduate Record Examination is not required.

Requirements for the M.A. Degree in Applied Linguistics

Important Note: All students must file a concentration form with a Graduate Adviser. The requirements below are in addition to the general requirements for the Master of Arts degree.

Satisfactory completion of the following 33 credits: LCD 701, 702, 703, 705, 706, 707, 740, 741, 750, 790; one elective.

Program for the Master of Science in Education Degree: TESOL

Program Director: Robert Vago

The M.S. in Education: Teaching English to Speakers of Other Languages degree is designed to educate and certify teachers of students who do not speak English in pre-kindergarten, elementary, and secondary schools (pre-K-12).

Requirements for Admission

Applicants seeking New York State Certification as Pre-K-12 schoolteachers of ESL must satisfy the following criteria for admission:

1. Completion of B.A. with a 3.0 GPA minimum.

2. One year of college-level study of a language other than English. (If the undergraduate course of study does not fulfill this requirement, appropriate course work may be taken in conjunction with the Master's degree program but is in addition to it.)

3. Applicants must demonstrate satisfactory standards of spoken and written English. For applicants whose first language is not English: a) Interviews are required of those applicants who hold an undergraduate or graduate degree from an accredited American institution of higher education; b) All other applicants must submit proof of having achieved a score of 650 or higher on the Test of English as a Foreign Language (TOEFL). The Graduate Record Examination is not required.

Requirements for the M.S. in Education Degree: TESOL

Important Note: All students must file a concentration form with a Graduate Adviser. The requirements below are in addition to the general requirements for the Master of Science in Education degree.

A. For students already possessing undergraduate teacher certification in TESOL (all courses are 3 credits, except where noted):

- 701. Introduction to Linguistics
- 702. Structure of American English: Theory and Methodology I
- 703. Structure of American English: Theory and Methodology II
- 705. Sociolinguistics and Pragmatics
- 706. Bilingualism
- 707. Evaluation and Measurement in TESOL
- 740. Introduction to Second Language Acquisition and Teaching
- 741. Methods and Materials in TESOL
- 742. TESOL through the Content Areas: Methods and Materials
- 790. Seminar in Research in TESOL

Plus one elective in Foundations of Education.

B. For students already possessing undergraduate teacher certification, but in an area other than TESOL: the above courses, plus SEYS 573, Student Teaching Internship in TESOL, Elementary and Secondary: 6 credits.

C. For students without undergraduate teacher certification: the above courses, plus SEYS 536, Educational Foundations, SEYS 552, Educational Psychology, and SEYS 573, Student Teaching Internship in TESOL, Elementary and Secondary: 6 credits.

Any deviation from this listing must be after consultation with the appropriate advisers.

Courses in Communication Disorders Program

700. Methodology in Communication Research. 2 hr. plus conf.; 3 cr. Methods of experimental and statistical control in the design of research for the speech and hearing sciences.+.

708. Speech Science. 2 hr. plus conf.; 3 cr. Descriptive and theoretical accounts of the production and perception of speech.†

710. Physiological Acoustics. 2 hr. plus conf.; 3 cr. Prereq.: Undergraduate speech/hearing anatomy, speech/hearing science, audiology. In-depth coverage of the anatomy and physiology of the auditory system from the peripheral ear through the central nervous system. The course covers the nature of signal transmission and transduction and the coding of information at each level of processing, along with the relationship of these functions to the nature of the sound signal, anatomical structure, and perception.

717. The Acquisition of Language. 2 hr. plus conf.; 3 cr. Development of language in the normal child; theoretical and empirical issues.?

721. Language and Learning Disorders of Children. 2 hr. plus conf.; 3 cr. Application of studies in normal language acquisition of childhood language and learning disorders; emphasis on use of current information in the evaluation and design of intervention programs for children with language and learning disorders.

722. Speech Disorders: Stuttering. 2 hr. plus conf.; 3 cr. Theoretical and empirical approaches to the symptoms, etiology, and management of fluency disorders.?

723. Augmentative Communication for the Severely Handicapped. 2 lec. hr., 1 lab. hr.; 3 cr. Nature of augmentative communication systems; guidelines and procedures for assessment and selection; training and intervention procedures.†

724. Neuromotor Communication Disorders. 2 hr. plus conf.; 3 cr. Emphasis on problems of children with cerebral palsy and other neuromuscular disorders.?

725. Diagnostic Methods in Speech-Language Pathology. 2 hr. plus conf.; 3 cr. Theoretical principles underlying the assessment of communication disorders; includes procedures for test selection, interviewing, and report writing.?

726. Language Disorders: Adults I. 2 hr. plus conf.; 3 cr. Symptoms, etiology, and management of adults with language difficulties related to neurological impairment.+

727. Speech Disorders: Voice. 2 hr. plus conf.; 3 cr. Vocal pathologies in children and adults: etiology, symptoms, and treatment approaches.?

728. Organization of Speech-Language Pathology and Audiology Services. 2 hr. plus conf.; 3 cr. Prereq. or coreq.: CAS 729. A study of research findings and professional practices basic to decision making in the organization of clinical speech-language and hearing service delivery programs.

729.1, 729.2, 729.3. Clinical Practicum in Speech-Language Pathology. Prereq.: Written permission of department. Graded on Pass/Fail basis only.

729.1. 3 hr.; 1 cr.

729.2. 6 hr.; 2 cr.

729.3. 9 hr.; 3 cr.

730. Speech Disorders: Articulation. 2 hr. plus conf.; 3 cr. Review of current literature on phonological disorders with a view toward assessment and management.?

731. Language Disorders: Adults II. 2 hr. plus conf.; 3 cr. Prereq.: CAS 726. This course looks at the language of dementia, confusion, schizophrenia, and right hemisphere brain damage, along with motor speech disorders of dysarthria and apraxia of speech. Each disorder, especially as it relates to the geriatric population, is discussed according to its symptoms, etiology, diagnosis, and treatment.

734. Communication and Auditory Impairment. 2 hr. plus conf.; 3 cr. Communication problems of the hearing impaired, clinical strategies for intervention; production and comprehension of speech and language as well as psychological considerations.†

759. Studies in Communication. 3 hr.; 3 cr. May be repeated for credit if topic changes.

797. Special Problems. Prereq.: Approval of program coordinator and Department Chair.

797.1. 1 hr.; 1 cr.

797.2. 2 hr.; 2 cr.

797.3. 3 hr.; 3 cr.

Communication Disorders Courses in Reserve

704. The Psychology of Speech

714. Sociology of Speech: Sociolinguistics

715. Semantics

743. Advanced Audiology I

744. Hearing Aids

745. Audiological Assessment of the Young Child

746. Advanced Audiology II

747. Psychological Acoustics

748. Auditory Disorders in Children

749.1, 749.2, 749.3. Clinical Practicum in Audiology

Courses in linguistics Programs

701. Introduction to Linguistics. 3 hr.; 3 cr. Structural aspects of language most relevant to the ESL and/or literacy teacher.

702. The Structure of American English: Theory and Methodology I. 3 hr.; 3 cr. Introduction to the grammar of English and applications to teaching ESL.

703. The Structure of American English: Theory and Methodology II. 3 hr.; 3 cr. Prereq.: LCD 702. Continuation of LCD 702.

705. Sociolinguistics and Pragmatics. 3

hr.; 3 cr. Prereq.: LCD 701. An introduction to sociolinguistics, the study of the relationship between language and society. Pragmatics, the study of conditions that affect the use and understanding of language in society, is introduced. The socio-cultural factors that influence the way people use different codes and dialects, and the pragmatic factors that show how utterances are actually conveyed and how comprehension is ultimately achieved are investigated.

706. Bilingualism. 3 hr.; 3 cr. Prereq.: LCD 701. Sociolinguistic and psycholinguistic properties of bilingualism, legal history, and educational foundations of bilingual education. Bilingual education will be compared to other approaches. An emphasis is placed on the implications of bilingualism for ESL or literacy teachers.

707. Evaluation and Measurement in TESOL. 3 hr.; 3 cr. Discussion of contemporary issues and problems in ESL testing. Construction and evaluation of reliable tests in all areas of language skills. Analysis of published standardized ESL tests, such as LAB and TOEFL.

740. Introduction to Second Language Acquisition and Teaching. 3 hr.; 3 cr. An introduction to the linguistic and pedagogical theories and methods of ESL teaching.

741. Methods and Materials in TESOL. Prereq.: LCD 701 and 740. This course concentrates on the methods and materials appropriate to teaching ESL to adolescents and adults.

742. TESOL through the Content Areas: Methods and Materials. 3 hr.; 3 cr. Prereq.: LCD 701 and 740. Training in the teaching of comprehension, speaking, reading, and writing of English to speakers of other languages at all grade levels. Materials and techniques for teaching English to speakers of other languages through the content subjects, such as mathematics, science, and social studies.

750. Practicum in Adult TESOL. 5 hr.; 3 cr. Prereq.: LCD 703, 705, 706, 741. Supervised teaching experience plus a weekly two-hour seminar focused on classroom-related issues in second language acquisition and instruction. This course does not fulfill the State Education requirements for certification in elementary or secondary schools.

790. Seminar in Research in TESOL. 3 hr.; 3 cr. Prereq.: LCD 701, 702, 703, 705, 706, 707, 740, 741, 742. Analysis of selected research studies related to the teaching of English to speakers of other languages.

Linguistics Courses in Reserve

709. Teaching Writing and Reading to the Adult ESL or Basic Education Student

781. Survey of Adult Literacy Practices and Theory

782. Language, Literacy, and Society

764. Practicum in Adult Literacy and Reading

791. Seminar in Research in Applied Linguistics

MASTER OF ARTS IN LIBERAL STUDIES

Director: Martin L. Pine

MALS Advisory Committee: James N. Jordan, Frederick Purnell

Dept. Office: Powdermaker 200, 997-5372

The Master of Arts in Liberal Studies program makes possible a structured study of issues and problems outside the usual graduate school disciplines. Its interdisciplinary approach encourages students to see a specific problem, theme, or topic from a broad perspective by focusing on it through more than one methodology. The base of the 30-credit program is three team-taught core seminars that provide an intense examination of the sources and development of Western values.

While completing the core seminars (which comprise 9 credits), students, in consultation with a faculty adviser, select 18 credits of elective courses from existing College graduate offerings. This allows for a focused yet interdisciplinary approach at the Master's level of study.

Faculty

The core faculty is drawn primarily but not exclusively from the Departments of Philosophy, History, Economics, and Political Science. Recent participants include:

- Pine, Martin L., Director, *Professor* of History, Ph.D. 1965, Columbia University: ancient, medieval, and renaissance history
- Cordero, Alberto, *Professor* of Philosophy, Ph.D., University of Maryland: philosophy of natural science; history of science
- Hicks, Steven V., Associate *Professor* of Philosophy, Ph.D. 1990, Columbia University: Kant and Post-Kantian continental philosophy
- Jordan, James N., *Professor* of Philosophy, Ph.D. 1966, University of Texas at Austin: Kant studies, ethics
- Purnell, Frederick, Associate *Professor* of Philosophy, Ph.D. 1971, Columbia University: ancient, medieval, and renaissance philosophy

Admission

Students must satisfy the general requirements for admission to the Graduate Division. The Graduate Record Exam is not required. The MALS Advisory Committee recommends candidates to the Dean.

Requirements for MALS Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

1. Each student must complete the three core seminars.
2. The course of study must be approved by a faculty adviser.
3. Of the six elective courses, no more than three can be in the same department.
4. Thesis or project required (3 credits).

MALS Core Seminars

Liberal Studies 700. Western Values I. 2 hr. plus conf.; 3 cr. An intensive examination of the philosophical, religious, and political ideas of the ancient and Medieval world in their historical context.

Liberal Studies 701. Western Values II. 2 hr. plus conf.; 3 cr. A continuation of LS 700 from the Renaissance to the middle of the twentieth century.

Liberal Studies 702. Western Values III. 2 hr. plus conf.; 3 cr. Topics in twentieth-century philosophy, politics, and science.

MATHEMATICS

Chair: Jack P. Diamond

Graduate Adviser: Nick Metas

Dept. Office: Kiely 237, 997-5800

Students in the Master's program can choose a program of study to prepare them for Ph.D. programs in mathematics, for teaching at a pre-university level, for a career in probability or statistics, or for actuarial work. For those students who are interested in computer science as well as mathematics, a program can be arranged so that students do approximately one-half of their work in mathematics and one-half in computer science, each area complementing the other.

Faculty

- Diamond, Jack P., Chair, *Associate Professor*, Ph.D. 1975, Princeton University: algebraic number theory
- Metas, Nick, Graduate Adviser, *Assistant Professor*, Ph.D. 1966, Massachusetts Institute of Technology: functional analysis, injective Banach spaces
- Sullivan, Dennis P., *Albert Einstein Professor of Mathematics*, Ph.D. 1965, Princeton University: geometric topology
- Braun, Martin, *Professor*, Ph.D. 1968, New York University: qualitative theory of differential equations, mathematical models
- Cowen, Robert H., *Professor*, Ph.D. 1967, Yeshiva University: logic and set theory
- Dodziuk, Jozef, *Professor*, Ph.D. 1973, Columbia University: geometric analysis
- Don, Eugene C., *Lecturer*, Ph.D. 1984, State University of New York at Stony Brook: numerical analysis
- Emerson, William R., *Professor*, Ph.D. 1967, University of California at Berkeley: number theory, combinatorics, and topological group theory
- Goldberg, Wallace, *Professor*, Ph.D. 1974, Polytechnic Institute of New York: applied mathematics, differential equations
- Goodman, Arthur, *Lecturer*, Ph.D. 1980, Yeshiva University: approximation theory
- Hechler, Stephen H., *Professor*, Ph.D. 1967, University of California at Berkeley: logic, set theory, set theoretical combinatorics, set theoretical topology
- Hershenov, Joseph, *Professor*, Ph.D. 1961, Massachusetts Institute of Technology: fluid dynamics, stability theory
- Itzkowitz, Gerald L., *Professor*, Ph.D. 1965, University of Rochester: topology, topological groups, functional analysis, relativity
- Jiang, Yunping, *Assistant Professor*, Ph.D. 1990, City University of New York: dynamical systems
- Kahane, Joseph, *Professor*, Ph.D. 1963, Columbia University: combinatorics, applied mathematics

- Kramer, Kenneth B., *Professor*, Ph.D. 1973, Harvard University: algebraic number theory
- Kulkarni, Ravi S., *Professor*, Ph.D. 1967, Harvard University: differential geometry, Riemann surfaces
- Lieberman, Sidney M., *Professor*, Ph.D. 1965, New York University: image reconstruction, applied mathematics, cholesterol synthesis, biological modeling
- Maller, Michael J., *Associate Professor*, Ph.D. 1978, University of Warwick: dynamical systems and analysis
- Mansfield, Larry E., *Associate Professor*, Ph.D. 1965, University of Washington: differential geometry
- Mendelson, Elliott, *Professor*, Ph.D. 1955, Cornell University: mathematical logic, axiomatic set theory
- Ralescu, Stefan S., *Professor*, Ph.D. 1981, Indiana University at Bloomington: statistics, non-parametric inference, probability theory
- Roskes, Gerald J., *Associate Professor*, Ph.D. 1969, Massachusetts Institute of Technology: numerical analysis, partial differential equations, singular perturbation theory
- Rothenberg, Ronald I., *Associate Professor*, Ph.D. 1964, University of California at Davis: operations research, probability and statistics, applied mathematics
- Sisser, Fern S., *Associate Professor*, Ph.D. 1977, Columbia University: optimization
- Steinberg, Arthur, *Associate Professor*, Ph.D. 1963, New York University: group theory
- Sultan, Alan, *Professor*, Ph.D. 1974, Polytechnic Institute of New York: topological measure theory
- Swick, Kenneth E., *Professor*, Ph.D. 1967, University of Iowa: differential equations, integral equations, population dynamics, epidemiology
- Tischler, David C., *Professor*, Ph.D. 1969, City University of New York: foliations, singularities of differential forms
- Thorpe, John A., *Professor*, Ph.D. 1963, Columbia University: differential geometry, general relativity
- Weintraub, Sol, *Professor*, Ph.D. 1964, Temple University: number theory, statistics and probability
- Weiss, Norman J., *Professor*, Ph.D. 1966, Princeton University: harmonic analysis on Euclidean spaces and Lie groups

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. To be admitted to the program, a candidate must have at least 25 credits in advanced courses in mathematics and related fields (such as computer science and physics). At least 12 credits must be in mathematics, including advanced calculus and linear algebra, with an average of at least *B* in the mathematics courses. Applicants not meeting these requirements must secure special permission of the department, and may be required to take

courses to remove the deficiencies without receiving graduate credit.

2. At least two of the written recommendations must be from the applicant's undergraduate instructors and must deal with the ability of the applicant to pursue graduate work in mathematics.

3. The applicant must have the approval of the Departmental Committee of the Graduate Program.

4. The applicant's plan of study must be approved by the department.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

The Department of Mathematics offers to the student the opportunity to obtain the Master of Arts degree either in Pure Mathematics or with a concentration in Applied Mathematics.

Master of Arts in Pure Mathematics

1. A candidate for this degree is required to complete Mathematics 621, 628, 701, 702, and 703. A total of 30 credits required for the degree must be in mathematics, except that, with the approval of the Mathematics Department, a limited number of appropriate courses in physics or computer science may be substituted for mathematics courses. It is required that the program be completed with an average of *B* or better.

2. Each candidate for the degree must pass an oral examination.

Master of Arts with a Concentration in Applied Mathematics

1. A candidate for this degree is required to complete 30 credits in an approved sequence of graduate-level courses in mathematics and related fields. All students must achieve a solid grounding in the three areas of probability and statistics, analytic methods, and numerical methods. This can be achieved by taking the following mathematics courses: 621, 624, 625, 628, and 633; or by demonstrating competence in specific areas to the satisfaction of the department; or by taking an alternative program of courses selected with the advisement and approval of the Graduate Adviser. A list of current courses and suggested programs of study will be made available. Students may obtain permission to design programs tailored to their individual needs. It is required that the Master's program be completed with an average of *B* or better.

2. Each candidate will be required to pass a written examination in an area of specialization to be approved by the Mathematics Department.

3. Students will be encouraged to obtain practical experience in applied mathemat-

ics by working for private businesses or governmental agencies participating in the Queens College Cooperative Education program.

Courses in Mathematics

503. Mathematics from an Algorithmic Standpoint. 3 hr.; 3 cr. Prereq.: One year of calculus. An algorithmic approach to a variety of problems in high school and college mathematics. Experience in programming is not necessary. Topics may include problems from number theory, geometry, calculus and numerical analysis, combinatorics and probability, and games and puzzles. This course aims at a better understanding of mathematics by means of concrete, constructive examples of mathematical concepts and theorems. (This course may not be credited toward the degree of Master of Arts in Mathematics, except with the special permission of the Chair of the Mathematics Department.) Spring

509. Set Theory and Logic. 3 hr.; 3 cr. Prereq.: One year of calculus or permission of instructor. May not be credited toward the Master of Arts degree in Mathematics. Propositional logic and truth tables. Basic intuitive ideas of set theory: cardinals, order types, and ordinals.

518. College Geometry. 3 hr.; 3 cr. Prereq.: One course in linear algebra. Advanced topics in plane geometry, transformation geometry. Not open to candidates for the Master of Arts degree in Mathematics. Fall

524. History of Mathematics. 3 hr.; 3 cr. Prereq. or coreq.: Mathematics 201 (Intermediate Calculus). Not open to candidates for the Master of Arts degree in Mathematics. Fall

525. History of Modern Mathematics. 3 hr.; 3 cr. Prereq.: Mathematics 524 or permission of instructor. May not be credited toward the Master of Arts degree in Mathematics. Selected topics from the history of nineteenth- and twentieth-century mathematics, e.g., topology, measure theory, paradoxes and mathematical logic, modern algebra, non-Euclidean geometries, foundations of analysis.

550. Studies in Mathematics. Prereq.: Permission of the Mathematics Department. Topics will be announced in advance. May be repeated once for credit if topic is not the same. Not open to candidates for the Master of Arts degree in Mathematics. ††

550.1. 1 hr.; 1 cr.

550.2. 2 hr.; 2 cr.

550.3. 3 hr.; 3 cr.

555. Mathematics of Games and Puzzles. 3 hr.; 3 cr. Prereq.: Two years of calculus or permission of instructor. May not be credited toward the Master of Arts degree in Mathematics. Elements of game theory. Analysis of puzzles such as weighing problems, mazes, Instant Insanity,

magic squares, paradoxes, etc.

601. Discrete Mathematics for Computer Science. 4 hr.; 3 cr. An introduction to discrete mathematics for those incoming Computer Science master's degree students who do not have an undergraduate background in discrete mathematics. Topics include elementary set theory, elements of abstract algebra, propositional calculus, and Boolean algebra, proofs, mathematical induction, combinatorics, graphs, and discrete probability theory. (Students may not receive credit for both Mathematics 601 and either Mathematics 220 or Computer Science 221, or an equivalent course in discrete mathematics. Mathematics 601 cannot be counted toward an undergraduate major in mathematics or a master's degree in mathematics.)

609. Introduction to Set Theory. 3 hr.; 3 cr. Prereq.: Mathematics 201 (Intermediate Calculus) or permission of instructor. Axiomatic development of set theory; relations, functions, ordinal and cardinal numbers, axiom of choice. Zorn's lemma, continuum hypothesis. Spring

611. Introduction to Mathematical Probability. 3 hr.; 3 cr. Prereq.: A one-year course in differential and integral calculus (including improper integrals). A first course in probability at an advanced level. Topics to be covered include axioms of probability, combinatorial analysis, conditional probability, random variables, binomial, Poisson, normal, and other distributions, mathematical expectation, and an introduction to statistical methods. Not open to students who have received credit for Mathematics 241 or 621. May not be counted toward the Master of Arts degree in Mathematics. Spring

612. Projective Geometry. 3 hr.; 3 cr. Prereq.: A course in linear algebra. Study of the projective plane. ††

613. Algebraic Structures. 3 hr.; 3 cr. Prereq.: A course in linear algebra. Not open to students who have received undergraduate credit for Mathematics 333 at Queens College. Groups, rings, polynomials, fields, Galois theory. Spring

614. Functions of Real Variables. 3 hr.; 3 cr. Prereq.: Course in Elementary Real Analysis or Point Set Topology (equivalent of Mathematics 310 or 320), or permission of instructor. Provides a foundation for further study in mathematical analysis. Topics include: basic topology in metric spaces, continuity, uniform convergence and equicontinuity, introduction to Lebesgue theory of integration. Fall

616. Ordinary Differential Equations. 3 hr.; 3 cr. Prereq.: Mathematics 614 or permission of Chair. Existence and uniqueness of solutions, linear systems, Liapunov stability theory, eigenvalue and boundary value problems. Spring 1998

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

617. Number Systems. 3 hr.; 3 cr. Prereq.: Three semesters of undergraduate analytic geometry and calculus including infinite series. Not open to students who have received undergraduate credit for Mathematics 317 at Queens College. Axiomatic development of the integers, rational numbers, real numbers, and complex numbers. Fall

618. Foundations of Geometry. 3 hr.; 3 cr. Prereq.: One year of calculus. Historical perspective. Axiomatics: models, consistency, and independence. Rigorous development of both Euclidean geometry and the non-Euclidean geometry of Bolyai and Lobachevski. Spring

619. Theory of Numbers. 3 hr.; 3 cr. Prereq.: A course in linear algebra. The elementary theory of integers is considered, with applications to many numerical problems. Spring

621. Probability. 3 hr.; 3 cr. Prereq.: A semester of intermediate calculus (the equivalent of Mathematics 201) and an introductory course in probability, or permission of Chair. Binomial, Poisson, normal, and other distributions. Random variables. Laws of large numbers. Generating functions. Markov chains. Central limit theorem. Fall

623. Operations Research (Probability Methods). 3 hr.; 3 cr. Prereq.: Course in probability theory (such as Mathematics 241). An introduction to probabilistic methods of operations research. Topics include the general problem of decision making under uncertainty, project scheduling, probabilistic dynamic programming, inventory models, queuing theory, simulation models, and Monte Carlo methods. The stress is on applications. Spring

624. Numerical Analysis I. 3 hr.; 3 cr. Prereq.: Mathematics 130 (Applied Linear Algebra) or Mathematics 135 (Linear Algebra and Geometry I), or Mathematics 137 (Honors Linear Algebra), and either Mathematics 255 (Programming) or knowledge of a programming language. Coreq.: Mathematics 201 (Intermediate Calculus). Numerical solution of nonlinear equations by iteration. Interpolation and polynomial approximation. Numerical differentiation and integration. Fall

625. Numerical Analysis II. 3 hr.; 3 cr. Prereq.: Mathematics 624 or its equivalent, including knowledge of a programming language. Numerical solution of systems of linear equations. Iterative techniques in linear algebra. Numerical solution of systems of nonlinear equations. Orthogonal polynomials. Least square approximation. Gaussian quadrature. Numerical solution of differential equations. Spring

626. Mathematics and Logic. 3 hr.; 3 cr. Prereq.: Intermediate calculus or permission of department. Propositional calculus, quantification theory, recursive functions, Gödel's incompleteness theorem. Fall

628. Functions of a Complex Variable.

3 hr.; 3 cr. Prereq.: One year of advanced calculus (Mathematics 202) or permission of instructor. Topics covered include analytical functions. Cauchy's Integral Theorem, Taylor's theorem and Laurent series, the calculus of residues, Riemann surfaces, singularities, meromorphic functions. Spring

630. Differential Topology. 3 hr.; 3 cr. Prereq.: Advanced calculus. Differentiable manifolds and properties invariant under differentiable homeomorphisms; differential structures; maps; immersions, imbeddings, diffeomorphisms; implicit function theorem; partitions of unity; manifolds with boundary; smoothing of manifolds.

