



2004-2006 GRADUATE BULLETIN


Queens College

QUEENS COLLEGE OF
CUNY

Queens College

The City University of New York

2004-2006 Graduate Bulletin

CollegeSource

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2004-2006

Graduate Bulletin



Queens College
CITY UNIVERSITY OF NEW YORK

Flushing, New York 11367-1597 • 718-997-5000 • www.qc.cuny.edu

James L. Muyskens, President

A Message from the President



Since 1937, Queens College has dedicated itself to excellence in the liberal arts and sciences. We are proud to be one of the City University of New

York campuses entrusted with the mission of teaching on both the undergraduate and graduate levels. Our graduate division has an exceptional reputation; indeed, the 2005 edition of U.S. News & World Report's *America's Best*

Colleges rates Queens College #10 among the "Top Public Universities–Master's" in the north. It also includes us among the 11 colleges in America with the highest "campus diversity" rating as our students come from 140 countries, creating an extraordinarily rich learning environment.

Whether you are considering graduate study as part of a career plan or for the pure pleasure of learning, Queens College has a program to fit your needs. We offer master's degrees and advanced certificates in over 50 disciplines, and



are also a major participant in over 20 PhD programs offered by the City University's Graduate Center. As a research center, the college is equipped with science laboratories that serve hundreds of doctoral candidates who are pursuing their research at Queens under the supervision of our faculty.

Queens College has an outstanding faculty of internationally recognized scholars who care deeply about teaching and research. In recognition of their excellence, the faculty received over \$12.7 million last year to investigate such

problems as cancer, AIDS, global warming, and the health of workers involved in the cleanup of the World Trade Center.

Graduate education thrives in the college's environment of scholarly exchange. Our students acquire first-rate professional skills and, what is most important, the necessary intellectual and critical skills to meet the challenges of tomorrow.

James M. Stephens





Administration

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President

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Provost & Senior Vice President for
Academic Affairs

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Associate Provost for Academic
Planning & Programs

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& Graduate Studies

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Dean of Academic Support
& Development

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& Humanities

Penny L. Hammrich, BS, MS, PhD
Dean of the Division of
Education

Donald M. Scott, BA, MS, PhD
Dean of the Division of
Social Sciences

Thomas C. Strekas, BA, MA, PhD
Dean of the Division of Mathematics
& Natural Sciences

Graduate Studies at Queens College

Graduate Studies Office
718-997-5190

Graduate Admissions
718-997-5200

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Calendar

Fall 2004

August 27 – Friday

First day of Fall classes

September 6 – Monday

Labor Day – College closed

September 15–17 – Wednesday–Friday

No classes or related events scheduled

September 24–26 – Friday–Sunday

No classes or related events scheduled

October 11 – Monday

Columbus Day observance – College closed

November 16 – Tuesday

Classes will follow a Monday schedule

November 24 – Wednesday

Classes will follow a Friday schedule

November 25–28 – Thursday–Sunday

Thanksgiving recess – College closed

December 14 – Tuesday

Last day of classes; classes will follow a Wednesday schedule

December 16–23 – Thursday–Thursday

Final Examinations

Spring 2005

January 27 – Thursday

First day of Spring classes

February 11 – Friday

Lincoln's Birthday observance – College closed

February 12–13 – Saturday–Sunday

Weekend College classes in session

February 19–20 – Saturday–Sunday

Weekend College classes in session

February 21 – Monday

Presidents' Day – College closed

March 24 – Thursday

Classes will follow a Friday schedule

March 25–29 – Friday–Tuesday

No classes or related events scheduled

March 30 – Wednesday

Classes will follow a Monday schedule

April 23–May 1 – Saturday–Sunday

Spring recess

May 18 – Wednesday

Last day of classes

May 20–27 – Friday–Friday

Final Examinations for day/evening students

May 28–29 – Saturday–Sunday

Final Examinations for Weekend College students

May 30 – Monday

Memorial Day – College closed

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

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.

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, the college retains its international flavor with students from more than 140 nations attending classes here. And, just as before, Queens College is helping these students achieve their goals while giving them the skills to address the problems of a challenging time.

The 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 postgraduate study at Queens, students may expand their career opportunities by learning new professional skills, satisfying their scholarly interests, and participating in research that enriches our society.