631. Differential Geometry. 3 hr.; 3 cr. Prereq.: Advanced calculus. Theory of curves and surfaces and an introduction to Riemannian geometry.

632. Differential Forms. 3 hr.; 3 cr. Prereq.: Advanced calculus. A study in a coordinate-free fashion of exterior differential forms: the types of integrands which appear in the advanced calculus.

633. Statistical Inference. 3 hr.; 3 cr. Prereq.: A semester of intermediate calculus (the equivalent of Mathematics 201) and either an undergraduate probability course which includes mathematical derivations or Mathematics 611 or 621. Basic concepts and procedures of statistical inference. Spring

634. Theory of Graphs. 3 hr.; 3 cr. Prereq.: One semester of advanced calculus. An introduction to the theory of directed and undirected graphs. The Four-Color Theorem. Applications to other fields. Fall

635. Stochastic Processes. 3 hr.; 3 cr. Prereq.: Mathematics 611 or 621. A study of families of random variables.††

636. Combinatorial Theory. 3 hr.; 3 cr. Prereq.: A course in linear algebra. This course will be concerned with techniques of enumeration. Spring

650. Studies in Mathematics. Prereq.: Permission of department. The topic will be announced in advance. This course may be repeated for credit provided the topic is not the same.††

- 650.1. 1 hr.; 1 cr.
- 650.2. 2 hr.; 2 cr.
- 650.3. 3 hr.; 3 cr.

701. Theory of the Integral. 3 hr.; 4½ cr. Prereq.: Mathematics 614. The Lebesgue integral in one dimension and in n dimensions, the abstract case.

702. Modern Abstract Algebra I. 3 hr.; 4½ cr. Prereq.: Mathematics 613. A course in the fundamental concepts, techniques, and results of modern abstract algebra. Concepts and topics studied are semi-groups, groups, rings, fields, modules, vector spaces, algebras, linear algebras, matrices, field extensions, and ideals.

703. Point Set Topology. 3 hr.; 4½ cr. Prereq.: Advanced calculus. Topological

spaces, mappings, connectedness, compactness, separation axioms, product spaces, function spaces.

704. Functional Analysis. 3 hr.; 4½ cr. Prereq.: A course in linear algebra and Mathematics 614. Abstract linear spaces, normed linear spaces, continuous linear transformations, dual spaces. Hahn-Banach theorem, closed graph theorem, uniform boundedness principle, Hilbert spaces, the weak-topology, Alaoglu's theorem, topological linear spaces.

705. Theory of Functions of a Complex Variable. 3 hr.; 4½ cr. Prereq.: Mathematics 701.††

706. Advanced Ordinary Differential Equations. 3 hr.; 4½ cr. Prereq.: Mathematics 616.††

707. Partial Differential Equations. 3 hr.; 4½ cr. Prereq.: Mathematics 706.††

708. Combinatorial Topology. 3 hr.; 4½ cr. Prereq.: Mathematics 703.††

709. Set Theory. 3 hr.; 4½ cr.††

710. Mathematics and Logic: Advanced Course. 3 hr.; 4½ cr. Prereq.: Mathematics 626.††

711. The Mathematical Structure of Modern Statistics. 3 hr.; 4½ cr. Prereq.: A course in either probability or statistics.††

712. Higher Geometry. 3 hr.; 4½ cr.††

713. Modern Abstract Algebra II. 3 hr.; 4½ cr. Prereq.: Mathematics 702.††

717. Theory of Approximation I. 3 hr.; 4½ cr. Prereq.: Mathematics 614 or permission of department.††

718. Theory of Approximation II. 3 hr.; 4½ cr. Prereq.: Mathematics 717.††

790. Independent Research. May be repeated for credit if the topic is changed.

- 790.1. 1 hr.; 1 cr.
- 790.2. 2 hr.; 2 cr.
- 790.3. 3 hr.; 3 cr.
- 790.4. 4 hr.; 4 cr.
- 790.45. 3 hr.; 4½ cr.
- 790.5. 5 hr.; 5 cr.

791. Tutorial. May be repeated for credit if the topic is changed.

- 791.1. 1 hr.; 1 cr.
- 791.2. 2 hr.; 2 cr.
- 791.3. 3 hr.; 3 cr.
- 791.4. 4 hr.; 4 cr.
- 791.45. 3 hr.; 4½ cr.
- 791.5. 5 hr.; 5 cr.

792. Seminar. May be repeated for credit if the topic is changed.

- 792.1. 1 hr.; 1 cr.
- 792.2. 2 hr.; 2 cr.
- 792.3. 3 hr.; 3 cr.
- 792.4. 4 hr.; 4 cr.
- 792.45. 3 hr.; 4½ cr.
- 792.5. 5 hr.; 5 cr.

MEDIA STUDIES

Chair: Stuart Liebman

Master's Program Coordinator: Jonathan Buchsbaum

Dept. Office: G100, 997-2950

The Media Studies program offers students a rigorous academic course of study which seeks to develop their research, analytic, and policy-making skills. Students not only familiarize themselves with the theories and criticism of the field, but also develop the procedures and skills necessary to conduct original research. The curriculum is suited to those students whose primary interest is in theory and research and who wish to pursue doctoral studies elsewhere, but is also of great benefit to those who wish to enter into and reach higher levels in media-related industries.

The program is designed for the media generalist. All courses within the program examine the intellectual, social, and cultural issues raised by a rapidly changing media environment throughout the world. While local circumstances vary from country to country, many of these issues apply to media practices internationally. Courses address key questions in contemporary media debates with careful attention to the historical background of these debates. Specifically, the curriculum focuses upon the theory and criticism of contemporary media in three principal areas: 1) theories of media; 2) criticism of media and popular culture; 3) international media systems.

The program regularly updates the curriculum to take account of the rapid changes referred to above, in particular the globalization of media and the implications of new technological development.

Those students lacking academic background in Media and/or Communications may be asked to take selected undergraduate courses to provide the appropriate background. These courses may be taken concurrently with graduate courses.

Faculty

Liebman, Stuart, Chair, *Professor*, Ph.D. 1980, New York University: film theory and criticism, media theory

Buchsbaum, Jonathan, Master's Program Coordinator, *Associate Professor*, Ph.D. 1983, New York University: film theory, film history, film and politics

Grossman, Manuel, *Associate Professor*, Ph.D. 1966, New York University: film theory

Haney, John, *Professor*, Ph.D. 1960, University of Michigan: theory and application of instrumentation in media

Hendershot, Heather, *Assistant Professor*, Ph.D. 1995, University of Rochester: film and television analysis and criticism; children's television; feminism and media

Hill, Forbes I., *Associate Professor*, Ph.D.

1963, Cornell University: rhetorical theory, analysis and criticism

López-Pumarejo, Tomás A., *Assistant Professor*, Ph.D. 1991, University of Minnesota; Ph.D. 1986, University of Valencia (Spain): mass communication and Hispanic and Luso-Brazilian studies; film and television

Maxwell, Richard, *Associate Professor*, Ph.D. 1990, University of Wisconsin-Madison: international media and marketing

Rembert, Susan, *Lecturer*, M.A. 1981, University of North Carolina: television production, media performance

Master's Degree in Media Studies

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. A 3.0 grade-point average on a 4.0 scale in undergraduate degree work.

2. At least three letters of recommendation from undergraduate instructors, normally two from instructors in communication and one from an instructor in another area. Applicants who have been employed full time following the receipt of their undergraduate degree may wish to submit letters from employment supervisors. In some instances an interview may be required.

3. A minimum score of 1000 on the Graduate Record Examination. International students are exempt from this requirement but must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

4. The credentials of each applicant will be examined by the departmental Graduate Studies Committee, which will accept, accept with conditions, accept on probation, or reject the candidate.

Requirements for the Media Studies Program

These requirements are in addition to the general College requirements for the Master of Arts degree.

1. When a candidate is admitted, a departmental adviser will be appointed who will assist the candidate in developing a plan of study.

2. All candidates in Media Studies are required to pass three core courses with an overall grade-point average of 3.0 (*B*) or better. The courses are: MS 701, History of Forms of Media; MS 703, Graduate Study in Media; MS 706, Survey of Media Criticism.

3. In order to graduate, students must pass a comprehensive examination after completion of 30 credits with a grade-point average of 3.0 (*B*) or better.

4. Thesis Option. Subject to approval by the Graduate Media Studies Committee, students may prepare a thesis based upon independent research and must pass a final oral examination on its content and method, in the presence of their graduate committee. The thesis and thesis course,

MS 799.2, will satisfy 6 credits toward the degree.

COURSES

701. History of Forms of Media. 3 hr.; 3 cr. Introduction to and survey of the history of media forms, from orality through print to electronic media, with analysis of the grammar, syntax and social implications unique to each medium.

703. Graduate Study in Media. 3 hr.; 3 cr. Introduction and survey of basic theories, research, production techniques, and critical procedures necessary to the development of a media orientation at the graduate level.

706. Survey of Media Criticism. 3 hr.; 3 cr. Broad survey of critical approaches to media, including semiotics, genre analysis, Frankfurt school, Freudian theory, political economy, feminism, rhetorical, and cultural studies, introducing basic critical vocabulary and addressing competing arguments.

707. Methodology in Media Research. 3 hr.; 3 cr. An introduction to basic scientific research methods used within the field of communications and the philosophical arguments behind the various approaches. Students learn to read and access statistical information as presented in communications research studies.

752. Media Theory. 3 hr.; 3 cr. Analysis of theoretical models; examination of relationships among interpersonal, organizational, mass, and societal communication systems.††

754. Survey of Media Research. 3 hr.; 3 cr. An examination and evaluation of media research. Emphasis on behavioral and experimental research.††

757. Media and Politics. 3 hr.; 3 cr. The study of the interaction of media upon politics with special attention to topics such as rhetorical strategies used in presidential campaigns and elections, social movements, and Marxist theories of media.

758. Form and Genre. 4 hr.; 3 cr. Analysis of selected topics in media trends, forms, and styles. Social and political impact of film and ethnic and cultural minorities in film.

759. Studies in Communication. 3 hr.; 3 cr. May be repeated for credit if topic changes.

760. Rhetorical Theory and Media. 3 hr.; 3 cr. Study of rhetorical theories of communication from Aristotle to the present applied to a contemporary media context.††

761. Comparative Media Analysis. 3 hr.; 3 cr. Comparisons of selected national media systems across a variety of political and economic formations. The focus will include both print and broadcast media. Topics will include the nature of media

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

organization, control, and financing; program content and scheduling; national policy debates; and others as pertinent.

764. International Media Systems. 3 hr.; 3 cr. International, transnational, cross-cultural, and comparative analyses of media systems.††

788. Cooperative Education Placement. Experiential learning through job placements developed by the Queens College Cooperative Education Program. Opportunities to test, apply, demonstrate, and expand on academic learning in an organizational setting. Prerequisites: at least three Media Studies courses. Students will

develop a detailed learning and project contract to be approved by an on-site supervisor, a departmental faculty adviser, and the Media Studies Coordinator. At the completion of the project, the student shall submit a written report of the experience to the faculty adviser for evaluation and a grade. Students receiving life-experience credit may not receive Cooperative Education credit.†

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

797. Special Problems. Prereq.: Approval of program coordinator and Department Chair. Media Studies graduate students may receive up to three credits of life-experi-

ence credit under the conditions specified by the department; consult the coordinator of the Media Studies Program for details. hr.; 3

797.1. 1 hr.; 1 cr.

797.2. 2 hr.; 2 cr.

797.3. 3 hr.; 3 cr.

799.1. Article. Hr. to be arranged; 3 cr. Prereq.: Approval of program coordinator and Department Chair.

799.2. Thesis. Hr. to be arranged; 6 cr. Prereq.: Approval of program coordinator and Department Chair.

THE AARON COPLAND SCHOOL OF MUSIC

Director and Chair: Hubert S. Howe, Jr.

Music Office: Music Building 203,
997-3800; Fax 997-3849

The Aaron Copland School of Music offers conservatory-level training in performance and university curricula in musical composition and scholarship leading to the Master of Arts degree. In conjunction with the Department of Secondary Education, the Copland School offers a music education program leading to the Master of Science degree in Music Education.

In the M.A. degree program, the performance sequence includes private instruction in the major instrument or voice, ensembles, historical performance practice studies, and other courses geared to the needs of performers. A student may major in a standard orchestral, keyboard, early, or jazz instrument, in classical guitar, voice, and choral or orchestral conducting. The composition, theory, and music history sequences are designed for the student planning a career as a composer, for the student interested eventually in college-level teaching who needs solid grounding for doctoral studies, and for the student planning to enter music publishing, criticism, editing, or other music-related fields.

The M.S. in Education (Music) degree program includes methods, conducting, and rehearsal techniques, and research courses in music education. It is designed to provide professional training for those who expect to teach general or vocal, choral, and/or instrumental music in elementary and secondary schools. Electives are planned for the needs of the school music teacher, or are drawn from other graduate music offerings.

The Copland School moved into its new music building in the Summer of 1991. The facility includes the LeFrak Concert Hall with tracker organ, a smaller recital hall, choral and orchestral rehearsal spaces, classrooms surrounding a central skylit atrium, practice rooms and teaching studios, an expanded music library to house the extensive music collections, an expanded electronic music studio, music education workshop facilities, recording studio, faculty offices, and student and faculty lounges. The building is acoustically isolated and is one of the most advanced music facilities in the area.

Master of Arts Program

Adviser: Charles L. Burkhart, Music Building, Room 356; (718) 997-3868.

Faculty for Classical Performance

Adviser: Ronald Roseman

Violin: Burton Kaplan, Isaac Malkin, Margaret Pardee, Daniel Phillips, Todd Phillips

Baroque Violin: Nancy Wilson

Viola: Toby Appel, Karen Dreyfuss, Burton Kaplan

Cello: David Geber, Barbara Stein Mallow, Vagram Saradjian

Double Bass: Homer Mensch

Flute: Trudy Kane, Robert Stallman, Keith Underwood, Jan Vinci

Baroque Flute: Sandra Miller

Oboe: Ronald Roseman

Clarinet: David Glazer, David Krakauer

Bassoon: Loren Glickman

French Horn: David Jolley, Robert Routch

Trumpet: Mel Broiles, Chris Gekker,

William Vacchiano*

Trombone: Erwin Price, Jack Schatz

Tuba: Richard Schneider, Lewis Waldeck

Percussion: Michael Lipsey

Harp: Aristid von Wurtzler

Voice: Shirlee Emmons, Marcy Lind-

heimer, Jan Olian, Robert C. White, Jr.

Piano: Ana Maria Bottazzi, Lev Natoseny, Donald Pirone, Morey Ritt, Gerald Robbins

Organ: Donald Joyce

Harpisichord: Raymond Erickson

Guitar (Classical): William Matthews, Ben Verdery

Lute: Patrick O'Brien

Recorder: Daniel Waitzman

Gamba: Judith Davidoff

Orchestral Conducting: Maurice Peress

Chamber Music and Ensembles: David Jol-

ley, Barbara Stein Mallow, William

Matthews, Drora Pershing, Daniel

Phillips, Morey Ritt, Gerald Robbins,

Ronald Roseman

Opera Workshop: Doris Lang Kosloff,

David Ostwalt

Faculty for Jazz Performance

Adviser: Michael Mossman

Trumpet: Michael Mossman

Saxophones and Flute: Jimmy Heath, Lew Tabackin

Piano: Sir Roland Hanna

Bass: Ben Brown, Victor Gaskin

Percussion: Keith Copeland, Akira Tana

Voice: Sheila Jordan

Trombone: Michael Mossman, Benny Powell, Steve Turre

Guitar: Mark Elf

Violin: John Blake

Faculty for Composition, Theory, and Music History

Advisers: Henry Weinberg (Composition),

Joseph Straus (Theory), Henry Burnett

(History)

Berkowitz, Sol, *Professor*, M.A. 1946,

Columbia University: composer; orchestration, musical theatre

*New York Philharmonic

Burkhart, Charles L., *Professor*, M.Mus. 1957, Yale University: theorist, vocal coach and accompanist, Schenkerian analysis

Burnett, Henry, *Associate Professor*, Ph.D. 1978, City University of New York: musicologist, ethnomusicologist; seventeenth and eighteenth centuries, Japanese music

Erickson, Raymond, *Professor*, Ph.D. 1970, Yale University: musicologist, harpsichordist; Medieval and Baroque periods, computer techniques for musicology

Gagné, David W., *Assistant Professor*, Ph.D. 1988, City University of New York: theorist, Schenkerian analysis

Hallmark, Rufus E., *Professor*, Ph.D. 1975, Princeton University: musicologist, singer; manuscript studies, Schumann, the Romantic lied

Heath, Jimmy, *Professor*, jazz composer, saxophonist; woodwinds, jazz composition and arranging

Howe, Hubert S., Jr., *Professor*, Ph.D. 1972, Princeton University: composer; computer synthesis of electronic music

Mandelbaum, Joel, *Professor*, Ph.D. 1961, Indiana University: composer, theorist; tuning and temperament, microtonal theory-composition

Musgrave, Thea, *Distinguished Professor*, B.Mus. 1950, University of Edinburgh: composer; composition, orchestration

Orenstein, Arbie, *Professor*, Ph.D. 1968, Columbia University: musicologist, pianist; French music 1870-1940

Saylor, Bruce S., *Professor*, Ph.D. 1978, City University of New York: composer; composers' workshop

Stone, Anne, *Assistant Professor*, Ph.D. 1994, Harvard University: Medieval and Renaissance music

Straus, Joseph N., *Professor*, Ph.D. 1981, Yale University: theorist; music of Igor Stravinsky, set theory

Weinberg, Henry, *Professor*, Ph.D. 1966, Princeton University: composer, theorist; music of Arnold Schoenberg

Requirements for Admission

These requirements are in addition to the general requirements for admission.

1. An undergraduate degree with a major in music (or its equivalent).

2. A major audition for performance applicants. Auditions are held at the College each semester and are competitive.

3. Other applicants should submit copies of recent work to Professor Charles Burkhart, Graduate Adviser, Music Building, as stipulated below:

Composition: two or three recent works

Theory: one or two examples of tonal composition and a recent paper

History: one or more recent papers

Requirements for the Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. A student normally majors in one

MUSIC

area - Performance, Composition, Theory, or Music History - or in a combined Theory/History program.

2. Composition majors complete 30 credits of course work and write a large composition. Theory and Music History majors complete 30 credits plus a thesis, or complete 36 credits of course work. Performance majors complete 33 credits, perform a public recital, and write an essay on one of the works thus performed. The composition, thesis, or essay is completed under the supervision of an adviser approved by the Graduate Adviser.

Master's programs are planned for three semesters of full-time work, but many students take two years to complete all requirements. Performance majors enroll as full-time students; others may register on a full- or part-time basis. Except for performance ensembles, graduate courses are usually offered in late afternoon or early evening for the convenience of students.

3. The following examinations are required during the course of study. Students will take each examination each semester until a passing grade is achieved.

a) All students take a placement examination in *theory and musicianship* before registering for their first semester. Those who need work will be assigned appropriate course work or individual study.

b) Students will be tested in *history of music* during their first semester. Those who need further work in this area will consult the Graduate Adviser for course work or other recommended study before retesting.

c) A reading proficiency examination in French, German, or Italian is required of all students majoring in Music History and Theory, and Composition, and of performance majors who are singers or pianists specializing in vocal accompanying. All others may substitute an examination in foreign musical terms for the language examination.

4. Orchestral instrument majors play in Orchestra during each semester of residence. Voice majors participate in Opera Workshop or Vocal Ensemble each semester.

Course of Study for Classical Performance Majors

Performance majors are required to take Music 775.1, 775.2, 775.3, 777 (any two semesters), 773.1, 773.2, 773.3, 779, and three electives. (Conducting majors take 776 for three semesters instead of 775.) The entire course of study shall be under the supervision of the Adviser for performance. The preferred schedule of courses is:

Fall (Semester I)
Music 773.1
Music 775.1
One or two electives

Spring (Semester II)
Music 775.2
Music 777
Music 773.2

Music 779
One or two electives

Fall (Semester III)
Music 775.3
Music 777
Music 776.3
One or two electives

Course of Study for Jazz Performance Majors

Jazz performance majors are required to take Music 775.1, 775.2, 775.3, 773.1, 773.2, and 778.3, and Advanced Jazz' Improvisation and Theory (754), Jazz Composition/Arranging (755), Problems in Jazz History and Analysis (756), plus three electives. The preferred schedule of courses is:

Fall (Semester I)
Music 775.1
Music 754
Music 773.1
One or two electives

Spring (Semester II)
Music 775.2
Music 755
Music 773.2
One or two electives

Fall (Semester III)
Music 775.3
Music 756
Music 773.3
One or two electives

Course of Study for Composition Majors

Composition majors are required to take Music 742, 729, 730, 731 or 732, and 784-785. Remaining credits will be chosen from electives in consultation with the Adviser. The preferred schedule of courses is:

Fall (Semester I)
Music 742
Music 729
Music 734
One elective

Spring (Semester II)
Music 730
Music 735
One or two electives

Fall (Semester III)
Music 731 or 732
One or two electives

Courses of Study for Theory and History Majors

Since the fields of music theory and music history are both branches of musicology, their curricula have much in common. They diverge in the content of their two required seminars, as well as in the notation requirement. While most students declare either theory or history as their major area and take both seminars in that one area, it is possible to declare a musicology major and take one seminar in theory and one in history.

Theory majors are required to take Music 706, 742, 745, 746, and 762-763. Remaining credits will be chosen from electives in consultation with the Adviser. The preferred schedule of courses is:

Fall (Semester I)
Music 700
Music 742
One or two electives

Spring (Semester II)
Music 745 (when applicable)
Music 746
Music 762

Fall (Semester III)
Music 763
One or two electives

History majors are required to take Music 700, 705 or 706, 742, and 760-761. Remaining credits will be chosen from electives in consultation with the Adviser. The preferred schedule of courses is:

Fall (Semester I)
Music 700
Music 742
One or two electives

Spring (Semester II)
Music 705 or 706
Music 710 or 760
One or two electives

Fall (Semester III)
Music 711 or 761
One or two electives

Courses in Music

700. Bibliography and Research Techniques. 3 hr.; 3 cr. Fall

705. Medieval Notation. 3 hr.; 3 cr. Spring

706. Renaissance Notation. 3 hr.; 3 cr. Spring

710,711. Ethnomusicology Seminar. 3 hr. plus conf.; 3 cr. Prereq.: For Music 710, 700 and 742; for Music 711, Music 710. Ethnomusicological research of a special culture area or particular group.††

712. Ethnomusicology. 3 hr.; 3 cr. An introduction to the current theories and methodology of ethnomusicology. The study will include approaches to library research, field work, notation, analysis, instrument classification, and contextual description of music as an integral part of culture. Recorded sound examples from the principal cultures of the world outside the area of Western classical music will be studied.††

713. Topical Course in Ethnomusicology. 3 hr.; 3 cr. Survey of a particular aspect of ethnomusicology or of the music of a particular area or group. (Recent offerings have been in Asian Music, Music of

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

Japan, and Japanese Chamber Music.)††

725. Composers' Workshop. 1 hr.; 1 cr. A practicum for composers including performance and discussion of student works and discussion of other new music. Required of composition majors during each semester of residence for a maximum of three credits. Open to other graduate students with permission of instructor. Graded on Pass/Fail basis only.

726.1. Electronic Music Studio I. 3 hr.; 3 cr. Introduction to electronic music studio synthesis through lectures and studio work. Emphasizes the operation of analog, digital, and sampling synthesizers and recording techniques.

726.2. Electronic Music Studio II. 3 hr.; 3 cr. Prereq.: Music 726.1 and permission of instructor. A continuation of Electronic Music Studio I, emphasizing the Musical Instrument Digital Interface and the use of personal computers for sequencing and music publishing.

727. Electronic Music Composition. 3 lec. hr. plus lab.; 3 cr. Prereq.: Music 726 or 733.1, or permission of instructor. Composition of electronic music using analog or digital methods.

728. Musical Systems and Speculative Theory. 3 hr.; 3 cr. Analysis of the syntactical systems of two musical languages which have produced important work: tonality and the 12-tone system; construction by analogy of new musical systems which might be used as the foundations for new music. Use of electronic media and the computer.

729,730. Techniques of Composition. 3 hr.; 3 cr. each course. Prereq.: Undergraduate study in composition. A study of the different compositional concepts, styles, and techniques embodied in historical models. Students are required to submit original work directly related to the materials considered. May be repeated for credit with permission of Department.

731,732. Composition Seminar. 3 hr. plus conf.; 3 cr. Prereq.: Music 730. May be repeated for credit with permission of department. 731-Fall; 732-Spring

733.1. Computer Music I. 3 hr.; 3 cr. Prereq.: Music 726.1 or 726.2, or permission of instructor. Introduction to computer music synthesis emphasizing the basic concepts of synthesis, score preparation, and the study of computer music.

733.2. Computer Music II. 3 hr.; 3 cr. Prereq.: Music 733.1 or permission of instructor. A continuation of Computer Music I. Survey of computer music synthesis methods and computer composition.

734. Computer Techniques for Music Research. 3 hr.; 3 cr. Applications of digital computers in the fields of music theory and music history. No technical background in the use of the computer is required.

736. Acoustics. 3 hr.; 3 cr. The study of sound generation, transmission, and reproduction.††

737. Organology. 3 hr.; 3 cr. History and classifications of music instruments in the Occident.††

738. Musical Iconography. 3 hr.; 3 cr. Critical and historical interpretation of the representation of music subjects from the arts of Ancient Egypt to the nineteenth century.††

742. Proseminar in Analysis and Style Criticism. 3 hr.; 3 cr. Analysis of style and structure of works of various periods. Fall

745.1. Schenkerian Analysis I. 3 hr.; 3 cr. Prereq.: Passing of Theory Qualifying Exam. An introduction to the theories of Heinrich Schenker, their relevance and practical application to musical analysis. (Required for all theory majors.)

745.2. Schenkerian Analysis II. 3 hr.; 3 cr. Prereq.: Music 745.1 or permission of instructor. A continuation of Music 745.1, focusing on more difficult repertoire, e.g., Baroque binary form, sonata, and rondo forms. Weekly assignment in graphing.††

746. Introduction to Post-Tonal Theory. 3 hr.; 3 cr. An introduction to current analytical approaches to 20th-century music. Required of theory majors.

749. Seminar in Music Criticism. 3 hr.; 3 cr.

753. Style Criticism: Topical Lecture Courses in Analysis and Criticism. 3 hr.; 3 cr. Prereq.: Matriculation for the Master of Arts degree in Music, or permission of school. Analysis and criticism of selected works. For announcement of specific topic, consult the School of Music or see supplementary listing at registration.††

754. Advanced Jazz Improvisation and Theory. 3 hr.; 3 cr. Prereq.: Permission of instructor. Advanced study of the theory, practice, and styles of improvisation designed to refine the technique and skills of the performer in preparation for a professional career.

755. Jazz Composition/Arranging. 3 hr.; 3 cr. Prereq.: Permission of instructor. The development of skills and techniques in the use of various jazz idioms and their application to individual creative expression. May be repeated for credit with permission of Department.

756. Problems in Jazz History and Analysis. 3 hr.; 3 cr. Prereq.: Permission of instructor. The first part of the semester will introduce students to the methods and problems of research in jazz history; the second half will focus on a specific era or on the work of a single jazz improviser or composer.

759. Studies in Tonal Harmony and Counterpoint. 3 hr.; 2 cr. An intensive study of tonal harmony and counterpoint, including chord prolongation and long-

range structure. Practical applications. Open to interested students, but required of those who fail the Theory Qualifying Examination.

760,761. Seminar in Music History. 3 hr. plus conf.; 3 cr. Prereq.: For Music 760, Music 700 and 742; for Music 761, Music 760. Consideration of special historical problems in which techniques of research and independent evaluation are stressed. May be repeated for credit with permission of School. 760-Fall; 761-Spring

762,763. Seminar in Music Theory. 3 hr. plus conf.; 3 cr. Prereq.: For Music 762, Music 700 and 742; for Music 763, Music 762. An examination of significant theoretical and compositional concepts from the Middle Ages to the present. May be repeated for credit with permission of School. 762-Fall; 763-Spring

764. Topical Courses in Applied Music Theory. 3 hr.; 3 cr. Prereq.: Permission of instructor. Topic changes each time; past topics have included advanced counterpoint, fugue writing, advanced orchestration, arranging, theory of pedagogy, etc.

765. Theory: Topical Lecture Courses. 3 hr.; 3 cr. Study of special topic in music theory such as chromaticism, form, structural analysis, comparative musical systems, etc.

768. Western Music History Survey. 3 hr.; 2 cr. A survey of Western music covering the major periods through the 20th century. Assigned readings and listening, plus one individualized research project. Final exam on: 1) historical information, and 2) style recognition.

772. The Art of Keyboard Accompaniment. 2 hr.; 2 cr. Prereq.: Permission of instructor. A course for advanced keyboard players in the accompanist's role in the performance of the vocal and instrumental repertory. Coaching in selected literature.

773. Topics in the History of Music. 3 hr.; 3 cr. Prereq.: Matriculation for either the M.A. degree in Music or the MS. in Education (Music) degree, or permission of School. Lecture courses in the history of music. For announcement of specific courses, consult the School of Music or see supplementary listing at registration. May be repeated for credit if the topic changes.

774. Liturgical Chant. 3 hr.; 3 cr. Prereq.: A year of undergraduate study in music history.††

775.1. Group Performance I. 1 hr.; 1 cr. The study of music literature through participation in a performance group. Fall, Spring

775.2. Group Performance II. 1 hr.; 1 cr. Fall, Spring

775.3. Group Performance III. 1 hr.; 1 cr. Fall, Spring

776. Performance Workshop for Conductors. 2 hr.; 2 cr. Prereq.: Permission of instructor. This course consists of assist-

antships to the directors of the Orchestra, Opera Workshop, and Choir and leads to public performances with one or more of these large performing groups. May be repeated for credit. (Required for all conducting majors.)

777. Seminars in Performance Practice. 3 hr.; 3 cr. Study of the performance practices of a particular historical period. Musical analysis and examination of contemporaneous writings will serve as the basis for live performance in class. The course normally rotates over a four-semester series as follows:

777.1. Renaissance

777.2. Baroque

777.3. Classic and Romantic

777.4. Twentieth Century

778.1. Individual Musical Performance I. 1 hr.; 4 cr. Prereq.: *For instrumentalists and singers:* Advanced level of performance on the student's instrument or voice and permission of School. *For conductors:* Advanced level of performance as a conductor and permission of School. Private study in an instrument, or voice, or conducting. Fall, Spring

778.2. Individual Musical Performance II. 1 hr.; 4 cr. Prereq.: Music 778.1. Continuation of private study in an instrument, or voice, or conducting. Fall, Spring

778.3. Individual Musical Performance III. 1 hr.; 4 cr. Prereq.: Music 778.2. Continuation of private study in an instrument, or voice, or conducting. Fall, Spring

778.4. Performance of Non-Western Instruments of Music. 1 hr.; 2 cr. Prereq.: Limited to students of ethnomusicology, or permission of School. Instruction in playing non-Western instruments. Fall, Spring

779. Musical Analysis for Performers. 3 hr.; 3 cr. Prereq.: Required of all students with a major in performance. Analysis of structure, texture, and form in tonal music as it relates to performance.†

780. The Middle Ages. 3 hr.; 3 cr. Prereq.: A year of undergraduate study in music history.††

781. The Renaissance. 3 hr.; 3 cr. Prereq.: A year of undergraduate study in music history.††

782. The Baroque. 3 hr.; 3 cr. Prereq.: A year of undergraduate study in music history.††

783. Classicism and Romanticism. 3 hr.; 3 cr. Prereq.: A year of undergraduate study in music history.††

784. The Twentieth Century I. 3 hr.; 3 cr. A detailed study of the changing styles and concepts of twentieth-century music up to World War I. Fall

785. The Twentieth Century II. 3 hr.; 3 cr. A detailed study of music from World War I to the present. Spring

790,791. Special Problems. Prereq.: Permission of School. Intensive study and a definite project in a field chosen by the student under the direction of a member of the School.

790.1., 791.1. 1 hr.; 1 cr.

790.2., 791.2. 2 hr.; 2 cr.

790.3., 791.3. 3 hr.; 3 cr.

792. Orchestra. 1 hr.; 1 cr. Prereq.: Permission of instructor. May be repeated for credit.

793. Symphonic Wind Ensemble. 1 hr.; 1 cr. Prereq.: Permission of instructor. A specialized performance organization for wind and percussion players which is designed for the study and performance of the symphonic band/wind ensemble repertoire from a variety of periods. May be elected by M.A. or M.S. students subject to the requirements of the various programs. May be repeated for credit.

794.1. Vocal Ensemble. 1 hr.; 1 cr. Prereq.: Permission of instructor. A small, select chamber choir which performs music from the Middle Ages to the present. May be repeated for credit.

794.2. Collegium Musicum (Renaissance and Baroque Instrumental Ensemble). 1 hr.; 1 cr. Prereq.: Permission of instructor. May be repeated for credit. Group performs on modern copies of period instruments.

794.3. Baroque Ensemble. 1 hr.; 1 cr. Prereq.: Permission of instructor. A small, select ensemble which performs Baroque chamber music. May be repeated for credit.

794.4. Nota Bene (Contemporary Instrumental Ensemble). 1 hr.; 1 cr. Prereq.: Permission of instructor. May be repeated for credit.

794.5. Brass Ensemble. 1 hr.; 1 cr. Prereq.: Permission of instructor. A small, select group for the performance of literature for brass instruments. May be repeated for credit. Fulfills the chamber music requirement for brass players.

794.6. Percussion Ensemble. 1 hr.; 1 cr. Prereq.: Permission of instructor. A small, select ensemble for the performance of literature for percussion. Fulfills the chamber music requirement for percussionists. May be repeated for credit.

794.7. Jazz Ensemble. 1 hr.; 1 cr. Prereq.: Permission of instructor. The study and performance of selected repertoire, published and unpublished, including student work. May be repeated for credit.

796. Opera Studio. Prereq.: Permission of instructor. Individual coaching and group rehearsals culminating in recitals and staged performance. May be repeated for credit.

796.1. 1 hr.; 1 cr.

796.2. 2 hr.; 2 cr.

796.3. 3 hr.; 3 cr.

798. Advanced Solfege and Score Reading. Prereq.: Permission of instructor. An elective for students needing high-level proficiency in score reading and related skills.

798.1. 2 hr.; 1 cr.

798.2. 3 hr.; 2 cr.

799. Survey of Repertory for Major Instruments and Voice. 1 hr.; 1 cr. Prereq.: Permission of instructor. A study of orchestral, chamber, and solo repertoire. Depending on enrollment, the course concentrates each semester on one or more of the following media: woodwinds, brass, percussion, strings, keyboard, and voice. May be repeated for credit.

Master of Science in Education Program (Music)

Adviser: Richard C. Sang, Music Bldg., Room 323; (718) 997-3850

Faculty

Sang, Richard C., *Assistant Professor*, Ph.D. 1982, University of Michigan: music educator and conductor; instrumental pedagogy; music education research

Aiello, Rita, *Associate Professor*, Ed. D. 1976, Teachers College, Columbia University: secondary education, music perception, psychology of music

Eisman, Lawrence W., *Professor*, Ed.D. 1968, New York University: music educator and conductor; music in the secondary school, choral and instrumental conducting

White, Robert C., *Professor*, Ed.D. 1975, Columbia University: music educator and conductor; vocal pedagogy

Requirements for Admission

The following requirements are in addition to the general requirements for admission. The applicant must possess:

1. A baccalaureate degree in music or music education from an accredited institution.

2. A minimum grade-point average of 3.0 or B, both in music and in education courses at the undergraduate level.

3. A New York State Teachers Certificate in Music, either the Certificate of Qualification or the Provisional Certificate, or their equivalent from another state.

Applicants who meet the other requirements but do not possess the appropriate certificate may apply for the Advanced Certificate Program,* which includes student teaching. Upon completion of this program, the student is eligible to file for the NYS Certificate of Qualification and to begin course work in the Master of Science in Education Program.

*See Secondary Education and Youth Services section of this Bulletin for general information on the Advanced Certificate Program.

Requirements for the Degree of Master of Science in Education

These requirements are in addition to the general requirements for the Master of Science in Education degree.

1. This program requires 30 credits. Part-time enrollment is possible; courses in this program are scheduled in late afternoon and evening.

2. The following courses in music are required: Music 773 or equivalent course in music history literature (students who were Queens College undergraduate music majors may substitute a 3-credit elective for Music 773, which is waived as a requirement); Music 641 (required for instrumental music teachers) or 642 (required for vocal or general music teachers); Music 659 or 660 (to meet the curriculum and methods requirement in education); Music 688 (to be taken during the last ten credits of the student's program); Music 670.

3. The complete program of each student must be planned in consultation with the Graduate Adviser to whom the student has been assigned. The resultant program, which is to be filled out in triplicate, must be signed by this Adviser and no subsequent changes may be made without the Adviser's written permission.

4. Students who expect to write a thesis should complete Music 688 before registering for the SEYS 769-770 sequence. Students who do not expect to write a thesis should take Music 688 as noted above.

5. Music electives needed to complete the student's program may include: a) any 600-level course not already taken to meet a departmental requirement, and b) specific courses in the Master of Arts program: Music 773, 774, 780, 781, 782, 783, 784, or 785. All other courses in the Master of Arts program require the permission of the Graduate Adviser.

6. Courses in areas other than advanced music and education may be elected by the student provided he/she fulfills the necessary prerequisites.

Courses

641. Teaching of Instrumental Music. 3 hr.; 3 cr.††

642. Teaching of Choral Music. 3 hr.; 3 cr.††

659. General Music in the Elementary Schools. 3 hr.; 3 cr. Prereq.: Undergraduate course in elementary music methods (Education 367 or equivalent).††

660. General Music in the Secondary Schools. 3 hr.; 3 cr. Prereq.: Undergraduate course in secondary music methods (Education 367 or equivalent).††

670. Advanced Conducting. 3 hr.; 3 cr. Prereq.: Undergraduate course in conducting (Music 270 or equivalent).††

671. Conducting Seminar. 3 hr.; 3 cr. Prereq.: Undergraduate course in conducting (Music 370), or Music 670, or permis-

sion of instructor.††

688. Seminar in Research in Music Education. 3 hr.; 3 cr. Prereq.: Matriculation for the Master of Science in Education degree with a major in music; completion of 20 credits of graduate study.††

689. Topics in Music Education. 3 hr.; 3 cr. Prereq.: Permission of coordinator of Music Education or instructor. The topic of the course changes each time it is offered. For announcement of the current topic, consult the School of Music or see supplementary listing for registration. May be repeated for credit if the topic is different.

690. Foundations of Music Education. 3 hr.; 3 cr. Prereq.: Permission of School.††

691. Administration and Supervision of School Music Program. 3 hr.; 3 cr. Prereq.: Music 690.††

PHILOSOPHY

Chair: Steven V. Hicks

Graduate Adviser: Alberto Cordero

Dept. Office: Powdermaker 260, 997-5270

Four-Year B.A./M.A. Program

The Philosophy Department offers to strongly qualified undergraduate students the opportunity to receive both master's and bachelor's degrees within four years: that is, within the 120 credits normally required for the bachelor's degree alone. Application to this program should be made in the upper sophomore or lower junior semester; admission is granted only in the junior year.

Seminars and research tutorials are given on both the leading contemporary movements of philosophy and the chief historical periods and figures. Students with diverse philosophical interests are accommodated by a faculty representing a broad spectrum of specializations. The acceleration and intensiveness of the B.A./M.A. program make for an exceptionally solid grounding in philosophy that will be of value in all fields in which the tradition of liberal arts is prized. Full details and application forms are obtainable from the Chair or Graduate Adviser.

Faculty

- Hicks, Steven V., Chair, *Associate Professor*, Ph.D. 1990, Columbia University; Kant and Post-Kantian continental philosophy
- Cordero, Alberta, Graduate Adviser, *Professor*, M.Phil. 1978, University of Cambridge; M.Sc. 1976, University of Oxford: philosophy of natural science, history of science
- Gildin, Hilail, *Professor*, Ph.D. 1962, University of Chicago: political philosophy, ancient philosophy
- Grover, Stephen, *Assistant Professor*, D.Phil. 1987, University of Oxford: epistemology, philosophy of religion
- Jordan, James N., *Professor*, Ph.D. 1966, University of Texas at Austin: Kant studies, ethics
- Lange, John F., *Professor*, Ph.D. 1963, Princeton University: contemporary analytic philosophy, ethics
- Leites, Edmund, *Professor*, Ph.D. 1972, Harvard University: cross-cultural studies, Chinese philosophy, history of modern philosophy
- O'Connor, Patricia J., *Assistant Professor*, Ph.D. 1990, University of Exeter: philosophy of religion, ethics
- Orenstein, Alex, *Professor*, Ph.D. 1972., New York University: logic, philosophy of language
- Purnell, Frederick, Jr., *Associate Professor*, Ph.D. 1971, Columbia University; Renaissance philosophy, Medieval philosophy
- Rosenberg, Alan, *Assistant Professor*, M.A.

1980, Queens College: philosophy of the social sciences, philosophy and the Holocaust

Program for the Master of Arts Degree

Requirements for the M.A. Degree (Offered in Conjunction with the Four-Year B.A./M.A. Program)

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Required Courses: Twenty-four credits in philosophy; six of these shall be in the history of philosophy, unless the student presents six undergraduate credits in the history of philosophy or passes an exemption examination. Approval of the program of study must be obtained from a Graduate Adviser.

2. The student's program must include courses chosen from at least three of the five groups of graduate philosophy courses: history of philosophy; logic and philosophy of science; metaphysics, epistemology, and contemporary schools of philosophy; theory of values; and philosophies of special disciplines.

3. Six credits may be taken in approved graduate courses offered outside the program of philosophy. Approval of such course work must be secured in advance from the Graduate Committee in Philosophy.

4. The student must give evidence of proficiency in one of the following languages: French, German, Latin, or Greek. Another language may be substituted for one of these only with the approval of the Graduate Committee in Philosophy.

5. A thesis satisfactory to the department, written under supervision.

6. A Comprehensive Examination in Philosophy.

Courses in Philosophy

Note: Detailed descriptions of current course offerings are available from the secretary of the Department of Philosophy, Powder-maker 260G.

HISTORY OF PHILOSOPHY

710. Ancient Philosophy: Plato. 2 hr. plus conf.; 3 cr.††

711. Ancient Philosophy: Aristotle. 2 hr. plus conf.; 3 cr.††

712. Studies in Medieval Philosophy: Early Medieval Philosophy. 2 hr. plus conf.; 3 cr.††

713. Studies in Medieval Philosophy: Late Medieval Philosophy. 2 hr. plus conf.; 3 cr.††

714. Studies in Early Modern Philosophy: Rationalism. 2 hr. plus conf.; 3 cr.††

715. Studies in Early Modern Philosophy: Empiricism. 2 hr. plus conf.; 3 cr.††

716. Studies in Late Modern Philosophy: Kant. 2 hr. plus conf.; 3 cr.††

717. Studies in Late Modern Philosophy: Middle and Late Nineteenth Century. 2 hr. plus conf.; 3 cr.††

LOGIC AND PHILOSOPHY OF SCIENCE

620. Advanced Logic. 2 hr. plus conf.; 3 cr. Prereq.: An introductory course in symbolic logic or its equivalent.††

621. Logic and Language. 2 hr. plus conf.; 3 cr.††

721. Philosophy of Mathematics. 2 hr. plus conf.; 3 cr. Prereq.: A knowledge of symbolic logic.††

722. Methodology of Empirical Sciences. 2 hr. plus conf.; 3 cr. Prereq.: A course in logic or philosophy of science.††

723. Probability and Induction. 2 hr. plus conf.; 3 cr. Prereq.: An introductory course in logic or its equivalent.††

METAPHYSICS AND EPISTEMOLOGY

730. Metaphysics. 2 hr. plus conf.; 3 cr. ††

731. Philosophy of Mind. 2 hr. plus conf.; 3 cr.††

732. Epistemology. 2 hr. plus conf.; 3 cr. ††

CONTEMPORARY PROBLEMS AND SCHOOLS OF PHILOSOPHY

740. Phenomenology. 2 hr. plus conf.; 3 cr. ††

741. Existentialism. 2 hr. plus conf.; 3 cr. ††

742. Pragmatism. 2 hr. plus conf.; 3 cr.††

743. Philosophical Analysis. 2 hr. plus conf.; 3 cr.††

ETHICS, AESTHETICS, SOCIAL PHILOSOPHY, AND PHILOSOPHY OF RELIGION

651. Philosophy of Law. 2 hr. plus conf.; 3 cr.††

652. Philosophy of History. 2 hr. plus conf.; 3 cr.††

653. Philosophy of the State. 2 hr. plus conf.; 3 cr.††

654. Philosophy of Religion. 2 hr. plus conf.; 3 cr.††

750. Ethical Systems. 2 hr. plus conf.; 3 cr. Prereq.: A course in ethics or theory of value.††

751. Ethical Analyses. 2 hr. plus conf.; 3 cr. Prereq.: A course in ethics or theory of value.††

752. Aesthetics. 2 hr. plus conf.; 3 cr.††

SPECIAL STUDIES, SEMINARS, AND TUTORIALS

778. Special Studies in Philosophy. 2 hr. plus conf.; 3 cr. May be repeated for

credit provided topic is different.††

779. Seminar in Philosophy. 2 hr. plus conf.; 3 cr. May be repeated for credit provided topic is different.††

780. Tutorial: Special Problems.

The completion of a project under the direction of a member of the department.

780.1. 1 hr.; 1 cr.

780.2. 2 hr.; 2 cr.

780.3. 3 hr.; 3 cr.

791. Thesis Research. Hr. to be arranged; 3 cr. Preparation of an acceptable Master's thesis under faculty supervision. (Required of all candidates for the M.A. in Philosophy. A candidate will register for the course once and credit will not be granted until the thesis is accepted.)††

†-Offered either Fall or Spring; see Class Schedule.
††-May be offered; see Class Schedule.

PHYSICS

Chair: Steven A. Schwarz

Graduate Advisers: For Ph.D. candidates: Joseph Klarfeld; for Master's candidates: J. Marion Dickey

Dept. Office: SB B334, 997-3350

The Physics Department offers a full spectrum of courses in theoretical and experimental physics, as well as research programs leading to the M.A. degree and the City University of New York Ph.D. degree. Students may participate in research via course Physics 799.

A partial list of research activities includes: development of high coercivity magnetic materials having wide application in microelectronics, development of sophisticated diagnostic techniques for surfaces, development of acousto-optic techniques for use in mammography, studies of photonic band gaps and localization, theoretical studies of wave diffusion in random media, elementary particle theory and studies of polymer thin films and interfaces.

The department has research funding from NSF, DOE, DOD, FIPSE, NASA, the Aaron Diamond Foundation, Exxon Research, Brookhaven National Laboratories, and other agencies. This funding allows a high level of student support and purchase of the most up-to-date equipment.

Faculty

Schwarz, Steven A., Chair, *Associate Professor*, Ph.D. 1980, Stanford University; secondary ion mass spectrometry polymer physics.

Klarfeld, Joseph, Graduate Adviser, *Associate Professor*, Ph.D. 1969, Yeshiva University; general relativity, classical and quantum field theory

Dickey, J. Marion, Graduate Adviser, *Professor*, Ph.D. 1967, Cambridge University; risk assessment, reactor safety, solid state physics

Cadiou, Fred J., *Professor*, Ph.D. 1970, University of Chicago; experimental solid state physics, rare earth transition metal magnetic systems

Ferrari, Lawrence A., *Professor*, Ph.D. 1965, Stevens Institute of Technology; experimental plasma physics, electromagnetic waves in magnetoplasmas

Fischer, C. Rutherford, *Professor*, Ph.D. 1960, Yale University; theoretical solid state and molecular physics, azide crystals

Genack, Azriel Z., *Distinguished Professor*, Ph.D. 1973, Columbia University; experimental solid state physics, light scattering and nonlinear optics

Lisyansky, Alexander, *Professor*, Ph.D. 1977, Donetsk State University, USSR; condensed matter theory, phase transitions, and critical phenomena

Miksic, Mark G., *Associate Professor*, Ph.D. 1962, Polytechnic Institute of New York; experimental solid state physics; X-ray and neutron diffraction of thin films

Rafanelli, Kenneth R., *Professor*, Ph.D. 1964, Stevens Institute of Technology; theoretical elementary particle physics, relativistic rotating particles

Sessoms, Allen Lee, *Professor*, Ph.D. 1972, Yale University; nuclear instrumentation, experimental particle physics, public policy related to nuclear weapons

Program for the Master of Arts Degree

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. Candidate must have a minimum of 16 credits in physics beyond the introductory college course and six credits in mathematics beyond elementary calculus.

2. Letters of recommendation must be written by individuals who are qualified to attest to the applicant's character and capacity to do graduate work in physics.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

1. All candidates must complete the following courses or their equivalents as determined by the Graduate Physics Committee:

	credits
601. Introduction to Mathematical Physics	3
625. Introduction to Quantum Mechanics	3
641. Statistical Physics	3
711. Analytical Dynamics	4
715. Electromagnetic Theory	4

2. A minimum grade of B is required in any course numbered 600 to 699.

3. Graduate courses in mathematics and chemistry may be approved by the Graduate Physics Committee.

4. All candidates must take and pass a written comprehensive examination.

The Master of Arts is the first 30 credits of doctoral work in physics. The CUNY doctoral program is described in the *Bulletin* of the Graduate School.

Courses in Physics

Candidates for the Master of Arts degree must take at least three Physics courses at the 700 level or above.

501. Modern Aspects of Physics. 4 hr.; 4 cr. A course for teachers providing discussion of selected topics in mechanics, electronics, atomic and nuclear physics. Not open to candidates for the M.A. degree in Physics.††

503. Selected Topics in General

Physics. 4 hr.; 4 cr. Prereq.: Matriculation for the M.S. in Education and an undergraduate major in biology, chemistry, or geology. Selected topics in the current high school physics curriculum are studied, with special emphasis on understanding of concepts, including recent developments and research; on lecture demonstrations; and on laboratory experiments.††

601. Introduction to Mathematical

Physics. 3 hr.; 3 cr. Prereq.: A course in mechanics and an approved mathematics background. Selected topics in mechanics, thermodynamics, electrostatics, magneto-statics, the electromagnetic field, and the restricted theory of relativity. The mathematical methods developed include such topics as linear and partial differential equations, the calculus of variations, normal and curvilinear coordinates, expansion of a function as a series of orthogonal functions, vector, tensor, and matrix analysis.††

611. Analytical Mechanics.

3 hr.; 3 cr. Prereq.: An undergraduate course in mechanics and an approved mathematics background. Analytical mechanics of particles and rigid bodies. Free and forced oscillations; coupled systems; vibrating strings and membranes; the top. Use of numerical integration and power series, vector and tensor analysis, Lagrange's and Hamilton's equation. Fourier series and Bessel functions.††

612. Fluid Dynamics.

3 hr.; 3 cr. Prereq.: Physics 233,234, or Mathematics 223 or 224, and Physics 122 or 146. A macroscopic description of the physical properties of fluids. Topics include fluid equations for inviscid compressible and incompressible flow, wave propagation, shock waves and related discontinuities, stability and turbulence, and other topics.††

621. Electronics.

3 hr.; 3 cr. Prereq.: Undergraduate course in electromagnetism and modern physics. Physical principles underlying operation of solid state, vacuum, and gaseous electronic devices; theory of rectifier, amplifier, and oscillator circuits; introduction to digital circuitry.††

622. Physics of Lasers.

3 hr.; 3 cr. Prereq.: Physics 355 or 312. Principles of operation of solid, liquid, and gas lasers and application of lasers to research.

625. Introduction to Quantum

Mechanics. 3 hr.; 3 cr. Prereq.: Permission of department, a course in modern physics, and an approved mathematics background. Planck, Einstein, Compton, and the light quantum. The Bohr atom, Bohr-Sommerfeld quantum conditions, and interpretations by de Broglie waves. Solutions of problems, including the free particle, particle in box, the harmonic oscillator, and the hydrogen atom. Waves and the uncertainty principle. The Schrödinger equation and the solution of

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

the above problems. Transmission through a potential barrier. Spin, identity of particles, exclusion principle, statistics, exchange phenomena.

635. Introduction to Modern Physics I. 3 hr.; 3 cr. Prereq.: A course in modern physics; coreq.: Physics 625. An introduction to molecular and solid state phenomena. Molecular structure and spectra of diatomic molecules, quantum theory of chemical bonding and dipole moments, crystal structure, lattice dynamics, free electron theory of metals, band model of metals, insulators, and semiconductors.

636. Introduction to Modern Physics II. 3 hr.; 3 cr. Prereq.: A course in modern physics; coreq.: Physics 625. The experimental facts and elements of the quantum theories pertaining to: natural and artificial radioactivity; interaction of charged particles and gamma rays with matter; nuclear structure; emission of alpha, beta, and gamma rays; nuclear reactions and models; the nuclear force; neutron processes; muons; pions; strange particles.

641. Statistical Physics. 3 hr.; 3 cr. Prereq.: Undergraduate courses in advanced mechanics and advanced thermodynamics. Maxwellian distribution of velocities, molecular motion, and temperature; elementary theory of the transport of momentum (viscosity), energy (heat), and matter (diffusion). Entropy and probability; Maxwell-Boltzmann statistics, equipartition of energy and classical theory of heat capacity of gases and solids. Bose-Einstein and Fermi-Dirac statistics; quantum theory of paramagnetism.††

645. Solid State Physics. 3 hr.; 3 cr. Prereq.: Physics 625. Crystal structure and symmetry; crystal diffraction; crystal binding; phonons and lattice vibrations; thermal properties of insulators; free electron theory of metals; energy bands; Fermi surfaces; semiconductors; selected topics in super conductivity, dielectric properties, ferroelectricity, magnetism.††

651. Foundations of Physics. 3 hr.; 3 cr. Prereq.: Physics 625. The course presents the fundamental physical principles and concepts in a manner intended to show the interrelatedness of the various basic courses given in the undergraduate curriculum; classical and quantum mechanics, electromagnetic theory, phenomenological and statistical thermodynamics, and the principle of special relativity. The treatment provides historical and philosophical perspective. Some of the topics discussed are: the nature of space and time, concepts of force, mass, and inertia, action-at-a-distance and field theories, indeterminateness, the role of probability, the unidirectional character of time, the foundations of special and general relativity, symmetry principles and conservation theorems, the dimensionless number, and cosmological considerations. The unsettled character of all topics discussed is emphasized.

657. Introduction to Astrophysics. 3

hr.; 3 cr. Prereq.: Undergraduate courses in mechanics, electromagnetism, and modern physics. An introductory study of the spatial positions, movements, and constituents of the stars, star clusters, and nebulae.††

661,662. Computer Simulation of Physical Models. 3 hr.; 3 cr. each sem. Prereq.: A course in differential equations or intermediate methods of mathematical physics. A seminar course in which computer programming will be used to obtain solutions to a wide variety of interdisciplinary problems such as the queuing problem in traffic flow, population dynamics, cell proliferation and death. Fourier optics, radiation shielding and safeguards, atomic motion in crystals and liquids.††

671,672. Modern Physics Laboratory. Hr. to be arranged; 1 cr. Experiments selected from among the areas of atomic, nuclear, solid state, molecular, and wave-optics physics. Depending on the experiment, objectives will vary: to learn basic techniques, to measure fundamental constants by repeating classic experiments; to do preliminary reading and planning of procedures which are then to be used in making the measurements.

701,702. Mathematical Methods in Physics. 3 hr. plus conf.; 4 cr. each sem. Prereq.: 701 - Physics 601; 702 - Physics 701. Topics in complex variables; perturbation and variational methods of solution of differential equations; Green's functions; eigenfunction expansions; integral transforms; integral equations; difference equations, linear algebra; Hilbert space; tensor analysis; group theory; higher algebra; numerical methods for solving equations.

711. Analytical Dynamics. 3 hr. plus conf.; 4 cr. Prereq.: Physics 601 or coreq.: Physics 701. The Lagrangian formulation including Hamilton's principle; Lagrange equations; central force motion; Kepler problems, scattering; rigid body motion; transformation matrices, Eulerian angles, inertia tensor. The Hamiltonian formulation including canonical equations; canonical transformations; Hamilton-Jacobi theory. Small oscillations. Continuous systems and fields. Relativistic dynamics. Fall

715,716. Electromagnetic Theory. 3 hr. plus conf.; 4 cr. each sem. Prereq.: 715 - Physics 601 or coreq.: Physics 701; 716 - Physics 715. Electrostatics, magnetostatics, and boundary value problems; Maxwell's equations; multipole radiation; radiation from accelerated charges; scattering theory; special theory of relativity.

725,726. Quantum Mechanics. 3 hr. plus conf.; 4 cr. each sem. Prereq.: 725 - Physics 625,601 or 701, and 711; 726 - Physics 725. Historical foundations. The Schrödinger formulation. Wave packets and uncertainty principle. Harmonic oscillator and potential barrier problems. W. K. B. approximation. Operators and eigenfunction. Central forces and orbital angular momentum. Scattering: Born approxima-

tion, partial waves. Linear vector spaces. The Heisenberg formulation. Spin and total angular momentum. Perturbation theory: bound state, time-dependent. Systems of identical particles. Introduction to relativistic quantum mechanics.

730. Atomic Physics. 3 hr. plus conf.; 4 cr. Prereq.: Physics 716 and 725. Spin systems, angular momentum, spectra. Atomic beam resonance, nuclear magnetic resonance (NMR), electronic paramagnetic resonance (EPR), optical pumping, scattering, lasers.††

731. X-ray Diffraction. 2 hr. plus conf.; 3 cr. Prereq.: Physics 636 and an approved mathematics background. The theory of X-ray diffraction and its application to the study of the structure of matter. Topics to be considered will include the physics of X-rays, the geometry of crystals and of X-ray reflections, the theory of X-ray diffraction, techniques for the production and interpretation of X-ray diffraction data, and crystal structure determination.††

734. Introduction to Relativity. 3 hr. plus conf.; 4 cr. Prereq.: Physics 711. A short exposition on the foundation of the special and general theories of relativity. Topics include foundation of special relativity; relativistic particle dynamics in flat space time; differential geometry; the physical and mathematical foundations of Einstein's theory of gravitation; the Cauchy problem of field equations; the spherically symmetric field and its topology; the classical experimental tests; variational principle and conservation laws; equation of motion; gravitational waves; cosmology and gravitational collapse.††

735. Nuclear Physics. 3 hr. plus conf.; 4 cr. Prereq.: Physics 725. Properties of stable nuclei; isotopes; mass formula; interactions with matter; methods of detection; nuclear moments. Alpha decay; gamma emission; level structure; nuclear models. Low-energy nucleon-nucleon scattering, the deuteron, photodisintegration, tensor and exchange forces, isotopic spin.

736. Particle Physics. 3 hr. plus conf.; 4 cr. Prereq.: Physics 735. Pi mesons, pion nucleon scattering, resonance. Hadron level systematics and decays, effective Hamiltonians, electromagnetic interactions and form factors, higher symmetries. Scattering at very high energies. Weak interactions, beta decay, discrete symmetries, T. C. P. Weak interactions of pions and Kaons. Coherent regeneration, conserved vector current. Leptonic decays of baryons, nonleptonic decays.

741. Statistical Mechanics. 3 hr. plus conf.; cr. Prereq.: Physics 641, 725. Probability theory, ensembles, approach to equilibrium, quantum and classical ideal and non-ideal gases, cooperative phenomena, density matrices, averages and fluctuations, and other selected topics, such as time-temperature, Green's functions, non-zero temperature variational and perturbation methods. Spring

745. Solid State Physics. 3 hr. plus conf.; 4 cr. Prereq.: Physics 725. Principles of crystallography; crystal structure; lattice vibrations, band theory, and defects; study of ionic crystals, dielectrics, magnetism, and free electron theory of metals and semiconductors.

748,749. Theory of Relativity and Gravitation. 3 hr. plus conf.; 4 cr. each sem. Prereq.: Physics 711 and 716. An exposition of the fundamentals of the special and general theories of relativity and their applications to cosmology. Topics include foundations of special relativity; formulation of physical theories in flat space-time; relativistic particle and continuum mechanics, electrodynamics and classical field theory, an introduction to differential geometry and topology; foundations of Einstein's theory of gravity; exact and approximate solutions; observational tests; variational principle; conservation laws; initial-value data and stability; ponderomotive equations; gravitational radiation; introduction to relativistic stars, cosmological models, gravitational collapse, and black holes; other theories of gravity.††

750,751. Plasma Physics. 3 hr. plus conf.; 4 cr. each sem. Prereq.: Physics 641 or 741; 711, 715, 716. The first semester will cover such topics as the motion of charged particles in electromagnetic fields via the guiding center approximation; a discussion of adiabatic invariance and particle motion in fields with spatial symmetry; the Liouville equation and the BBGKY hierarchy in the plasma limit; the Balescu-Lenard equation- the derivation of the Vlasov equation; the plasma moment equations; and plasma transport phenomena. The second semester will deal with waves in cold, uniform plasmas; the application of the Vlasov equation to waves in warm plasmas; Landau damping; instabilities; waves in spatially non-uniform plasmas; and the description of turbulent plasmas and associated transport processes (anomalous diffusion, collisionless dissipation, etc.). The topics of both semesters will be discussed in relation to the problems of achieving controlled thermonuclear fusions and the understanding of geophysical and astrophysical plasma phenomena.††

760. **Cosmology.** 3 hr. plus conf.; 4 cr. Prereq.: Physics 641, 711, and 715.

771, 772, 773. Graduate Physics Laboratory. 3 hr.; 2 cr. each course. Prereq.: Permission of the Graduate Physics Committee. Advanced experimental work in one or more fields of physics, including the planning of experiments, the design and construction of apparatus, and the evaluation of experimental results in the fields of optics, X-rays, electronics, and atomic and nuclear physics. A student may obtain from 2 to 6 credits starting with Physics 771. Two courses of the group may be taken concurrently.

781. Theory of Quantum Liquids. 3 hr. plus conf.; 4 cr. Prereq.: Physics 716 and 741. The theory of liquids covering such topics as neutral Fermi liquids; response and correlation in neutral systems; charged Fermi liquids; response and correlation in homogeneous electron systems, microscopic theory of electron liquid, second quantization, Green's functions.††

782. Cryophysics. 2 hr. plus conf.; 3 cr. Prereq.: Physics 741. A course designed to present and to interpret the quantum effects occurring near the absolute zero of temperature. Topics to be considered include principles and methods of attaining and measuring very low temperatures, thermal and magnetic properties of matter at these temperatures, nuclear paramagnetism, superconductivity, and the phenomena and theories of liquid Helium Four and Three.††

788. Cooperative Education Placement. Prereq.: Approval by the Physics Department's Master's Adviser of a detailed project description. Experiential learning through a job placement developed by the Queens College Cooperative Education Program.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

799. Graduate Research. Prereq.: Permission of the Graduate Physics Committee. A course requiring investigation in depth of a field approved by the Graduate Physics Committee. Units of this course may be repeated to a maximum of 12 credits.

799.1. 1 hr.; 1 cr.

799.2. 2 hr.; 2 cr.

799.3. 3 hr.; 3 cr.

799.4. 4 hr.; 4 cr.

799.5. 5 hr.; 5 cr.

799.6. 6 hr.; 6 cr.

The following courses, which bear the *U* designation, are doctoral courses offered at Queens College. Students must register for them through the Graduate Center.

U812. Continuum Mechanics. 3 hr. plus conf.; 4 cr. Prereq.: Physics 711 and 715. Fall

U825, U826. Advanced Quantum Theory. 3 hr. plus conf.; 4 cr. each sem. Prereq.: Physics 726.

COURSE IN ASTRONOMY

Astronomy 501. Modern Aspects of Astronomy. 4 hr.; 4 cr. Prereq.: Permission of department. A course for teachers providing an introduction to general astronomy with emphasis on the structure and evolution of the universe. Not open to candidates for the M.A. in Physics.††

POLITICAL SCIENCE

Chair: Patricia Rachal

Graduate Adviser: Irving Leonard Markovitz

Dept. Office: Powdermaker 360, 997-5470

This program offers a balanced course of study within the discipline of political science, built around lectures, colloquia, seminars, and supervised independent study. Its strongest asset is its distinguished faculty, with proximity to the libraries and research facilities of metropolitan New York as an added advantage. For the convenience of the working student, all classes are held after 4:30 pm, with the majority between 6:20 and 8:00 pm. Most classes average no more than 20 to 25 students, with many seminars and colloquia much smaller, thus allowing close contact between students and professors.

Please Note: No applications are being accepted for this program for the 1997-98 academic year.

Faculty

Rachal, Patricia, Chair, *Associate Professor*, Ph.D. 1979, Harvard University: American government, public policy and administration

Markovitz, Irving Leonard, Graduate Adviser, *Professor*, Ph.D. 1967, University of California at Berkeley: comparative government, developing areas, African politics

Altenstetter, Christa, *Professor*, Ph.D. 1967, University of Heidelberg: public policy, comparative politics, health policies

Bowman, John, *Associate Professor*, Ph.D. 1984, University of Chicago: American politics, political economy, computer application to political science

Gerassi, John, *Professor*, Ph.D. 1977, London School of Economics: international relations, political theory

Hacker, Andrew, *Professor*, Ph.D. 1955, Princeton University: American politics, American economic system and social structure, political theory

Hevesi, Alan G., *Associate Professor*, Ph.D. 1971, Columbia University: American government, urban politics

Krasner, Michael A., *Associate Professor*, Ph.D. 1977, Columbia University: American politics, urban politics

Morton, Henry W., *Professor Emeritus*, Ph.D. 1959, Columbia University: Soviet and comparative politics, policy-making, comparative urban

Nesbitt, Murray B., *Associate Professor*, Ph.D. 1962, New York University: constitutional law, labor and administrative law, public administration

Ofuatey-Kodjoe, Wentworth, *Professor*,

Ph.D. 1970, Columbia University: international politics, international law and organization, African politics

Priestley, George, *Associate Professor*, Ph.D. 1981, Columbia University: Latin America, Central America

Psomiades, Harry J., *Professor*, Ph.D. 1962, Columbia University: comparative politics, international politics, Middle East studies

Resnik, Solomon E., *Associate Professor*, Ph.D. 1970, New School for Social Research: American government, political parties, presidency

Schneider, Ronald M., *Professor*, Ph.D. 1958, Princeton University: comparative politics, political development and modernization, Latin America

Sun, Yan, *Assistant Professor*, Ph.D. 1992, Johns Hopkins University: comparative politics, international politics, East Asia

Tung, William Ling, *Professor Emeritus*, Ph.D. 1939, University of Illinois: international law, international organization, government and politics of the Far East

Zwiebach, Burton, *Professor*, Ph.D. 1964, Columbia University: political theory, legal philosophy

Master of Arts Program in Political Science and Government

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

Students must present a minimum of 24 credits of undergraduate work in acceptable courses in political science, government, history, economics, or related fields. Normally, these should include courses in U. S. government, political theory, and comparative government and international relations. Students must also present evidence of ability to profit from graduate study in political science.

Requirements for the Master of Arts Degree

These requirements are in addition to the general requirements for the Master of Arts degree.

All students must fulfill the following requirements:

1. 30 credits of graduate study with an average of 3.0 or better. The department recommends that 21 credit hours be taken in Political Science.
2. Students must have an area of specialization consisting of a minimum of three courses (9 credits). The program of studies must be approved by the department.
3. Political Science 713, Seminar in Theory and Method of Political Science.
4. A reading knowledge of a foreign language relevant to the student's specialization, approved by the department and demonstrated to its satisfaction; or a

demonstrated proficiency in statistics.

5. Political Science 791, Thesis Research. To be taken after the student has completed at least 24 credits with an average of 3.0 or better, and has satisfied the language or statistics requirement.

6. Completion of a thesis to the satisfaction of a thesis Adviser and second reader who will award the grade.

Courses in Political Science

No more than 6 credits of 600-level courses may be accepted for the Master of Arts degree. Seminars are restricted to matriculants in the Master of Arts program. Candidates for other Master's degrees may be admitted to 700-level courses with permission of the Graduate Adviser in political science.

610. Western Political Thought. 3 hr.; 3 cr. The basic ideas and systems of Western political thought from Plato through Marx. Prof. Zwiebach.††

630. Contemporary Comparative Government. 3 hr.; 3 cr. Governmental structures, ideological foundations, and the functioning of political institutions in selected European states. Prof. Morton, Prof. Schneider.††

640. Public Administration. 3 hr.; 3 cr. Problems of organization and process: the administrator as manager; decision-making and information flow; administrative powers; procedural safeguards, authority, status, and leadership; internal politics and bureaucracy. Prof. Nesbitt.††

651. Government of the City of New York. 3 hr.; 3 cr. The government of the City of New York and its role in the metropolitan area; its relationship to the state and the federal government. Impact of economic and social forces on the political process. Prof. Krasner.††

660. International Politics. 3 hr.; 3 cr. Basic factors in international politics and the struggle for power and order in world politics. Prof. Ofuatey-Kodjoe.††

701. Ancient and Medieval Political Thought. 3 hr.; 3 cr. An examination, both analytical and historical, of the principal political thinkers from Plato to Machiavelli. Prof. Zwiebach.††

702. Modern Political Thought. 3 hr.; 3 cr. An examination, both analytical and historical, of the principal political thinkers from the sixteenth through nineteenth centuries. Prof. Zwiebach.††

710. Twentieth-Century Political Thought. 3 hr.; 3 cr. An examination of theories of the state in modern society; leading political ideas of the twentieth century; contrasts between democratic and nondemocratic concepts. Prof. Zwiebach, Prof. Gerassi.††

† Offered either Fall or Spring; see Class Schedule.
†† May be offered; see Class Schedule.

713. Seminar in Theory and Method of Political Science. 3 hr.; 3 cr. An eclectic approach to the problems of theory and method in the study of government and politics; alternative patterns of analysis of political behavior. Required of all students. Prof. Bowman.††

'714. Theory of "Democratic Socialism" and Communism. 3 hr.; 3 cr. The influence of nineteenth-century antecedents on Marx and of Marx himself through Plekanov, Lenin, Trotsky, and Stalin to the present.††

715. Organization Theory. 3 hr.; 3 cr. Theories of organization; special problems regarding public organizations; concepts of authority, hierarchy, status, and leadership.††

720. United States Constitutional Law I. 3 hr.; 3 cr. The relation of the judicial process and constitutional law to the political process in the United States: judicial review, federalism, separation and delegation of powers. Prof. Nesbitt.††

721. United States Constitutional Law II. 3 hr.; 3 cr. Civil liberties, civil rights, due process, equal protection of the laws. Prof. Nesbitt.††

730. The United States Party System. 3 hr.; 3 cr. The nature and functions of United States political parties and interest groups, their growth, the electoral process, organization and leadership, decision-making. Prof. Resnik.††

731. Policy Formulation in the United States Government. 3 hr.; 3 cr. Changing nature of federalism and of the separation of powers as related to major problems facing the United States today. Prof. Altenstetter.††

732. The Presidency in the United States. 3 hr.; 3 cr. An analysis of the office and its incumbent; the institution of the presidency. Prof. Resnik.††

733. The Legislative Process in the United States. 3 hr.; 3 cr. The functions of Congress and the state legislatures: bases of representation; internal politics; procedures; interest groups; controls. Prof. Hevesi.††

735. Politics and Public Opinion Formation. 3 hr.; 3 cr. The role of public opinion in differing political systems: the formation of opinion; political socialization; interest groups; leaders and political behavior. A study of mass media of communications.††

736. Public Policy Analysis. 3 hr.; 3 cr. This course will review the important theories of the policy process with special attention to their application in an urban setting.

'741. Administrative Law and Regulation. 3 hr.; 3 cr. study of the requirements of procedural due process. Prof. Nesbitt.††

744. Government and Defense. 3 hr.; 3 cr. Selected problems of national security

in the space age: civil-military relations; individual liberties; the mobilization base; budgetary problems.††

747. Metropolitan Areas and Community Power Analysis. 3 hr.; 3 cr. The urban power structure and metropolitan complex: adjustment of governmental services to the metropolitan social and economic community. Prof. Krasner.††

748. Planning for Metropolitan Areas. 3 hr.; 3 cr. The planning process in metropolitan governments. Emphasis on regional problems as well as on special planning problems of the New York metropolitan area.††

760. United States Foreign Policy. 3 hr.; 3 cr. Analysis of domestic factors affecting the determination and conduct of U. S. foreign policy. Prof. Psomiades, Prof. Krasner.††

762. International Organization. 3 hr.; 3 cr. Analysis of the major global and regional international organizations; emphasis placed on the United Nations systems. Prof. Tung.††

763. International Law. 3 hr.; 3 cr. The nature, sources, and development of international law; the role and function of law in international society. Prof. Tung.††

764. Post-Soviet Foreign Policy. 3 hr.; 3 cr. Topics include continuity and change, ideology and national interest, power considerations, the present situation and future prospects.††

765. The International Politics of Africa. 3 hr.; 3 cr. An examination of Africa's politics against the background of its changing political and social system. Prof. Markovitz, Prof. Ofuately-Kodjoe.††

766. Changing Concepts and Practices in International Cooperation. 3 hr.; 3 cr. Recent developments in international responsibility, especially in the fields of welfare and justice; human rights, minorities and cultural autonomy, forced migration and exchange of populations, refugees, genocide, health. Prof. Gerassi.††

767. Western and Post-Soviet Impacts on Underdeveloped Areas. 3 hr.; 3 cr. The problems arising from the impact of Western and Marxist ideas, policies, and political institutions on underdeveloped areas will be examined in the framework of Great Powers' competition within the less developed parts of the world. Prof. Gerassi.††

768. Post-Soviet Union and Eastern Europe. 3 hr.; 3 cr. An analysis of the relationship between members of the former Communist bloc in Eastern Europe.††

770. Political Problems in the Development of Western and Non-Western States and Societies. 3 hr.; 3 cr. Selected problems of political stability; representative institutions; parties; the military and the bureaucracy. Prof. Markovitz.††

771.1-771.6. Political Systems in Developing Areas: Regional Analysis. 3 hr.; 3 cr. Political modernization of developing areas; process of transition from traditionalism to modernism; developing political institutions and changing political processes considered in specific regions (e.g., 771.1, South and Southeast Asia; 771.2, the Far East; 771.3, the Middle East; 771.4, Africa south of the Sahara; 771.5, North Africa; 771.6, Latin America). Prof. Markovitz, Prof. Psomiades, Prof. Schneider, Prof. Sun.†

772.1-772.3. Political Systems of Western European States. 3 hr.; 3 cr. Analysis of the political system of a European state. Each state will be treated in a separate course (e.g., 772.1, Great Britain; 772.2, France; 772.3, Germany). Prof. Altenstetter, Prof. Psomiades, Prof. Schneider.††

773. Post-Soviet Political Institutions. 3 hr.; 3 cr. An analysis of the theory and practice of Post-Soviet political institutions: the party, government, army, bureaucracy, and law. ††

776. Comparative Public Administration. 3 hr.; 3 cr. A comparative analysis of different bureaucratic structures and processes in the industrialized and developing areas of the world. Prof. Nesbitt.††

777. Comparative Federalism. 3 hr.; 3 cr. Theories of federalism and the problems of centralization and decentralization; cooperative federalism and regional arrangements; administrative relationships, cultural factors in a federal union. Prof. Altenstetter.††

780. Colloquium in American Politics. 3 hr.; 3 cr. Content will vary from semester to semester. May be repeated for credit once if the content changes.††

781. Colloquium in Comparative Politics. 3 hr.; 3 cr. Content will vary from semester to semester. May be repeated for credit once if the content changes.††

782. Colloquium in Political Theory. 3 hr.; 3 cr. Content will vary from semester to semester. May be repeated for credit once if the content changes.††

783. Colloquium in International Relations. 3 hr.; 3 cr. Content will vary from semester to semester. May be repeated for credit once if the content changes.††

790. Seminar in Selected Topics in Political Science. 3 hr.; 3 cr. Topic will vary from semester to semester.††

791. Thesis Research. Hr. to be arranged; 3 cr. Preparation of an acceptable Master's thesis under faculty supervision. Required of all candidates for the Master's degree in political science. A candidate will register for the course once and credit will not be granted until the thesis is accepted.77

PSYCHOLOGY

Chair: Wilma Winnick

Head, Master of Arts Program and Graduate Adviser: Philip H. Ramsey

Dept. Office: SB E318, 997-3200

The Queens College Department of Psychology offers two programs of study each leading to the Master of Arts degree in psychology: General Psychology or Clinical-Behavioral Applications in Mental Health Settings. The department also participates in the City University of New York doctoral program in psychology. (For more information, please address inquiries to: Ph.D. Programs in Psychology, Graduate School and University Center, 33 West 42 Street, NY, NY 10036.) Qualified Master's students may be admitted to Ph.D.-level courses in Learning Processes and Neuropsychology.

Faculty

- Winnick, Wilma, Chair, *Professor*, Ph.D. 1949, Columbia University: verbal learning and short-term memory, imagery in memory, tachistoscopic recognition, perceptual constancy
- Ramsey, Philip H., Head, Master of Arts Program and Graduate Adviser, *Professor*, Ph.D. 1970, Hofstra University: multiple comparison procedures, significance testing, simulation, and test theory
- Baker, A. Harvey, *Professor*, Ph.D. 1968, Clark University: perceptual style and personality, psychotherapy
- Berman, Doreen, *Associate Professor*, Ph.D. 1971, City University of New York: developmental neuropsychology, models of minimal brain damage, control of movement and electrophysiological correlates of somatic sensory function in monkeys
- Bodnar, Richard J., *Professor*, Ph.D. 1976, City University of New York: physiological, pharmacological, neurochemical, neuroanatomical, and behavioral mechanisms of pain inhibition and pain perception
- Borod, Joan, *Professor*, Ph.D. 1975, Case Western Reserve University: clinical neuropsychology
- Brown, Bruce L., *Professor*, Ph.D. 1968, Yale University: classical conditioning, autoshaping, stimulus control of behavior, schedule interaction, two-factor theory, consummatory behavior
- Caputo, Daniel V., *Professor*, Ph.D. 1961, University of Illinois: psychopathology, neonatal prematurity, biofeedback
- Cole, Brett K., *Associate Professor*, Ph.D. 1968, Columbia University: behavior theory, learning and conditioning, discrimination, reinforcement schedules, experimental approaches to teaching
- Ehrlichman, Howard, *Professor*, Ph.D. 1972, New School for Social Research: emotions, individual differences, hemispheric laterality, hypnosis
- Essman, Walter B., *Professor*, Ph.D. 1957, University of North Dakota: neurochemistry and behavior; psychopharmacology
- Fields, Lanny, *Professor*, Ph.D. 1968, Columbia University: stimulus equivalence
- Fleischer, Susan, *Associate Professor*, Ph.D. 1973, Columbia University: behavioral consequences of infantile malnutrition, biological basis of sexual behavior and of sex differences in behavior, psychotherapy
- Frumkes, Thomas E., *Professor*, Ph.D. 1967, Syracuse University: information processing and neuropharmacology of the vertebrate retina, rodcone interaction, psychophysical studies in humans
- Gilden, Lloyd, *Associate Professor*, Ph.D. 1964, McGill University: motivation, neurophysiological correlates of perceptual and motor processes, effects of drugs on EEG, biofeedback
- Halperin, Jeffrey, *Professor*, Ph.D. 1976, City University of New York: child clinical neuropsychology, childhood behavior disorders, and psychopathology
- Hemmes, Nancy, *Professor*, Ph.D. 1972, University of North Carolina: learning theory, temporal control of behavior, habit control
- Hollander, Melvyn, *Assistant Professor*, Ph.D. 1968, University of Oklahoma: treatment of psychopathology, training of mental health workers, behavioral medicine, mental retardation
- Johnson, Ray, Jr., *Professor*, Ph.D. 1979, University of Illinois: electrophysiological measures of normal and abnormal cognitive brain function, short- and long-term memory, event-related brain potentials, psychophysiology
- Lanson, Robert N., *Associate Professor*, Ph.D. 1968, Columbia University: experimental analysis of human and animal behavior, sensation and perception
- McComas, Jennifer, *Assistant Professor*, Ph.D. 1994, University of Iowa: applied behavior analysis
- Moreau, Tina, *Associate Professor*, Ph.D. 1968, City University of New York: sensory organization, habituation, lateral differentiation in human newborn, development of inter- and intra-sensory integration
- Paulson, Claire, *Associate Professor*, Ph.D. 1974, University of Kansas: experimental analysis of human behavior, applied behavioral analysis, language development, infant learning, autism, and other developmental disabilities
- Schuckman, Harold, *Professor*, Ph.D. 1962, Florida State University: comparative psychology, neural basis of learning and perception
- Shapiro, Sandra, *Associate Professor*, Ph.D. 1964, Bryn Mawr College: comparative psychology, psychotherapy and treatment of psychosomatic disorders, biofeedback
- Witkin, Arthur, *Associate Professor*, Ph.D. 1956, New York University: personnel evaluation and development, industrial

and organizational psychology, vocational counseling, employee motivation

Programs leading to the Master of Arts Degree in Psychology

Either full-time or part-time attendance is possible. Students may be admitted in the Fall or Spring.

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. Fifteen credits in undergraduate psychology is considered the minimum requirement for admission to the M.A. program, which should include an undergraduate laboratory course in experimental psychology and a course in psychological statistical methods or their equivalents. A student who has not had at least a one-semester laboratory course in experimental psychology and a one-semester course in statistical methods or their equivalents, but whose record of achievement is otherwise high, will be asked to make up the deficiency through taking a comparable course without credit in an undergraduate college.

2. A minimum grade average index of B (3.0) in undergraduate courses.

3. A minimum grade average index of B (3.0) or the equivalent in the undergraduate field of concentration or, with permission of the department, in related fields.

4. Three letters of recommendation, at least two of which should be from instructors who are in a position to attest to the applicant's capacity to complete successfully a program of graduate studies. In some cases a personal interview with the Graduate Adviser or with some other members of the Department may be required.

5. The applicant is required to submit results in both the aptitude test and the advanced test in psychology of the Graduate Record Examination. Applicants should apply directly to the Educational Testing Service, Princeton, New Jersey 08541, or Box 27896, Los Angeles, California 90027, for full information and arrangements to take the test. Students are advised to take the Graduate Record Examination no later than February for September admission. No final consideration may be given to any application unless the Admissions Office receives the results of the examination by the date applications are due.

6. Applicants whose first language was not English and who were educated in a country where English is not the official language must present a minimum score of 600 on the Test of English as a Foreign Language (TOEFL) to be eligible for admission to the M.A. programs in Psychology.

7. Possession of the requirements does not automatically insure admission to the programs. Each record, including grades, letters of recommendation, Graduate Record Examination scores, and information from present and former instructors

and employers, will be carefully examined by a Graduate Committee on Admissions. Departmental interviews may be required prior to a decision.

8. Specific requirements may be waived by the Graduate Committee on Admissions for students of special promise.

Requirements for the Master of Arts Degree

These requirements are in addition to general requirements for the Master of Arts degree.

General Psychology Program (30 credits plus thesis or 36 credits without thesis)

This program is intended for students who:

1. want to explore their interests further or expand their backgrounds in psychology;
2. want to learn more about the area of mental health (but without seeking the field placements and special course work offered in the Clinical Behavioral Applications program); and/or
3. see themselves en route to doctoral study, with the goal of pursuing a career as independent researchers, particularly in the areas of neuropsychology, learning processes, or experimental psychology.

Requirements for the General Psychology Program

1. Ten semester courses in psychology (30 credits), which must be distributed as follows:

- a) History (Psych. 700)
- b) Advanced Experimental Psych. I (Psych. 701)
- c) Statistical Methods I (Psych. 705)
- d) 7 additional courses distributed over at least three of the following areas: Applied (Psych.), Comparative (Psych. 716), Developmental (e.g., Psych. 720 or 721), Learning (Psych. 730 or 731), Perception (Psych. 735), Personality (e.g., Psych. 740 or 741 or 742), Physiological (Psych. 610 or 708.1 or 708.2 or 710 or 711), Psychopathology (Psych. 755 or 756), and Social (Psych. 746)

2. Students may complete the program in 30 or 36 credits, as follows:

- a) Students who elect to complete the program in 30 credits must take and pass a comprehensive examination and submit an approved thesis which may be either a literature review or an empirical investigation.
- b) Students whose grade-point averages are 3.7 or better may elect to complete the program in 30 credits and do an empirical thesis. The comprehensive examination will be waived.
- c) Students who elect to complete the program in 36 credits are required to take and pass a comprehensive examination.

Clinical Behavioral Applications in Mental Health Settings Program (48 credits with no thesis)

The Clinical Behavioral Applications program features course work and training

in the intervention modality of applied behavior analysis. The program also includes training in intellectual and personality assessment. A broad perspective on contemporary clinical practice and research is provided by a number of academic survey courses in areas such as psychotherapy and counseling, psychoanalytic theory, and psychopathology. Research training in single-subject design and statistics is included in this program.

The Clinical Behavioral Applications program, which includes practica and 630 hours of field-work experience, is designed to prepare students for M.A.-level careers using behavioral assessment and intervention skills.

Type of Training

The CBAMHS Program seeks to provide students with skills in Applied Behavior Analysis (a type of behavior modification) and in intelligence and personality testing. Extensive hands-on experience is provided in the two practica associated with the two Applied Behavior Analysis courses and in the Externships. Typically, each student spends two semesters out in the field working in two different Externship settings. The first Externship experience focuses on mastering Applied Behavior Analytic skills; the second focuses on mastering skills in intelligence testing and personality testing (with objective-type instruments).

Type of Settings and Nature of Client Populations

It is important to note that the actual training during the two practica and the Externships involves direct contact with low-functioning populations. Students are assigned to such agencies as the Association for Children with Retarded Mental Development, where the trainees work with adult retardates. Students have also been assigned to agencies where they work with adolescents diagnosed as autistic. Most of the testing training is carried out at a large state psychiatric center (e.g., Creedmoor).

Institutions (federal, state, local, and private) typically employing graduates with training in the intervention modality of Applied Behavior Analysis include psychiatric facilities and institutions for the developmentally disabled, for emotionally disturbed children and adults, and for geriatric individuals. Applicants should note that this program does not prepare the student to function either as a School Psychologist, or as a Clinical Psychologist at the level of independent practice for which both a doctoral degree and a state license are required.

Full-time CBA students can complete the requirements for the degree in four semesters by taking both day and evening courses. This includes a 630-hour externship (field-work placement) taken during the last two semesters of study.

Courses are offered during the day, afternoon, and evening. Part-time students

can therefore be accommodated and can complete requirements more slowly, in accordance with their schedules. However, all students must arrange their schedules to accommodate the externship, which is held during daytime-weekday hours only.

Degree Requirements for the Clinical Behavioral Applications Program (48 credits)

1. Completion of following courses in psychology:

- 760. Psychometric Methods
- 774. Assessment of Intellectual Functioning
- 771. Ethical Issues in Psychology (not to be confused with U771)
- 730.01 & .02. Theory and Method in Applied Behavioral Analysis I and II (with practica)
- 764. Assessment of Personality with Standardized Objective Measures
- 743. Survey of Psychotherapy and Counseling: A Case Study Approach
- 755. Psychopathology I
- 756. Psychopathology II
- 748. Self-Awareness Training I
- 705. Statistical Methods in Psychology I

2. An externship (fieldwork placement) of at least 630 hours taken during the last two semesters of study (Psych. 795,796). This externship is offered during *daytime-weekday* hours only.

3. Psych. 797 Externship Seminar.

4. Nine credits of elective courses.

5. Completion with a passing grade of a skills-oriented Clinical Behavioral Applications Comprehensive Examination, which includes evaluation of the student's skills in assessment and behavioral intervention.

Responsible training for work in the area of mental health requires that students have the personal characteristics appropriate for workers in a mental health setting. At the end of each semester, the Psychology Department's M.A. Committee will evaluate each student's suitability for continuation in the program, considering information from all sources. The decision that a student must leave the program on personal grounds will be made by the Program Head and the Department's M.A. Committee. This decision may be appealed to a special Ad Hoc Appeals Committee, which will include no one who participated in the initial evaluation.

Requirements for Continuance in the Psychology M.A. Program

All students enrolled in either Master's program who, after taking 12 graduate credits, have not achieved an academic index of 3.0, will be placed on probation or dropped from the Master's program in psychology.

Non-Matriculated Studies

Certain graduate courses are open to qualified professionals and career specialists in psychology or other fields. These courses

may fulfill a particular need for skill acquisition or credential maintenance for teachers, social workers, et al. Students who believe that a course or course sequence is relevant should contact the Head of the Master of Arts program regarding suitability for enrollment. *Applicants for non-matriculated status must get the signature of the Head of the M.A. program on their applications before submitting them to the Graduate Admissions Office.* A lifetime cumulative total of no more than 12 credits may be taken on a non-matriculated basis.

Courses in Psychology

The general prerequisites for courses in the 600-700 category are matriculation for the Master of Arts in Psychology (or matriculation for the M. S. in Education with a major in School Psychology for Psychology 610, 720, 721, 730, 735, 740, and 760), or permission of department.

Note: Certain M.A.-level courses are designed especially for students in the Clinical Behavioral Applications in Mental Health Settings Program. Enrollment is limited and all other students need special permission.

610. Physiological Psychology. 3 hr.; 3 cr. Prereq.: A course in experimental psychology. A survey dealing with the basic physiological, anatomical, and chemical functions as they relate to behavior. Topics include sensory and motor function, drive states and motivation, learning, and "higher" processes.

700. History of Psychology. 2 lec. hr. plus conf.; 3 cr. Prereq.: At least 15 undergraduate credits in psychology, including Psychological Statistics and a laboratory course in Experimental Psychology. Modern psychological problems are seen in historical perspective. Topics include the mind-body problem, motivation and empiricism, hedonism and reinforcement, hypnotism and spiritualism, psychophysiology and psychopathology. The nineteenth- and twentieth-century schools of psychology - structuralism, functionalism, Gestalt, psychoanalysis, and behaviorism - are reviewed, as are the contributions of philosophers and physical, biological, and social scientists.

701. Advanced Experimental Psychology I. 2 lec., 4 lab. hr.; 4 cr. Prereq.: Undergraduate courses in: a) Experimental Psychology with laboratory, and b) Psychological Statistics. A detailed examination and analysis of the ways in which experimental inquiry approaches psychological questions. The problems and paradigms typical of the various areas of the field are studied, and experiments from the literature scrutinized. Particular attention is paid to potential sources of error and problems of control in different kinds of experiments and to the use of experimental design to minimize error. M.A. students will undertake an original research study to fulfill the laboratory requirement.

702. Advanced Experimental Psychology II. 2 lec., 4 lab. hr.; 4 cr. Prereq.: Undergraduate courses in: a) Experimental Psychology with laboratory, and b) Psychological Statistics. Laboratory experiments in learning and conditioning; readings in current literature. Students have an opportunity to carry out an individual research project.

703. Design of Psychological Research. 2 lec. hr. plus conf.; 3 cr. Prior approval of the research project by both the Faculty Adviser and Graduate Adviser is required before registering. Individual research projects.†

705. Statistical Methods in Psychology I. 2 lec., 2 conf. or lab. hr.; 3 cr. Prereq.: An undergraduate course in statistical methods. Descriptive and inferential statistics, including t-tests, correlation, chi square, tests of normality, and distribution-free procedures. Other topics include independent groups, repeated measures and factorial ANOVA, multiple comparisons, multiple regression and ANCOVA.

706. Statistical Methods in Psychology II. 2 lec., 2 conf. or lab. hr.; 3 cr. Prereq.: Psychology 705. Multivariate methods including MANOVA, factor analysis, canonical correlations, discriminant functions analysis, and related topics.

708.1. Basic Neuroscience: Neuroanatomy. 3 hr.; 3 cr. Prereq.: Permission of instructor. This course, typically taken in conjunction with 708.2 Basic Neuroscience: Neurophysiology and 708.3 Basic Neuroscience: Neurochemistry, introduces students to the organizational structure of the human brain. Lectures include slide materials of gross neuroanatomy, cerebral vasculature, spinal organization, and internal structure from medulla to cortex. Functional system mini-lectures are also provided, as is a 5-laboratory component, to give students hands-on experience.

708.2. Basic Neuroscience: Neurophysiology. 3 lec. hr.; 3 cr. Prereq.: Permission of instructor. This is an introductory course in neurophysiology, including an introduction to electrical properties of membranes, ionic basis of resting, and action and synaptic potentials.

708.3. Basic Neuroscience: Neurochemistry. 3 lec. hr.; 3 cr. Prereq.: Permission of instructor. A course on the basic chemistry and metabolism of the brain, including neurotransmitters, receptors, second messengers, and the neurochemistry of neural development.

709. Proseminar. 2 lec. hr. plus conf.; 3 cr. Prereq.: Admission to the graduate program in psychology. The concepts, methods, and findings of psychology.†

710. Brain and Behavior I. 3 lec. hr.; 3 cr. Prereq.: At least one graduate level course in neural science and one undergraduate course in physiological psychology. This course and Psychology 711 comprise a two-semester sequence which covers the usual

topics found in physiological psychology courses but assumes the student has a firm background in modern neuroscience. Among the topics covered in this sequence are sensory processes, motor systems, development, endocrinological approaches in defining behavioral processes, learning, memory, motivation, emotion, sleep, and arousal. The specific sequence of topics to be covered in this two-semester sequence is subject to change each academic year.

711. Brain and Behavior II. 3 lec. hr.; 3 cr. Prereq.: Psychology 710. This is the completion of a two-semester course sequence. (See Psychology 710.)

713. Techniques in Physiological Psychology II: Ablation and Histological Methods. 2 lec., 4 lab. hr.; 4 cr. Instruction and practice in the sterile operative removal of central neural tissue, and the histological examination of locus and extent of resulting lesion. Chemical bioassay methods, histochemical methods, and preparation of tissue for chemical analysis will also be covered.†

714. Techniques in Physiological Psychology: Chemical and Metabolic Methods. 2 lec., 4 lab. hr.; 4 cr. An introduction to basic research methodology in the investigation of functional aspects of brain chemistry and metabolism. Laboratory techniques to be applied to specific problems of a behavioral nature include spectrophotometry, fluorometry, and chromatography.†

715. Techniques in Human Neuropsychology. 2 lec., 4 lab. hr.; 4 cr. Prereq.: One graduate course in physiological psychology and an undergraduate course in experimental psychology. A laboratory course using techniques other than psychometric procedures for measuring nervous system function in neuropsychological patients. Techniques studied will include a variety of procedures including EEG, evoked potentials, GSR, classical psychophysical procedures (reaction time and threshold measurement), and the use of recently developed cognitive psychological procedures.

716. Comparative Psychology. 2 lec. hr. plus conf.; 3 cr. Prereq.: An undergraduate course in experimental psychology. Descriptive, theoretical, and experimental aspects of animal behavior. Topics will include 1) epigenetic, ethological, and sociobiological models of species-typical behavior, 2) neural, endocrine, and experiential influences on the development of species-typical behavior.

717. Neuropsychology of Perception. 2 lec. hr. plus conf.; 3 cr. Phenomena of perception are discussed in relation to proposed neural mechanisms. Topics include "laterality" studies of cerebral hemispheric dominance and "levels of processing" stud-

† Offered either Fall or Spring; see Class Schedule.
 †† May be offered; see Class Schedule.

ies concerned with distinctions between "peripheral" vs. "central" processing.†

720. Developmental Psychology I. 2 lec. hr. plus conf.; 3 cr. Prereq.: One graduate or undergraduate course in developmental or child psychology (or its equivalent). An introduction to the major concepts, principles, theories, and methods of developmental and child psychology (e.g., critical periods, nature-nurture issue, relation of phylogeny to ontogeny).

720.01. Developmental Disabilities I. 2 hr. plus conf.; 3 cr. Prereq.: Permission of instructor and a course in developmental psychology. This course is an overview of the field of mental retardation and developmental disabilities. The content includes readings, lecture, and discussion on the history of the field, the concepts of intelligence and adaptive behavior, classification systems, litigation on behalf of people with developmental disabilities, etiology, *service-delivery systems*, the special case of autism, a review of early intervention programs and research, language programming, and a review of attention, memory and cognition. Readings will be included on behavioral assessment and intervention strategies for people with developmental disabilities.

720.02. Developmental Disabilities II. 3 hr.; 3 cr. Prereq.: Psychology 720.01 or permission of instructor. This course will provide students with an overview of research issues concerning people with developmental disabilities and their families. A major focus of the course is on topics related to adulthood. Students are encouraged to analyze extant research and to propose new solutions to problems in this area.

720.1. Lifespan Developmental Psychology. 3 hr.; 3 cr. Prereq.: Undergraduate or graduate course in child or developmental psychology. A lifespan perspective on the development of sensory and perceptual functions, language, cognition, and psychosocial adaptation, from conception to old age and death.

721. Developmental Psychology II. 2 lec. hr. plus conf.; 3 cr. Prereq.: At least one graduate or undergraduate course in developmental or child psychology (or its equivalent). This course covers the phylogenesis and ontogenesis (in humans) of basic sensory processes, perceptual functions, cognitive-intellective skills, and language and communication. The focus is on human development. Requirements include an oral and written report on a selected topic. Note: Psychology 720 is NOT a prerequisite to Psychology 721, and Psychology 721 is NOT a continuation of Psychology 720.

722. Theories of Development. 2 hr. plus conf.; 3 cr. Prereq.: An undergraduate or graduate course in developmental psychology. A critical review of the leading theories of child development will be undertaken, along with a review of relevant research.

730. Psychology of Learning. 2 lec. hr. plus conf.; 3 cr. Prereq.: Experimental Psychology and Statistical Methods in Psychology I. An examination of representative investigations and theories of learning.†

***730.01. Theory and Method in Applied Behavioral Analysis I.** (Formerly 770.1.) 2 lec., 6 lab. hr.; 4 cr. Prereq.: Undergraduate courses in statistics and research design (experimental psychology with laboratory) and permission of the Executive Committee of the M.A. Program (permission should be requested three months prior to registration for this course.) Introduction to basic theory and methodology in the field of applied behavioral analysis, including: 1) the technical language, 2) operational definition, 3) assessment of reliability and generality, 4) data analysis, 5) research design. Students will conduct supervised laboratory and fieldwork as part of the requirements.

***730.02. Theory and Method in Applied Behavioral Analysis II.** (Formerly 771.1.) 2 lec., 6 lab. hr.; 4 cr. Prereq.: Psychology 730.01 (formerly 770.1) and permission of the Executive Committee of the M.A. Program. (Permission should be requested three months prior to registration for this course.) An advanced course in theory, methodology, and professional issues in the field of applied behavioral analysis, focusing on contemporary issues in behavioral assessment strategies, single case research design, data evaluation, program development, and learning processes, and providing the student with the following skills: 1) competence in critically analyzing behavioral analytic research articles; 2) writing applied research proposals; 3) carrying out applied behavioral research in the field; 4) writing applied research/treatment reports for dissemination in professional journals and at professional conferences.

730.03. Behavioral Interventions with Children. 3 hr.; 3 cr. Prereq.: Psychology 730.11 (formerly 770) or 730.01 (formerly 770.1) and 730.12 (formerly 771) or 730.02 (formerly 771.1) and one undergraduate course in child or developmental psychology. Following a review of normal child development and childhood disorders, this course will consider behavior modification in the context of home, institutional, and community settings. Problems typical to each setting will be discussed from the points of view of both research and treatment. Topics to be considered include: toilet training, feeding disorders, language training, fears and phobias, hyperactivity, and autistic behaviors. This course is recommended for students who intend to undertake fieldwork involving children.

730.04. Supervised Practicum in Applied Behavior Analysis. 3 hr.; 3 cr. (8-12 field-work hours per week plus 2 hours supervision with Queens College faculty). Prereq.: Psychology 730.01 (formerly 770.1) and 730.02 (formerly 771.1) or comparable background. Students must receive prior

consent of instructor, which will be based on a personal interview. Students must also sign an acknowledgement of fieldwork regulations. This course is designed as a supervised field experience in agencies and institutional settings where behavior modification is in practice. Structured experiences include behavior assessment, as well as the development, administration, and evaluation of behavior modification programs for individuals and groups. Students will be required to purchase a malpractice insurance policy at a small fee.

Fieldwork Regulations

At any time, either the student or the fieldwork supervisor may initiate a request for termination. Students who are thought to lack certain of the personal qualifications needed in patient/client relationships may be required to discontinue the fieldwork. Appeals from the decision of the fieldwork supervisor will be considered.

730.11. Theory and Practice of Behavior Modification I: Assessment and Techniques. (Formerly 770.) 3 hr.; 3 cr. Prereq.: Undergraduate courses or equivalent experience in psychopathology, learning, statistics, and experimental psychology. Equivalence of experience must be evaluated by the Department. This course presents a behavioral framework for the understanding and treatment of clinical problems. Following an introduction to basic learning paradigms, a variety of behavioral intervention techniques is examined, selected ones are demonstrated and the supportive research is reviewed. Techniques covered include assertion training, operant and classical conditioning, systematic desensitization, relaxation/biofeedback training, cognitive restructuring, modeling, and aversive methods. The importance of using these techniques with clinical sensitivity and in the context of an effective helping relationship is highlighted.

730.12. Theory and Practice of Behavior Modification II: Applications. (Formerly 771.) 3 hr.; 3 cr. Prereq.: Psychology 730.11 (formerly 770). This course is a continuation of 730.11 with an emphasis on the complex integration of assessment, research, and techniques in behavioral treatment programs. Treatment programs are illustrated for a variety of disorders.

731. Stimulus Control of Behavior. 2 lec., 4 lab. hr.; 4 cr. Emphasis is upon the acquisition and maintenance of discriminative behavior. Topics include discrimination training, generalization, perception, signal detection, and psycho-physics.†

732. Motivation and Reinforcement. 2 lec., 4 lab. hr.; 4 cr. The role of motivation in behavior theory, and the experimental

*Course is open to all matriculated students enrolled in either the Clinical Behavioral Applications in Mental Health Settings M.A. Program or the CUNY Learning Processes Ph.D. Sub-Program. Enrollment is limited. All other students must obtain special permission from the Head of the M.A. Program.

manipulation of reinforcement variables as these interact with motivational variables.†

733. Information and Decision Processes in Human Behavior. 2 lec. hr. plus conf.; 3 cr. Prereq.: A graduate course in experimental psychology. A survey of human information processing. Analysis of the role of decision making and of characteristics and models of human choice behavior.

734. Neuropsychology of Learning. 2 lec. hr. plus conf.; 3 cr. An examination and evaluation of current information regarding the neural bases of learning and memory. Theoretical views as well as empirical evidence derived from the ablation, electrophysiological, and biochemical literatures are considered.†

735. Psychology of Perception. 2 lec. hr. plus conf.; 3 cr. Prereq.: An undergraduate or graduate course in experimental psychology. The phenomenology, psychophysics, and psychophysiology of perception are discussed. Topics may include perceptual organization and development, illusions, constancies, and the Ames demonstrations. Heredity and environment interactions are considered in relation to perceptual theories (Gestalt, transactionism, etc.).

736. Sensory Psychology. 2 lec. hr. plus conf.; 3 cr. Methodological, empirical, and theoretical approaches to problems in contemporary sensory psychology.†

738. Cognition. 3 hr.; 3 cr. This course focuses on the study of cognition in humans. Among the topics covered are attention, recognition of patterns (such as speech and visual forms), imagery, storage and retrieval of information from short-term and long-term memory, and the organization of thought and language. A central theme of the course is a focus on structure and organization in these various cognitive processes.

740. Personality. 2 lec. hr. plus conf.; 3 cr. Discussion and reports on selected topics in the field.

741. Psychoanalytic Theories: The Classical Freudian Approach. 2 lec. hr. plus conf.; 3 cr. Prereq.: An undergraduate or graduate course in personality theory. A study of basic psychoanalytic writings beginning with Freud's 1895 *Studies in Hysteria*, and tracing the major trends in the development of psychoanalytic theory and clinical practice throughout Freud's life. Readings will be drawn primarily from the collected works of Freud.

742. Psychoanalytic Theories: Developments since Freud. 2 lec. hr. plus conf.; 3 cr. Prereq.: An undergraduate or graduate course in personality theory or its equivalent. This course surveys issues and theories in contemporary psychoanalysis. It deals with early psychological development during the pre-verbal and pre-Oedipal years and the consequences of disturbances at this time for the more

severe psychopathologies. Issues of treatment of such psychopathology will also be considered. Such authors as Melanie Klein, Donald Winnicott, John Bowlby, Heinz Kohut, Margaret Mahler, Otto Kernberg, and Hyman Spotnitz may be studied.

***743. Survey of Psychotherapy and Counseling: A Case Study Approach.** 2 lec. hr. plus conf.; 3 cr. This course surveys the major approaches to psychotherapy and counseling, including classical Freudian psychoanalysis, behavior therapy, and such humanistic-existential approaches as client-centered therapy, Gestalt therapy, and transactional analysis. Special attention will be given to the way in which each approach conceptualizes and interprets a given life history. Students will be expected to develop skills in writing up a case study based on case protocols provided by the instructor. *Note:* Psych. 743 and 743.1 cannot both be counted for credit toward the M.A. degrees in Psychology.

743.1. Survey of Psychotherapy and Counseling. 2 lec. hr. plus conf.; 3 cr. This course surveys the major approaches to psychotherapy and counseling, including classical Freudian psychoanalysis, behavior therapy, and such humanistic-existential approaches as client-centered therapy, Gestalt therapy, and transactional analysis. *Note:* Psychology 743 and 743.1 cannot both be counted for credit toward the M.A. degrees in Psychology.

744. Personality Development. 2 hr. plus conf.; 3 cr. Prereq.: One graduate course in either developmental or personality psychology. Presentation of a comprehensive framework for the conceptualization of personality development and sustained consideration of current findings bearing on several topics, such as the following: biological foundations of personality, the importance of early experience, imitation and identification, socialization, development of affects and motives and the stability of personality dispositions over time.

745. Human Motivation. 2 hr. plus conf.; 3 cr. Prereq.: One graduate course in learning theory or personality psychology. Review of theory and research on major current topics such as: arousal, curiosity, anxiety, achievement, motivation. Some consideration will be given to various methods of measuring human motivation.

746. Social Psychology. 2 lec. hr. plus conf.; 3 cr. Prereq.: An undergraduate or graduate course in experimental psychology. Among the topics to be covered are: 1) foundations of modern social psychology; 2) physiological process and social man; 3) social interaction and social process; 4) the nature and characteristics of social groupings; 5) types of social groupings; 6) the relations between groups; 7) social change and stability.

***748, 749. Self-Awareness Training I and II.** 2 lab. hr. plus conf.; 1 cr. *Note:* Psychology 749 does *not* require Psychology 748 as a prerequisite. Either one of these

courses may be taken independently of the other. This course seeks to improve the intervention skills of the participants by increasing their self-awareness. Combining both didactic and experiential elements, the course encourages each participant to become more sensitive to other participants and to his or her own interpersonal behavior, while at the same time encouraging personal growth and development. A term paper based on course readings is required.

755. Psychopathology I. 2 lec. hr. plus conf.; 3 cr. Prereq.: a) Introductory psychology and b) personality theory or psychopathology, or permission of the instructor. *Note:* Psychology 756 does not require this course as a prerequisite. Identification, diagnosis, assessment, and treatment of psychopathological conditions. Several models of psychopathology are considered, including psychological (cognitive, behavioral, and psychoanalytic), medical, socio-cultural, and mixed models. The study of anxiety and anxiety disorders is emphasized. The other syndromes considered are somatoform, dissociative, psychophysiological, and personality disorders.

756. Psychopathology II. 2 lec. hr. plus conf.; 3 cr. Prereq.: Psychology 755 is not required as a prerequisite for this course. Prerequisites are: undergraduate courses in: a) introductory psychology, and b) personality theory or psychopathology, or permission of the instructor. This course encompasses psychosis, mood, and organic mental disorders, among other topics.

760. Psychometric Methods. 2 lec. hr. plus conf.; 3 cr. Prereq.: An undergraduate or graduate course in statistics. A general introduction to psychometric methods which focuses on administration, standardization, norms, reliability, validity, and test construction. This course provides exposure to tests from a wide range of areas: e.g., educational and occupational, interests, and projective tests. Lectures cover the history of intelligence testing and the development of techniques for assessing personality and psychiatric disorders.

761. Measurement of Abilities. 2 lec. plus 2 conf. or lab. hr.; 3 cr. Prereq.: One course in psychological testing. An advanced course in the measurement of intellectual and other abilities.

762. Psychology of Individual Differences. 2 lec. hr. plus conf.; 3 cr. The origin and development of inter-individual differences and intra-individual differentiation in levels and patterns of intelligence, achievement, personality, and social behavior.†

763. Psychophysical Methods. 2 lec. hr. plus conf.; 3 cr. Systematic coverage of current psychophysical theory and methods,

*Course is open to all matriculated students enrolled in either the Clinical Behavioral Applications in Mental Health Settings M.A. Program or the CUNY Learning Processes Ph.D. Sub-Program. Enrollment is limited. All other students must obtain special permission from the Head of the M.A. Program.

from traditional approaches through more recent developments.†

***764. Assessment of Personality with Standardized Objective Measures.** 1 lec., 2 lab. hr.; 2 cr. Prereq.: Permission of the Executive Committee of the M.A. Program. (Permission should be requested three months prior to registration for this course.) An introduction to the administration and interpretation of commonly used objective standardized rating scales and objective inventories. Instruments covered will include the Hamilton and Zung Scales for depression and Brief Psychiatric Rating Scale, and MMPI, and the CPI.

771. Ethical Issues in Psychology. 15 hr. per semester; 1 cr. Prereq.: Students must have completed or must be concurrently taking Psychology 795 or 796; or permission of instructor. (This course cannot be taken for credit in addition to U771, which can be taken at the Graduate Center.) This course examines ethical and legal standards which apply to psychologists and others involved in the application of psychological principles. Emphasis here will be placed on ethical standards recognized by and for professionals in applied settings and on laws concerning professional practice.

***774. Assessment of Intellectual Functioning.** 1 lec., 4 lab. hr.; 3 cr. Prereq.: Permission of the M.A. Committee. (Permission should be requested three months prior to registration for this course.) Prereq. or coreq.: Psychology 760. This course provides experience in the administration, interpretation, and written presentation of findings from a variety of measures of intellectual functioning, e.g., the Wechsler tests. Students will be trained to integrate clinical observations, developmental theories, theories of cognitive style, and neuropsychological research in their test reports. Students will also develop a familiarity and working knowledge of a broad range of additional assessment techniques, e.g., the Stanford-Binet.

777. Practicum in Interviewing and Personality Appraisal. 2 lec., 2 lab. hr.; 3 cr. A systematic examination of interview techniques and methods of personality assessment through direct communication. Students carry on regular intake interviews with clients and prepare appraisal reports.

780. Quantitative Methods in Psychology. 2 lec. hr. plus conf.; 3 cr. Prereq.: Psychology 705. Emphasis will be placed on the mathematical procedures used in psychological theories and in the theoretical analysis of psychological data. Possible topics are curve-fitting procedures for straight lines, polynomials, and growth functions; matrix methods and Markov processes; and statistical decision theory and signal detection theories.

788. Cooperative Education Placement. Prereq.: Permission of department. Experiential learning through placement. Opportunities to test and demonstrate academic learning in an organizational set-

ting. Students receive academic credit as well as a stipend from the placement. No more than 6 credits may be taken in Cooperative Education Placement.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

788.6. 6 hr.; 6 cr.

789. Developmental Neuropsychology. 2 lec. hr. plus conf.; 3 cr. This course pays particular attention to the problems pertinent to the effects of neonatal brain lesions, neonatal neural plasticity, and genesis of neural structures and developmental disorders in animal and man.†

791. Seminar in Selected Topics in Psychology. Prereq.: Permission of instructor. Content will be determined by the special interest of students and the instructor. The course may be repeated for credit by permission of the department as the topic changes.

791.1. 1 hr.; 1 cr.

791.2. 2 hr.; 2 cr.

791.3. 3 hr.; 3 cr.

791.4. 4 hr.; 4 cr.

794. Behavior Genetics. 3 hr.; 3 cr. Prereq.: An undergraduate course in statistics and one in experimental psychology; an undergraduate course in physiological psychology, or comparative psychology, or biology; two of the following undergraduate courses: child psychology, abnormal psychology, tests and measurements. Background material in Mendelian, molecular, and population genetics, and genetic determinants of abnormal behavior, learning, and intelligence. The techniques and data resulting from both human and animal experimentation are equally emphasized.†

****795, 796, 797. Fieldwork (Externship).** Each of the following three courses is required of all students in the Clinical Behavioral Applications in Mental Health Settings M.A. Program. Total hours of fieldwork for the three courses: 630 (i.e., 21 hours per week for 30 weeks). Total credits: 9 (3 credits for each course). Prereq. for each course: 1) Permission of the M.A. Committee; 2) Full-time students in the CBA Program normally start fieldwork in their third semester after completing the following courses: 748, 749, 760, 764, 730.01 (formerly 770.1), and 774. The work for these fieldwork courses will often extend beyond a given semester. In such cases a provisional grade of "P" will be given at the end of the semester, and a letter grade will be given when the work of the course is completed.

795. Fieldwork (Externship): Applied Behavior Analysis. 3 hr.; 3 cr. Prereq.: See above. This fieldwork placement will be conducted at various state or private mental health institutions and/or other settings and will focus on developing applied behavior analysis skills. Each student will complete an applied behavior analytic intervention and write a report

suitable for publication.

796. Fieldwork (Externship): Assessment of Intelligence and Personality. 3 hr.; 3 cr. Prereq.: See above. This fieldwork placement will be conducted at various state or private mental health institutions and/or other settings and will focus on developing skills in the assessment of intellectual and personality functioning. Each student will administer 10 psychological test batteries and write 10 interpretive test reports.

797. Fieldwork (Externship): Professional Functioning in a Mental Health Setting. 3 hr.; 3 cr. Prereq.: See above. Externs will meet in a 2-hour on-campus seminar (weekly for the fall semester or biweekly for the academic year), focusing on professional functioning in a mental health setting. Topics may include: conducting an interview (including role playing aimed at developing interview skills); integrating information from diverse sources in writing up an intake report and/or results of a test battery; relating to other staff members; confidentiality; professional ethics, etc.

799. Research Practicum. 1 hr.; 1 cr. This course may be repeated for credit for a maximum of 4 semesters of participation. Prereq.: Permission of instructor. Each student must submit a proposal (approved by his/her sponsor) with a detailed plan for the practicum. This plan must specify what the product of the semester's work will be (list of specific laboratory skills to be mastered, or specific study to be carried out, or report of research to be written up, etc.). For continued practica, a progress report is also required regarding product(s) achieved in past practica. Approval of the Head of the M.A. Program is required before the start of the semester in which the practicum is to take place. Students will be provided with an internship in research through practical experience in the laboratory with a member of the department. The actual number of hours which the student will work in a given laboratory will be mutually arranged with the student's laboratory mentor. Each practicum will include both direct laboratory experience and guided reading of pertinent secondary and primary literature.

Course in Reserve

712. Recording and Stimulational Techniques in Physiological Psychology.

"Course is open to all matriculated students enrolled in either the Clinical Behavioral Applications in Mental Health Settings M.A. Program or the CUNY Learning Processes Ph.D. Sub-Program. Enrollment is limited. All other students must obtain special permission from the Head of the M.A. Program.

**Fieldwork courses are open to all matriculated M.A. students in the CBA Program, for whom the courses are required. Enrollment is limited. All other students, including CUNY Ph.D. students, must obtain special permission from the Head of the M.A. Program.

ROMANCE LANGUAGES

THE COURSES PREVIOUSLY OFFERED BY THE ROMANCE LANGUAGES DEPARTMENT ARE NOW OFFERED THROUGH THE DEPARTMENT OF EUROPEAN LANGUAGES AND LITERATURES AND THE DEPARTMENT OF HISPANIC LANGUAGES AND LITERATURES.

SOCIAL SCIENCES

Chair: Donald M. Scott

Program Director and Graduate Adviser:
Ronald Waterbury

Dept. Office: Powder-maker 351, 997-5210

The Master of Arts Degree in Social Sciences is an interdisciplinary program providing training and knowledge for career development and advancement in the social sciences in settings that require expertise in social organization, public policy analysis, and societal diversity. Students interested in careers in education, government, management, community organization, unions, health care delivery, and social services learn how to apply social science perspectives and to utilize social research in these fields in a Master's program that brings together insights, findings, and methods from the various social science disciplines.

Faculty

The faculty of the M.A. Program in the Social Sciences is interdisciplinary. Courses are taught by members of the departments of the Division of Social Sciences: Anthropology, Economics, History, Philosophy, Political Science, Sociology, Urban Studies, and the School of Education.

Requirements for Admission

These requirements are in addition to the general requirements for admission.

1. Candidates must have a minimum undergraduate grade-point average of *B* (3.0) and
2. Sufficient undergraduate courses in the social sciences to be prepared for graduate study, including research methods. Job experience using social science knowledge and methods may be substituted for undergraduate course requirements.

Degree Requirements

The Master of Arts Degree in the Social Sciences requires a total of 36 credit hours. This includes the completion of a Master's thesis that is supervised by a faculty member.

Core Requirements

All students must take four core curriculum courses, totaling 12 credits:

- 710. Diversity in an Urban Setting
- 720. Varieties of Social Science Methods
- 730. Computer Methods for the Social Sciences
- 790. Master's Capstone Seminar

Concentration Requirements

12 credits are required to be taken in one of three areas of professional concentration:

1. *Education.* For teachers with provisional certification in Secondary Education-social Studies. Students can complete their Master's degree requirements toward permanent certification and gain expertise in the social sciences. Teachers and administrators will also acquire a sharper perspective on urban issues in education and student achievement.

2. *Public Policy.* For those seeking advancement in government careers. Students will examine political and organizational aspects of city management, budgets, methods of delivering services in an urban context, and the outcomes of social programs.

3. *Social Research.* For those whose primary focus is Social Science Research. Students will investigate the use of research in the design, monitoring, and evaluation of applied programs and learn how to interpret research findings. They will also gain both experience implementing research methodologies and a critical perspective on alternative research strategies.

Electives

Each student will be assigned a faculty adviser who will assist the student in selecting 12 elective credits appropriate to the student's goals that will develop:

- Broad-based knowledge of the social sciences
- Interdisciplinary thinking skills
- Knowledge of different forms of argument and evidence
- Multi-method approaches to problem solving.

Core Courses

710. Diversity in an Urban Setting. 2 hr. plus conf.; 3 cr. An interdisciplinary examination of recent and continuing change in urban demographic patterns, with emphasis upon the greater New York area. The course analyzes the causes of these changes and their implications for economic, political, educational, and cultural institutions.

720. Varieties of Social Science Methods. 2 hr. plus conf.; 3 cr. A broad introductory course in statistics, social science research concepts, social science quantitative methods, and social science qualitative methods. Special emphasis is placed on the use and interpretation of research findings.

730. Computer Methods for the Social Sciences. 2 hr. plus conf.; 3 cr. An introduction to the various uses of microcomputers in handling social science data, including statistical packages such as SPSS, graphic programs, mapping programs, word processing, and use of the Internet. Instruction emphasizes hands-on computer experience.

790. Master's Capstone Seminar. 2 hr. plus conf.; 3 cr. This course is taken in conjunction with independent work on an individual Master's Thesis. The seminar addresses social issues that cut across

standard disciplinary boundaries and relates discussion to issues raised in earlier courses. Specific topics vary depending upon the interests of students and faculty.

Courses in Area of Concentration and Elective Courses

Each semester's course offerings are listed by the Graduate Adviser. See the appropriate department in this *Graduate Bulletin* for fuller descriptions of courses listed below.

COURSES IN ECONOMICS

713. Public Finance and Fiscal Policy. 2 hr. plus conf.; 3 cr. Government revenues and expenditures: analysis of principles and practices.

750. Industrial Organization and Control. 2 hr. plus conf.; 3 cr. Structure of the American economy; governmental policies aiming at the preservation of competition in industrial markets and regulation of trade practices.

760. Labor Economics. 2 hr. plus conf.; 3 cr. Problems and issues in labor economics; wages, hours, and working conditions; wage policy; relation of labor organizations to management decisions and economic change.

770. Urban Economics: Tools, Methodology, and Applications. 2 hr. plus conf.; 3 cr. Introduces students to major subject areas, theories, and research tools of urban and regional economics and their applications.

COURSES IN EDUCATION

EECE 760. Social Studies in the Elementary School.

SEYS 702. The History of Education in the United States.

SEYS 707. Major Issues in Education.

ECPCE 731. Family and Substance Abuse.

ECPCE 814. Psychosocial Organization of the Family.

COURSES IN HISTORY

774. History of American Business.

777. The City in American History to 1890.

777.1. The City in American History since 1890.

786. The American Urban Environment, 1830-1930.

COURSES IN PHILOSOPHY

651. Philosophy of Law.

653. Philosophy of the State.

722. Methodology of Empirical Sciences.

750. Ethical Systems.

COURSES IN POLITICAL SCIENCE

640. Public Administration.

651. Government of the City of New York.

715. Organization Theory.

731. Policy Formulation in the United States Government.

733. The Legislative Process in the United States.

735. Politics and Public Opinion Formation.

736. Public Policy Analysis.

COURSES IN SOCIOLOGY

704. Studies in the Family as a Social Institution.

707. Criminology and Criminal Justice.

710. Applied Computer Methods.†

711. Qualitative Methods.

712. Advanced Social Statistics.

716. Professional Writing and Communication for Social Research.

718. Sociology of Politics.

719. Social Stratification.

728. Sociology of Organizations and Industry.

736. Selected Problems in Demography.

738. The Research Process.

COURSES IN URBAN STUDIES

724. Introduction to Public Policy.

725. Urban Research Methods.

727. Public Management.

731. Evaluating Urban Policies.

749. Urban Education.

760.1-760.6. Selected Topics in Urban Policy and Planning.

762. Jobs and Occupations in Urban Society.

763. Race, Ethnicity & Public Policy.

765. Urban Poverty.†

770.1-770.5. Roots of the Urban Crisis.

775. Changing Urban Institutions.

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

SOCIOLOGY

Acting Chair and Graduate Committee
Director: Dean B. Savage

Dept. Office: Kissena 256, 997-2800

The Master's Program in Applied Social Research provides students with the educational foundation and technical skills necessary to prepare for a professional career in market research, program evaluation, public opinion research, institutional research, or other applied social research field.

The department consists of 24 full-time faculty members who maintain a very active research agenda. Faculty research areas include social stratification of urban areas, film and society, the impact of digital technology on society, workforce diversity, and Jewish culture in America. The facilities in the department include a large main computer laboratory along with a new multimedia lab and full Internet connections to assist graduate students in their research.

Faculty

Savage, Dean B., Acting Chair and Graduate Committee Director, *Associate Professor*, Ph.D. 1975, Columbia University: organization, science, work
Beshers, James M., *Professor*, Ph.D. 1957, University of North Carolina: urban demography
Beveridge, Andrew A., *Associate Professor*, Ph.D. 1973, Yale University: social history, quantitative methods
Blumberg, Paul M., *Professor*, Ph.D. 1966, University of California at Berkeley: stratification, industrial sociology
Browne, Basil R., *Assistant Professor*, Ph.D. 1989, University of California at Berkeley: deviant behavior, race/ethnic/minority relations, methodology, qualitative approaches
Catsambis, Sophia, *Assistant Professor*, Ph.D. 1988, New York University: education
Clough, Patricia T., *Professor*, Ph.D. 1978, University of Illinois, Champaign-Urbana: feminist theory, mass media, qualitative methods
Cohen, Bernard, *Professor*, Ph.D. 1968, University of Pennsylvania: criminology, police research, deviance
Font, Mauricio A., *Associate Professor*, Ph.D. 1983, University of Michigan: development and social change, comparative and historical sociology
Gallo, Carmenza L., *Assistant Professor*, Ph.D. 1985, Boston University: comparative sociology, family
Habtu, Alem S., *Lecturer*, Ph.D. 1996, New School for Social Research: Africana studies
Heilman, Samuel C., *Professor*, Ph.D. 1973, University of Pennsylvania: social theory, symbolic interaction, sociology of religion, Jewry
Kapsis, Robert E., *Professor*, Ph.D. 1973,

University of California at Berkeley: art and culture, mass media
Kilger, Max, *Assistant Professor*, Ph.D. 1992, Stanford University: small groups, status cues, technology and society
Levine, Harry G., *Professor*, Ph.D. 1978, University of California at Berkeley: American historic culture
Liang, Zai, *Assistant Professor*, Ph.D. 1992, University of Chicago: demography, immigration, ethnic intermarriage
Mankoff, Milton L., *Associate Professor*, Ph.D. 1969, University of Wisconsin: social stratification, social change, social deviance
Miller, Joanne, *Associate Professor*, Ph.D. 1975, University of Wisconsin, Madison: work, social structure and personality, applied demography
Min, Pyong Gap, *Professor*, Ph.D. 1983, Georgia State: family, ethnicity, and race, Asian Americans
Reichler, Melvin, *Associate Professor*, Ph.D. 1963, University of Michigan: theory, friendship, computers
Seiler, Lauren H., *Professor*, Ph.D. 1970, University of Illinois at Urbana: methods, technology
Smith, Charles W., *Professor*, Ph.D. 1966, Brandeis University: theory, social psychology, sociology of markets
Tang, Joyce, *Assistant Professor*, Ph.D. 1991, University of Pennsylvania: stratification, mobility, science and technology, methodology
Zimmer, Lynn E., *Associate Professor*, Ph.D. 1982, Cornell University: law, criminal justice

Master of Arts Program

Requirements for Matriculation

These requirements are in addition to the general requirements for admission.

1. Sufficient work in sociology or related fields to pursue graduate work in sociology. Successful completion of undergraduate courses in social theory and statistics, or demonstration of competence by passing an examination in these subjects.

2. The department reserves the right to impose additional requirements upon any candidate for the degree who, in its opinion, enters with insufficient undergraduate work in sociology.

3. Personal interview with the Graduate Adviser whenever feasible.

Departmental Requirements

These requirements are in addition to the general requirements for the Master of Arts degree.

1. Students must satisfy the following requirements:

	<i>credits</i>
a. Sociological Theory: Sociology 701 and 702	6
b. Quantitative Research Methods and Statistics: Sociology 710 and 712	6
c. Qualitative Methods or Professional Communications in Social Research, Sociology 711 or 716	3
d. One substantive area of Sociology, as approved by the department, e.g., Sociology 734 and 735 or 754 and 755	6
e. Sociology 793 and submission of an approved thesis or thesis-length paper based upon supervised independent research	3
f. Elective courses	6
Total	30

2. The progress of all students will be reviewed every semester by the Graduate Committee. Satisfactory progress toward the degree requires a minimum grade of B (3.0) in the courses enumerated in a through d above. Additional work, a qualifying examination, or dismissal from the program will be prescribed for those students not satisfying the minimum requirements. Necessary action will be decided upon by the Graduate Committee and communicated to the student in writing.

Courses in Sociology

701. The Development of Sociological Theory. 2 hr. plus conf.; 3 cr. Critical examination of the major treatises and schools in the development of sociological theory from Comte to twentieth-century theorists.†

702. Contemporary Sociological Theory. 2 hr. plus conf.; 3 cr. Critical discussion of current sociological theory. Relationship of contemporary theory to empirical research.†

703. Social Pathology. 2 hr. plus conf.; 3 cr. Examination of certain problems, such as mental illness, delinquency and crime, poverty, divorce, differential morbidity and mortality, which are regarded as pathological by our society. These problems will be viewed within the context of a general theory of social pathology and the interplay of psychic and social variables.††

704. Studies in the Family as a Social Institution. 2 hr. plus conf.; 3 cr. The basic functions of family life and the effects of continuous social change on parenthood, courtship, and marriage are studied. The universality of the family and the relationship of the family to social and economic organizations will be explored. Sociological theories concerning changes in structure and function of the family will be presented.††

707. Criminology and Criminal Justice. 2 hr. plus conf.; 3 cr. Analysis of statistics, theories of causation, current research in crime, delinquency, and the

criminal justice system.††

710. Applied Computer Methods. 2 hr. plus conf.; 3 cr. Prereq.: Introductory course in statistics. This introductory applications course illustrates the use of computers in handling social science data. The method is to present a problem commonly encountered by social researchers and demonstrate its computer-based solution. Data handling and analysis are performed using SPSS (Statistical Package for the Social Sciences). Background is given in sampling, research design, and survey analysis.†

711. Qualitative Methods. 2 hr. plus conf.; 3 cr. Prereq.: An introductory course in statistics. Qualitative concepts and methods of sociological research; application of such concepts and methods in representative published studies.†

712. Advanced Social Statistics. 2 hr. plus conf.; 3 cr. Prereq.: An introductory course in statistics. An examination of more advanced statistical methods as applied to sociological data. The course will deal with the logic and techniques of sampling, the significance of differences, and the relationships between factors involved in quantitative sociological studies.†

715. Studies in Urban Sociology. 2 hr. plus conf.; 3 cr. An analysis of theories of urban life. The life cycle of urban neighborhoods, urban redevelopment, and planning. Methods of urban area analysis. Students will have an opportunity to participate in research projects.††

716. Professional Writing and Communication for Social Research. 2 hr. plus conf.; 3 cr. An applied course stressing succinct and meaningful communication. The course will include proposals, analytical reports, and presentations. Essential concepts will be drawn from a wide variety of professional experiences.

718. Sociology of Politics. 2 hr. plus conf.; 3 cr. Review of the basic research findings on the ecology of voting and on the determinants of electoral decisions as indicated in election polls and panel studies. Sociological analysis of the internal structure of political parties and of the decision-making process and the power structure on the community and the national level.††

719. Social Stratification. 2 hr. plus conf.; 3 cr. The concept of social class in social science (as used by Marx, Weber, Warner, and in recent sociological research). Comparisons of social stratification in several countries. Discussion of the causes and consequences of individual and structural mobility.††

721. Studies in Sociological Aspects of Religion. 2 hr. plus conf.; 3 cr. This course concerns itself with the institutional expressions of the great historical religions of the world (e.g., Buddhism, Christianity, Confucianism, Islam, Judaism, etc.). Consideration will be given to the relationship between religious institutions and society,

the rise and development of sects, leadership patterns in religious groups, and the role of religion in modern American communities.††

728. Sociology of Organizations and Industry. 2 hr. plus conf.; 3 cr. The general theory of organizations is examined with emphasis on groups, decisions, hierarchy, effectiveness, participation, conflict, power, and environment. Selected studies dealing with labor, business, and government are discussed.

729. Studies in Collective Behavior. 2 hr. plus conf.; 3 cr. An advanced course concerned with the individual in the social group. Such topics as group influences on the shaping of attitudes, conformity, and deviant behavior will be discussed. Will also explore collective behavior, including group reactions to crisis situations and the psychology of social movements.††

734. Applied Social Research in Marketing I. 2 hr. plus conf.; 3 cr. A survey of the techniques used in marketing research with an emphasis on developing skills needed to carry out research.

735. Applied Social Research in Marketing II. 2 hr. plus conf.; 3 cr. Prereq.: Sociology 734. Continuation of Sociology 734. Students carry out a marketing research project.

736. Selected Problems in Demography. 2 hr. plus conf.; 3 cr. Survey of 1) major population problems and developments, particularly the relation between natural and industrial resources and population growth in various areas of the world; 2) social and other factors influencing population developments; 3) techniques of demographic research.††

738. The Research Process. 2 hr. plus conf.; 3 cr. Prereq.: Sociology 701 and 710. A comparative survey of the conduct of social research. Each stage of the research process as it is performed in various settings will be explored, including: definition of problem, literature review, formulation of study design, development of research instruments, plans for data analysis, and construction of a report outline. Students will develop a model research proposal.

739. Studies in Social Psychology. 2 hr. plus conf.; 3 cr. An examination in depth of selected areas in social psychology such as attitudes, public opinion polling, socialization, personality, etc. Students will have the opportunity to pursue research under supervision.††

749. Selected Problems in Mass Communication. 2 hr. plus conf.; 3 cr. A discussion of selected problems in the field of mass communication. Includes research conducted by various institutions and contributions appearing in recent and current literature, together with problems in the methodology of mass communications research.††

751. Medical Sociology. 2 hr. plus conf.;

3 cr. A study of selected contributions from the literature of social organization and social psychology, in particular, to an understanding of the functioning and role of the helping professions, the patient, and the community in health-maintaining activities.††

754. Applied Social Research I. 2 hr. plus conf.; 3 cr. Prereq.: Permission of department. Topics in Applied Social Research.

755. Applied Social Research II. 2 hr. plus conf.; 3 cr. Prereq.: Permission of department. Topics in Applied Social Research.

788. Cooperative Education Field Placement. Prereq.: Permission of department. Students will apply skills learned in courses in paid positions. A written report linking experience with skills and concepts learned in the classroom is required.

788.1. 1 hr.; 1 cr.

788.2. 2 hr.; 2 cr.

788.3. 3 hr.; 3 cr.

788.4. 4 hr.; 4 cr.

788.5. 5 hr.; 5 cr.

788.6. 6 hr.; 6 cr.

789. Internship in Social Research.

Prereq.: Permission of department. Students will apply skills learned in courses in volunteer positions. A written report linking experience with skills and concepts learned in the classroom is required.

789.1. 1 hr.; 1 cr.

789.2. 2 hr.; 2 cr.

789.3. 3 hr.; 3 cr.

789.4. 4 hr.; 4 cr.

789.5. 5 hr.; 5 cr.

789.6. 6 hr.; 6 cr.

790. Seminar in Selected Topics in Sociology. 2 hr. plus conf.; 3 cr. Content will be determined by the special interest of students and the instructor.††

790.1. Seminar in Selected Topics in Sociology. Hr. to be arranged; 1 cr. Content will be determined by the special interest of students and the instructor. The course may be repeated for credit by permission of the department as the topic changes.††

790.2. Seminar in Selected Topics in Sociology. Hr. to be arranged; 2 cr. Content will be determined by the special interest of students and the instructor. The course may be repeated for credit by permission of the department as the topic changes.††

790.3. Seminar in Selected Topics in Sociology. Hr. to be arranged; 3 cr. Content will be determined by the special interest of students and the instructor. The course may be repeated for credit by permission of the department as the topic changes.††

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

791. Tutorial. 3 hr.; 3 cr. Prereq.: Permission of Director of Graduate Program in Sociology. Independent study under the guidance of a Faculty Adviser.

792. Research. 3 hr.; 3 cr. Prereq.: Permission of Director of Graduate Program in Sociology. Research conducted under the guidance of a Faculty Adviser.

793. Thesis Research. 3 hr.; 3 cr. Prereq.: Completion of requirements a through d (21 credits) in the list of Departmental Requirements above. Student will carry out a research project which will culminate in a Master's thesis or a research report of comparable significance.

URBAN STUDIES

Chair: Leonard Rodberg

Graduate Adviser: William A. Muraskin

Dept. Office: Powder-maker 376, 997-5130

The M.A. program in Urban Affairs is designed to prepare the student for professional work and career advancement in the areas of urban and public administration, social policy, and community organization and development. Graduates of the program work in government agencies, community-based and non-profit organizations, health care and education institutions, and enterprises such as real estate firms concerned with urban issues. Studying with faculty who have extensive knowledge and experience in contemporary urban affairs, students gain training and expertise in the design and administration of programs addressing issues of social and urban policy.

Faculty

Rodberg, Leonard, Chair, *Associate Professor*, Ph.D. 1957, Massachusetts Institute of Technology: health policy, employment policy, urban data analysis
Muraskin, William A., *Graduate Adviser*, *Professor*, Ph.D. 1970, University of California at Berkeley: social/urban history, health policy, international health
Bayne-Smith, Marcia, *Assistant Professor*, D.S.W. 1990, Columbia University: health services and education, social welfare policy, immigration, social work
Hanlon, Martin D., *Associate Professor*, Ph.D. 1979, Columbia University: health policy, public management, public policy evaluation, workforce issues
Lawson, Ronald L., *Professor*, Ph.D. 1970, University of Queensland, Australia: housing, tenant activism, protest and religious movements, urban sociology
Sardell, Alice, *Associate Professor*, Ph.D. 1980, New York University: health policy, community health planning, urban and community politics
Seley, John E., *Professor*, Ph.D. 1973, University of Pennsylvania: urban and regional planning, public policy, geography, computer mapping
Shirvani, Hamid, *Professor*, Ph.D. 1980, Princeton University: urban design and planning, architecture of the city, post-modernism
Steinberg, Stephen, *Professor*, Ph.D. 1971, University of California at Berkeley: racial and ethnic minorities, public policy, urban sociology

Program for the Master of Arts Degree

Requirements for Matriculation

Applicants must demonstrate aptitude for completing a graduate program in urban

affairs either through previous academic performance or through performance in relevant life situations. Applicants' experience in urban policy or administration or in community service jobs or activities will be evaluated along with the academic record in the admission decision. Inquiries should be addressed to: Graduate Admissions Committee, Department of Urban Studies.

Requirements for the Master of Arts Degree

Thirty-six credits are required for the M.A. degree. The credits shall include four required courses (12 credits) including a 3-credit Master's thesis seminar, and 12-18 credits in a major area (Urban Administration and Social Policy or Community Organization and Development). Students are encouraged to take 3-6 credits of fieldwork. Where appropriate, and where approved by the Adviser, 3-12 credits of the concentration may be taken in other departments.

No comprehensive examination is required.

REQUIRED COURSES

The following 12 credits are required of all graduate students in Urban Affairs:

724. Introduction to Public Policy	3 cr.
725. Urban Research Methods	3 cr.
Either:	
727. Public Management	3 cr.
or	
745. Community Organization	3 cr.
791. Master's Thesis Seminar	3 cr.

MAJOR SEQUENCE (12-18 credits, in addition to a 9-credit core)

Along with the core sequence, students must take a sequence of courses either in Urban Administration and Social Policy or in Community Organization and Development. The former prepares students for professional work in local, state, or federal agencies concerned with urban administration; the latter prepares students for professional work in community activities, including private organizations and agencies, poverty programs, and other community applications. Within the Urban Administration and Social Policy option, a student may concentrate in a functional area such as health, housing, community planning and development, or welfare policy.

FIELDWORK AND PROJECT SEMINAR (3-6 credits)

Field placements will be given in areas of urban activity of interest to the student. Fieldwork shall include participation in seminars where the experience will be discussed and analyzed. Students will be placed in an outside organization or participate in a group project or workshop organized by the department. Fieldwork will be under the direction of a Faculty Adviser who shall hold regular conferences with students. Papers on fieldwork are required. Fieldwork courses are 780 and 781.

THESIS OR PROJECT PAPER (3 credits)

A thesis or project paper is required, and students are required to take the Master's thesis seminar, Urban Studies 791. The thesis shall consist of a critical evaluation of social policy in some specific area or of a research report on data collected or obtained by the student. The project paper shall consist of a critical examination of the project developed by the student. Preferably, the thesis or project paper shall be in the area of the student's Fieldwork or work experience. A committee of two advisers, at least one of faculty rank in the Urban Studies Department, must evaluate and approve the thesis or project paper. The required Master's thesis seminar is 791.

Courses in Urban Studies

626. Computer Methods in Urban Policy Analysis. 3 hr.; 3 cr. This course introduces the student to a variety of methods for performing urban policy analyses using microcomputers, including the use of spreadsheets, database systems, graphics programs, mapping systems, and statistical packages. Students will be introduced to essential file management functions and will learn to use these computer-based tools to analyze, interpret, and display demographic, economic, and geographic data. Students will carry out and present projects using their own data or data provided by the instructor.

640. Public Administration. 2 hr. plus conf.; 3 cr. This course offers a comprehensive survey of the field of public administration, from the philosophical underpinnings of government activities to the structure and function of present-day state and local government programs and agencies.

719. Applications of Social Psychology to Urban Problems. 2 hr. plus conf.; 3 cr. ††

722. Processes of Urbanization. 2 hr. plus conf.; 3 cr. Provides an overview of 1) the historical growth and economic position of cities as centers of industry or commercial and bureaucratic control, 2) internal differentiation within cities, 3) the experience of urban life at different socio-economic levels. Fall

724. Introduction to Public Policy. 2 hr. plus conf.; 3 cr. This course is an introduction to policy making in public and nonprofit organizations. Students learn the major elements of the policy making process: defining problems, developing alternative policies, evaluating alternatives, policy implementation, and evaluating policy outcomes. The focus is on policy making at the local and state level. Substantive policy areas covered in the course include: welfare, urban economic development, environmental and land use policy, housing policy, and health policy. The course is intended to provide the theoretical and analytical basis for a series of proposed courses in each of these areas.

725. Urban Research Methods. 2 hr. plus conf.; 3 cr. Survey of approaches to urban research, including participant observation, statistical analysis, survey research, and analysis of aggregate data. Spring

726. The Urban Criminal Justice System in the United States. 3 hr.; 3 cr. The course will deal with the modern criminal justice system as it has developed through time in cities. Special attention will be given to the urban problems that led to the creation and evolution of the professional police, criminal courts, and penal institutions. Emphasis will be placed on the specifically urban influences (demographic, geographic, political, economic, and social) that originally shaped and continue to mold the criminal justice system.

727. Public Management. 2 hr. plus conf.; 3 cr. This course is devoted to the study of management in local and state government and the nonprofit sector. Defining the unique characteristics of public management is one of the goals of the course. Another is to provide an understanding of what government and nonprofit managers actually do. Finally, the course is intended to develop skills that are essential to effective public management. The course relies heavily on the case method approach, which is intended to simulate the world of actual managers and the processes of management decision making.

730. The Urban Economy: Growth and Problems. 2 hr. plus conf.; 3 cr. ††

731. Evaluating Urban Policies. 2 hr. plus conf.; 3 cr. Methods of evaluating proposed and existing policies and programs for urban improvement. Criteria for evaluation in terms of impacts on political power, distributional inequality, and economic well-being. Case studies of both public investments and community-directed programs, including those in which students are participants, will be emphasized. No formal prerequisite; Urban Studies 725 recommended. ††

735. NYC Land Use Planning Process. 2 hr. plus conf.; 3 cr. This course examines the ways in which New York City has historically exercised its zoning authority and has created a variety of institutions to intervene in the zoning process. It examines the role of real estate interests, the general public, and the City government agencies specifically charged with planning functions.

736. Urban Epidemics: Tuberculosis to AIDS. 3 hr.; 3 cr. The course will deal with infectious diseases in American cities over time. Severe epidemics of contagious disease are a creation of civilization, requiring as they do the large population that crowded cities provide. A number of devastating diseases will be considered, among them tuberculosis, cholera, syphilis, hepatitis, polio, and AIDS, along with their effect on city life. The social construction of disease

and the changing cultural meanings of different diseases will be dealt with. Special emphasis will be placed on the role of stigma and discrimination in how society reacts to those who have a disease.

740. Delivery of Public Services. 2 hr. plus conf.; 3 cr. This course examines the theory and practice of public service delivery by urban government within the context of budgetary constraints and the politicization of issues relating to public services. New York City's practices are compared with public service delivery in other political jurisdictions in the United States and other countries.

742. Public Budgeting. 2 hr. plus conf.; 3 cr. This course examines contemporary government budgeting practices within the context of urban politics, public administration, collective bargaining, and federal and state impacts on local budgeting. The emphasis is on the budgeting process in New York City, beginning with the role of the fiscal crisis of 1974-75 in reforming City government budgeting.

745. Community Organization. 2 hr. plus conf.; 3 cr. Analysis of the structure and organization of urban communities and how community resources can be mobilized to solve social and economic problems.

749. Urban Education. 2 hr. plus conf.; 3 cr. May be repeated for credit if topic changes. ††

752. Women in Urban Society. 2 hr. plus conf.; 3 cr. Effects of urban life on the status of women in the family and the political economy. Current changes and future prospects. ††

756. The Law and Urban Society. 2 hr. plus conf.; 3 cr. This course examines the role of law in relation to a variety of urban issues. It begins with an overview of legal processes within the American constitutional system. It then proceeds to address the relationship of law to issues of welfare, housing, racial discrimination, education, and urban crime. ††

760.1-760.6. Selected Topics in Urban Policy and Planning. 2 hr. plus conf.; 3 cr. An intensive analysis of policies and planning in one urban topic in one semester (e.g., health, housing, transportation, education, welfare). May be repeated for credit. ††

762. Jobs and Occupations in Urban Society. 2 hr. plus conf.; 3 cr. Changing job structures and the labor force are considered in relation to employment and unemployment, education, discrimination, government programs, labor unions, corporation policies, and economic and social change. ††

†-Offered either Fall or Spring; see Class Schedule.

††-May be offered; see Class Schedule.

763. Race, Ethnicity, and Public Policy. 3 hr.; 3 cr. This course begins with an overview of the status of racial and ethnic minorities in contemporary American society. It then examines a number of critical policy issues, such as enforcement of antidiscrimination laws, affirmative action, bilingual education, transracial adoptions, the creation of black-majority Congressional districts, and multicultural education.

765. Urban Poverty. 2 hr. plus conf.; 3 cr.††

770.1-770.5. Roots of the Urban Crisis. 2 hr. plus conf.; 3 cr. Selected topics in the development of urban institutions in American cities and their problems in meeting individual and social needs. May be repeated for credit (each institution will be dealt with in a separate course).††

775. Changing Urban Institutions. 2 hr. plus conf.; 3 cr.††

780. Fieldwork I. Hr. to be arranged; minimum of 12 hr. a week required; 3 cr. Includes fieldwork assignment and seminar sessions. Fall, Spring

781. Fieldwork II. Hr. to be arranged; minimum of 12 hr. a week is required; 3 cr. Includes fieldwork assignment and seminar sessions. Must be different assignment from that of Fieldwork I. Fall, Spring

785. Tutorial. Hr. to be arranged; 3 cr. Fall, Spring

790. Seminar in Selected Topics in Urban Studies. 2 hr. plus conf.; 3 cr. The topic will vary from semester to semester. Fall, Spring

791. Master's Thesis Seminar. 2 hr. plus conf.; 3 cr. The required thesis will be the focus of this class. Students will learn to do research and organize and write an original research paper. Fall

QUEENS COLLEGE ADMINISTRATION

Academic Advising
Amy Sugin, *Director*

Academic Affairs
John A. Thorpe, *Provost and Senior Vice President for Academic Affairs*

Frederick Purnell, *Acting Associate Provost for Academic Planning and Programs*

M. Hratch Zadoian, *Assistant Vice President and Assistant Provost*

Academic Skills & Resource Center
Howard H. Kleinmann, *Director*

Admissions
Susan L. Reantillo, *Executive Director of Admission, Marketing, and Scholarship Services*

Adult Collegiate Education (ACE)
Robert C. Weller, *Director*

Affirmative Action
Valli Cook, *Director*

Alumni Affairs
Renée K. Zarin, *Director*

Arts & Humanities
Raymond Erickson, *Dean*

Athletics Program
Richard G. Wettan, *Director*

Bursar's Office
Roy H. Pepino, *Bursar*

Campus Distribution Center
Elena Peters, *Director*

Career Development & Internships
Tesfaye Asfaw, *Director*

Center for Molecular & Cellular Biology
Luc Montagnier, *Director*
Emily Carrow, *Assistant to the Director*

Child Development Center at
Queens College, Inc.
Betty A. Pearsall, *Director*

Colden Center for the Performing Arts
Vivian Charlop, *Executive Director*

College English as a Second language
Howard H. Kleinmann, *Director*

Community Relations
Valli Cook, *Director*

Continuing Education Programs
Barbara Ritchin, *Executive Director*

Counseling & Advisement Center
Elizabeth J. McCaffrey, *Assistant Director*

Design & Production Services
Dyanne Maue, *Director*

Development Office
Mario John DellaPina, *Director*

Disabled Student Services
Chris Rosa, *Director*

Editorial Services
John Cassidy, *Director*

Education
Sydney Schwartz, *Acting Dean*

Environmental leaching &
Research Center (Caumsett)
Peter Schmidt, *Director*

Facilities & Campus Services
James M. O'Hara, *Executive Director*

Facilities Planning, Management & Construction
Robert Landsman, *Director*

Finance & Business
Sherry F. Brabham, *Acting Vice President*
Sam S. Yehaskel, *Director of Accounting*

Denise Wells, *Director of Accounts Payable and Revenue Accounting*

Susan V. Wong, *Director of Budget*
Maxine P. Rothenberg, *Director of Human Resources*

Ernest S. Jew, *Director of Payroll*
Lorraine Prasad, *Acting Director of Purchasing & Property Management*

Financial Aid Services
Doug Strauss, *Director*

Godwin-Ternbach Museum
Jerald R. Green, *Director*

Graduate Studies & Research
Hamid Shirvani, *Vice President*
Tamara Jackson, *Executive Assistant to the VP for Graduate Studies and Research*

Robert Engel, *Graduate Dean*
Frank Franklin, *Director of Recruitment and Graduate Advising*

G. Mike Prasad, *Director of Research and Sponsored Programs*
Mario Caruso, *Director of Graduate Admissions*

Melissa Sandor, *Director of Corporate and Foundation Relations*

Luc Montagnier, *Director of the Center for Molecular and Cellular Biology and Bernard and Gloria Salick Distinguished Professor of Molecular and Cellular Biology*

Health Service Center
Florence Bernard, *Director*

Information Technology
Russell Merrill, *Acting Assistant Vice President*

Institutional Research
Margaret McAuliffe, *Director*

Interdisciplinary Programs
M. Hratch Zadoian, *Assistant Provost and Director*

International Student Services
Phyllis Proctor, *Director*

Library
Sharon Bonk, *Chief Librarian*

Louis Armstrong Archives
Michael Cogswell, *Director*

Mathematics & Natural Sciences
Norman L. Goldman, *Dean*

Minority Student Affairs
Maureen Pierce-Anyan, *Director*

News & Information Services
Ron C. Cannava, *Director*

President's Office
Allen Lee Sessoms, *President*
Jane Denkensohn, *Assistant Vice President for Labor Relations and Special Counsel*

Nancy Zemsky, *Special Assistant to the President*

Registrar's Office
Donna Lipper, *Director*

Reprographics
Robert Kwarta, *Director*

Search for Education, Elevation & Knowledge (SEEK)
Eulas Boyd, *Director of Special Programs*

Security Office
Angel Cruz, *Director*

Social Sciences
Donald M. Scott, *Dean*

Special Events
Joseph R. Brostek, *Director*

Student Life
Burton L. Backner, *Dean*

Student Union
David Galloway, *Director of Student Services Corp.*

Tom VanSchoor, *Director of Student Life /Student Activities*

Telecommunications
Joseph Gong, *Director*

Worker Education & LEAP
Gregory Mantsios, *Director*

DEPARTMENT CHAIRS

Accounting & Information Systems
Israel Blumenfrucht

Anthropology
Patricia S. Bridges

Art
Barbara G. Lane

Biology
Uldis Roze

Chemistry & Biochemistry
Thomas C. Streckas

Classical, Middle Eastern & Asian
languages & Cultures
Ammiel Alcalay

Comparative Literature
Clare L. Carroll

Computer Science
Theodore D. Brown, *Acting*

Drama, Theatre & Dance
Ralph G. Allen, *Acting*

Economics
Michael Edelstein

Educational & Community Programs
David S. Goh

Elementary & Early Childhood
Education & Services
Nancy L. Dill, *Acting*

English
Steven F. Kruger

European Languages & Literatures
Peter Carravetta

Family, Nutrition & Exercise Sciences
Jacqueline M. Newman

Geology
Allan Ludman

Hispanic Languages & Literatures
Andrés Franco

History
Frank A. Warren

Library
Sharon Bonk

Graduate School of Library &
Information Studies
Marianne A. Cooper

Linguistics & Communication Disorders
Helen S. Cairns

Mathematics
Jack P. Diamond

Media Studies
Stuart E. Liebman

Aaron Copland School of Music
Hubert S. Howe, Jr.

Philosophy
Steven V. Hicks

Physics
Steven A. Schwarz

Political Science
Patricia Rachal

Psychology
Wilma A. Winnick

Secondary Education & Youth
Services
Philip M. Anderson

Sociology
Dean Savage, *Acting*

Special Programs
Eulas Boyd

Student Personnel
Burton L. Backner, *Dean*

Urban Studies
Leonard Rodberg

CITY UNIVERSITY OF NEW YORK

Christoph M. Kimmich, *Acting Chancellor,
City University*

Laurence F. Mucciolo, *Deputy Chancellor
(vacant), General Counsel and Vice
Chancellor for Legal Affairs*

Jay Hershenson, *Vice Chancellor for
University Relations*

Emma Espino Macari, *Vice Chancellor for
Facilities Planning, Construction, and
Management*

Brenda Richardson Malone, *Vice
Chancellor for Faculty and Staff
Relations*

Louise Mirrer, *Vice Chancellor for
Academic Affairs and Special Programs
(vacant), Vice Chancellor for Student
Affairs and University Dean for
Academic Affairs*

Richard F. Rothbard, *Vice Chancellor for
Budget, Finance, and Information
Systems*

Alvin Halpern, *University Dean for
Research and Acting President of the
Research Foundation*

John Mogulescu, *University Dean for Adult
and Continuing Education*

Angelo B. Proto, *University Dean for
Student Services*

Michael Ribaud, *University Dean for
Instructional Technology and Industry
and Government Partnership*

Dave I. Fields, *Special Counsel to the
Chancellor*

BOARD OF TRUSTEES

Anne A. Paolucci, *Chair*
Herman Badillo, *Vice Chair*

Satish K. Babbar
John J. Calandra
Kenneth E. Cook
Michael C. Crimmins
Alfred B. Curtis, Jr.
Edith B. Everett
Ronald J. Marino
John Morning
Susan Moore Mouner
James P. Murphy
George J. Rios
Nilda Soto Ruiz
Richard B. Stone

Mizanoor Biswas, *ex officio*
Sandi E. Cooper, *ex officio*

Genevieve Mullin, *Secretary of the Board*
Michael Hess, *Counsel to the Board*

TRANSPORTATION

Queens College, CUNY is located at the corner of the Long Island Expressway (LIE) and Kissena Boulevard (exit 24) in Flushing.

By Car

The campus can be reached from Manhattan via the Midtown Tunnel; from the Bronx or Westchester via the Triboro, Bronx Whitestone, or Throgs Neck Bridge; and from farther out on Long Island via the Long Island Expressway, Grand Central Parkway, or Northern Boulevard.

By public Transportation

Via Flushing: Take the Long Island Railroad or the IRT subway to Main Street, Flushing. From Main Street, take the Q25-34 or Q17 bus.

Via Forest Hills: Take the IND subway to Continental Avenue, Forest Hills. From Continental Avenue, take the Q65A bus to Kissena Boulevard and Jewel Avenue.

Via Kew Gardens: Take the IND to Union Turnpike. Then take the Q74 bus to the main gate.

Via Jamaica: Take the IND subway to Parsons Boulevard or the Long Island Railroad to the Jamaica station. From Jamaica Avenue and 160th Street or Hillside Avenue and Parsons Boulevard in Jamaica, take the Q25-34 bus. From Hillside Avenue and either 169th or 179th Street in Jamaica, take the Q17 bus to the Long Island Expressway and Kissena Boulevard.

Bus lines

Q25-34 (Queens Transit Bus Line)
Runs from Main Street, Flushing (IRT and LIRR stations), along Kissena and Parsons Boulevards to Jamaica Avenue and 160th Street (BMT and IND connections). Stops at the main gate.

Q44 (NYC Transit Authority Bus Line)
Runs from West Farms Square, Bronx (IRT station), to Sutphin Boulevard, Jamaica (LIRR station). Stops at Main Street and Melbourne Avenue, two blocks west of the campus.

Q74 (NYC Transit Authority)
Runs from Union Turnpike, Kew Gardens (IND station), along Vleight Place, Main Street, and the LIE service road, and then turns onto Kissena Boulevard. Stops at the main gate.

Q65A (Queens Transit)

Runs from Continental Avenue, Forest Hills (IND station), along Jewel Avenue to 165th Street. Stops one block from the campus.

Q17 (NYC Transit Authority)

Runs from Main Street, Flushing (IRT and LIRR stations), to 165th Street terminal in Jamaica (passing the IND 179th Street station). Travels along Kissena Boulevard, the LIE service road, 188th Street, and Hillside Avenue. Stops at Kissena Boulevard and the LIE, two blocks from the main gate.

Q88 (NYC Transit Authority)

Runs from Springfield Boulevard and Union Turnpike along Springfield Boulevard to 73rd Avenue, along 73rd Avenue to 188th Street, along 188th Street to the LIE, along the LIE service road to Queens Boulevard and Woodhaven Boulevard. Stops at Kissena Boulevard and the LIE, two blocks from the main gate.

INDEX

- Absent grade, 24
Academic calendar, 5
Academic Senate, 12
Accreditation, 7
Activity fee, 20, 21
Administration, College, 131
Admission, 16
 internationally educated students, 18
 re-entry, 19
 with conditions, 18
Admission, Retention & Graduation, 16
Advanced Certificate programs, 10, 50, 53, 58, 67
Advisement, 25
Affirmative Action, 28
Appeals, 11, 25
Application requirements, 16
 see also individual department listings
Applied Linguistics, 99
Applied Mathematics, 103
Archival Center, 14
Art, 36
Astronomy, course in, 115
Attendance, 26
Auditing, 24
Awards, 12, 23, 50

B.A.-M.A. degrees, 9, 111, 112
Bilingual Counselor Education, 72
Bilingual Education, 53, 56, 69
Bilingual Specialization, 63, 69
Biology, 40

Calendar, 5
Campus Ministry, 14
Campus store, 15
Career Development & Internships, 13
Catholic Newman Center, 14
Center for Molecular and Cellular Biology, 15
Certificate programs, 10
 Librarianship, 10, 95
 Post-Baccalaureate, 10
 School Administrator & Supervisor, 10, 67
 School Psychology, 10, 63
Certification
 New York City license, 51
 as School Administrator and Supervisor, 67
 in School Counseling, 71
 in School Psychology, 63
 in Special Education, 51, 69
 in Teaching, 51
Chemistry & Biochemistry, 44
Children's Literature, 53
Choral Society, 15
City University Ph.D. Program, 75
Classical, Middle Eastern & Asian Languages & Cultures, 46
Colden Center, 14, 15
Communication disorders, 99
Communications, 14
Complaint procedures, 30
Computer Science, 47
Computer use, 31
Computing resources, 14
Conduct, 28
Cooperative Education & Internships, 13
Copland School of Music, Aaron, 14, 15, 107
Counselor Education, 71
Course levels, 35
Creative Writing Sequence, 75
Credit requirements, 10
 see also department listings
Credits, maximum, 24
Curriculum Committee, 12

Degree and Certificate Offerings, 9
 combined B.A.-M.A., 9, 111, 112
 doctoral programs, 10, 75, 99
 Master of Arts, see Master of Arts programs
Degree requirements, 10
 see also department listings
Department chairs, 132
Dining Hall, 13
Diploma card, 19

Disability, 28, 32
 parking for disabled, 27
Dismissal, 25, 96
Divisions, 8
Doctoral programs, 10, 75, 99
 course levels, 35
 see also individual department listings
Drama, Theatre, and Dance, 15
Drug, Alcohol & Tobacco Use, 30, 31

Economics, courses in, 125
Education
 Children's literature, 53
 Counselor, 71
 Environmental, 53
 Mathematics, 53
 Reading, 62
 Special, 51, 68
Education, School of, 50
 Advanced Certificate programs, 50, 53, 58, 67
 Awards, 50
 Educational and Community Programs, 62
 Elementary & Early Childhood Education & Services, 52
 Human Relations courses, 51
 Internships, 50
 Placement, 50, 51
 Secondary Education & Youth Services, 58
Educational and Community Programs, 62
 Bilingual Counselor Education, 72
 Counselor Education, 71
 Reading Education, 62
 School Administrator and Supervisor, 67
 School & Mental Health Specialization, 72
 School Counseling, 71
 School Psychology, 63
 Special Education, 51, 68
Educational placement, 50, 51
Elementary and Early Childhood Education and Services, 52
Emergency Closings, 15
English, 74
 proficiency in, 18
 to Speakers of Other Languages, Teaching (TESOL), 99
Environmental Education, 53
European Languages and Literatures, 77
Examinations
 comprehensive, see individual department listings
 Graduate Record, 16
 make-up, 21, 24
Exercise Science, 79
Facilities, 14
Family, Nutrition & Exercise Sciences, 79
Federal Aid Programs, 22
Fees, 20, 21
Fellowship Award, 13
Field Placement Office, 51
Financial Aid Programs, 21, 50
Firearms, on campus, 33
FitzGerald Gymnasium, 13
French, courses in, 77
Full-time status, 19

Gambling, 32

- Geology, 82
 Godwin-Ternbach Museum, 15
 Government, Services & Facilities, 12
 Grade-point average, 25, 96
 Grades, 24
 appeals of, 25
 required average, 10, 25
 Graduate Admissions, Office of, 7, 13, 16, 18, 19
 Graduate Awards, 12
 Graduate Center courses, 35
 Graduate Curriculum Committee, 12
 Graduate Record Examination, 16
 see *also* individual department listings
 Graduate Scholastic Standards Committee, 12, 19, 26
 Graduate School of Library and Information Studies, 91
 Graduate Student Association, 12
 Graduate student organizations, 12
 Graduate Studies, Office of, 4, 7, 12, 19, 22, 25, 26
 Graduation procedures, 19
 Greek Orthodox Center, 14
 Gymnasium, FitzGerald, 13
- Health and Physical Education, see Family, Nutrition & Exercise Sciences
 Health Service Center, 13
 HEGIS Codes, 9, 10, 50
 Help desk, 15
 Hillel Center, 14
 Hispanic Languages & Literatures, 85
 History, 88
 Holds, 21
 Home Economics, see Family, Nutrition & Exercise Sciences
 Housing, 15
- Identification cards, 27
 Immunization requirements, 16
 Inactive status and re-entry, 19
 Incomplete work, 24
 Information Technology, Office of, 14
 Integrated Graduate Center, 63
 International student admission, 18
 Internships, 13
 in Education, 50
 Italian, courses in, 78
- Jazz Performance, 107
- Laboratories, 15
 Learning Center, 15
 Leave of absence, 19
- Librarianship, 10, 95
 Library, 14
 I.D. cards, 27
 thesis collection, 11
 Library and Information Studies, Graduate School of, 91
 Linguistics and Communication Disorders, 98
 Teaching English to Speakers of Other Languages (TESOL), 99
 Literature sequence, 75
 Loans, 22, 23
- Maintenance of matriculation, 19
 Make-up examination, 24
 fees, 21
- Master of Arts in Liberal Studies, 9, 101
 Master of Arts in Social Sciences, 124
 Master of Arts degrees, programs, 9
 Applied Linguistics, 99
 Applied Mathematics, 103
 Art History, 36
 Audiology, 98
 Biology, 40
 Chemistry and Biochemistry, 44
 Computer Science, 47
 English, 75
 French, 77
 Geology, 83
 History, 88
 Italian, 77
 Mathematics, 103
 Media Studies, 105
 Music, 107
 Philosophy, 112
 Physics, 113
 Political Science and Government, 116
 Psychology, 118
 Psychology: Clinical Behavioral Applications in Mental Health Settings, 119
 Sociology, 126
 Spanish, 86
 Speech Pathology, 99
 Urban Affairs, 128
- Master of Fine Arts, 9, 36
 Master of Library Science, 9, 94
 Master of Science in Education programs, 9
 Art, 39
 Bilingual Education, 53
 Counselor Education, 71
 Early Childhood, 52
 Elementary Education, 53
- English, 75
 European Languages and Literatures, 77
 French, 77
 Hispanic Languages & Literatures, 86
 Home Economics, 80
 Italian, 77
 Mathematics, 53
 Music, 110
 Physical Education, 79
 Reading Education, 62
 Romance Languages see European Languages and Hispanic Languages
 School Counseling, 71
 School Psychology, 63
 Secondary Education, 58
 Spanish, 86
 Special Education, 69
 Teaching English to Speakers of Other Languages (TESOL), 99
- Mathematics, 102
 Matriculation, 18
 maintenance of, 19
 on probation, 18
 requirements, 16
 see *also* individual department listings
 Media Studies, 105
 Mental Health Specialization, 72
 Microcomputer Facilities, 15
 Military service, 13
 Ministry, 14
 Morton Roberts Center for Augmentative Communication, 15
 Music, Aaron Copland School of, 14, 15, 107
- Newman Center, 14
 New York City License, 51
 New York State Financial Aid Programs, 22
 New York State Permanent Certification, 51
 Non-discrimination policies, 28
 Non-matriculated status, 19
- Oceanography, 82
 Organizations, student, 12
 Overlapping courses, 35
- Parking, 27
 disabled students, 27
 fees, 21
 permits, 27
 Part-time status, 19

- Permits to other colleges, 11
- Persons with disabilities, 27, 28, 32
- Phi Beta Kappa, 7
- Philosophy, 111
- Physical Education, 79
- Physics, 113
- Placement services, 50, 51
- Policy statement, 28
- Political Science, 116
- Post-Baccalaureate Advanced Certificates, 10
- Pregnancy, 32
- Privacy Act, 27
- Probation, 96
matriculation on, 18, 25
- Programs of Study, 35
- Prohibited conduct, 28
- Protestant Center, 14
- Psychology, 118
School, 63
- Reading Education, 62
- Records, student, 27
see also Transcripts
- Re-entry, 19
fee, 21
- Refunds, 21
- Regulations, 27
- Religious observance, 32
- Requirements, general
for admission, 16
for degrees, 10
grade average, 10, 25
- Returned check fee, 21
- Romance Languages, see European Languages & Literatures and Hispanic Languages & Literatures
- Rules and Regulations for the Maintenance of Public Order, 32
- Scheduling of courses, 35
- Scholastic standards, 24, 95
Committee, graduate, 12, 19, 26
- School Administrator and Supervisor, 10, 67
- School and Mental Health Specialization, 72
- School Counseling, 71
- School Media Specialist, 94
- School Psychology, 10, 63
- Secondary Education & Youth Services, 58
- Sexual discrimination, 28
- Sexual harassment, 28
- Sigma Xi, 7
- Smoke-Free Policy, 30
- Smoking, 32
- Sociology, 126
- Social Sciences, 124
- Spanish, courses in, 86
- Special Education, 51, 68, 69
- Special fees, 21
- Speech, see Linguistics and Communication Disorders
- Speech-Language-Hearing Center, 15, 99
- Speech-Language Pathology, 99
- Student integrity, 32
- Student loan funds, 23
- Student organizations, 12
- Student records, 27
Privacy Act, 27
see also Transcripts
- Student services, 12
- Student Union, 13
- Students with disabilities, 27, 28, 32
parking, 27
- Substance abuse, 30
sequence, 71
- Summer Session, 10
- TAP (Tuition Assistance Program), 22, 25
- Teacher certification, 51
- Teaching English to Speakers of Other Languages (TESOL), 99
- TESOL (Teaching English to Speakers of Other Languages), 99
- Test of English as a Foreign Language (TOEFL), 18, 99
- Thesis, master's, 10, 11
binding fee, 11, 21
see also individual department listings
- Time limit for degrees, 10
see also individual department listings
- TOEFL (Test of English as a Foreign Language), 18, 99
- Transcripts, 25
fee, 21
- Transfer credits, 11, 96
- Transportation to the campus, 133
- Tuition Assistance Program (TAP), 22, 25
- Tuition, Fees, and Financial Aid, 20
consolidated fees, 21
material and transportation charges, 20
matriculated and non-matriculated, 20
payment of, 20
refund of, 21
special fees, 21
- Undergraduate students, registration in graduate courses, 35
- Urban Studies, 128
- Veterans' information, 13
educational benefits, 23
- Waiver, 22
- Web server, 15
- Withdrawal from courses, 24
refunds, 21
- Work-Study Program, 23
- Your Right to Know*, 27



The Graduate Bulletin was produced by the Queens College Office of Publications

John Cassidy, *Editor*
Dyanne Maue, *Creative Director*
Miyoung Kim, *Designer*

Helene B. Guidice, *Assistant Editor*
Naomi Rivlin, *Proofreader*

Photography by Nancy Bareis, J. Charles, Steve Jordan, Matthew Klein, Katherine McGlynn, Norman McGrath