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

Graduate programs are offered in the the Aaron Copland School of Music, the Graduate School of Library & Information Studies, the School of Earth & Environmental Sciences, and all academic divisions. The departments and schools of the college are organized into the following divisions (Queens College’s area code is 718):

Arts & Humanities Division

997-5790

Art 997-5770

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

English 997-4600

European Languages & Literatures 997-5980

Hispanic Languages & Literatures 997-5660

Linguistics & Communication Disorders 997-2870

Media Studies 997-2950

The Aaron Copland School of Music
997-3800

Education Division

997-5220

Educational & Community Programs 997-5250

Elementary & Early Childhood Education 997-5300

Secondary Education & Youth Services 997-5150

Mathematics & Natural Sciences Division

997-4105

Biology 997-3400

Chemistry & Biochemistry 997-4100

Computer Science 997-3500

Family, Nutrition & Exercise Sciences 997-4150

Mathematics 997-5800

Physics 997-3350

Psychology 997-3200

School of Earth & Environmental Sciences 997-3300

Social Sciences Division

997-5210

Accounting & Information Systems 997-5070

Economics 997-5440

History 997-5350

Philosophy 997-5270

Political Science 997-5470

Sociology 997-2800

Urban Studies 997-5130

Graduate School of Library & Information Studies 997-3790

Degree & Certificate Offerings

Degrees are offered in the following areas: Master of Arts, Master of Arts in Liberal Studies, Master of Arts in Social Sciences, Master of Arts in Teaching, Master of Fine Arts, Master of Library Science, Master of Science, and Master of Science in Education. Certificate programs currently accepting students include Applied Behavior Analysis in Psychology, Post-Master's Certificate in Library Science, Specialist Diploma in Educational Leadership, and Professional Certificate in School Psychology.

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 (Biology, Chemistry, Earth Science, and Physics), Italian, Mathematics, Music, Social Studies, and Spanish. Bilingual certificates are offered in connection with master's degree programs in Counselor Education, School Psychology, and Special Education. Post-baccalaureate certificate programs in Librarianship are also offered.

BA/MA Degrees

For qualified undergraduate students, the Departments of Chemistry & Biochemistry, Computer Science, Philosophy, Physics, and Political Science, as well as the Aaron Copland School of Music offer the opportunity to receive combined bachelor's and master's degrees. Application to the BA/MA program should be made during 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 Advisor of these departments. See page 10 for the list of BA/MA

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

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

Master's Degrees

Page 10 lists all the master's degrees that are offered by the college, along with their HEGIS and New York State Education codes.

Certificate Programs

The certificate programs offered by the college are listed on pages 10–11, along with their HEGIS and New York State Education codes.

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 PhD degree, the Graduate School offers many services for graduate students, including library and computer research facilities.

The following PhD degrees are offered: Anthropology, Art History, Biochemistry, Biology, Biomedical Sciences, Business, Chemistry, Classics, Comparative Literature, Computer Science, Criminal Justice, Earth & Environmental Sciences, Economics, Educational Psychology, Engineering, English, French, Germanic Languages & Literatures, Hispanic & Lusobrazilian Literatures, History, Linguistics, Mathematics, Music, Philosophy,

Physics, Political Science, Psychology, Sociology, Speech & Hearing Sciences, and Theatre. Both PhD and MD/PhD degrees are offered in Biomedical Sciences, and the DSW is offered in Social Welfare. The DMA 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 more information, contact the appropriate department at the college or the CUNY Graduate School, 365 Fifth Avenue, New York, NY 10016-4309.

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 may have the option of satisfying either the original or new requirements.

Students 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 the number of semester hours required for the program, mandatory courses, etc. General requirements are as follows:



Minimum Grade-Point 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 register 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 29.

Time Limits: 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, Master of Library Science, or Master of Science degree is four years. The time limit for the Master of Arts in Teaching and the Master of Science in Education degree is five years. Time limits for certificate programs are noted under 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 (Kiely Hall 139A).

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 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

The college offers four Summer Sessions. Graduate courses are scheduled during two six-week sessions, and also may be given during two four-week sessions. All the college's academic, recreational, and cultural facilities are available during this period. For graduate courses and other information, please consult the *Summer Session*

Bulletin (available online at www.qc.cuny.edu/summer_session), or write to Summer Session, Queens College, CUNY, Flushing, NY 11367-1597.

Transfer Credits

In most cases, a maximum of 12 credits of graduate work completed at 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 credit *no later than the end of their second semester in attendance*.

Only the following grades will be accepted 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.)

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

BA/MA DEGREES

<i>Program</i>	<i>HEGIS Code</i>	<i>NYS Ed. Code</i>
Chemistry & Biochemistry	1905	02798
Computer Science	0701	19797
Music	1004	02733
Philosophy	1509	02772
Physics	1902	02787
Political Science*	2207	76096

MASTER'S DEGREES

Master's degrees are offered in these officially registered graduate programs, listed with their HEGIS and New York State Education codes.

MASTER OF ARTS DEGREES

<i>Program</i>	<i>HEGIS Code</i>	<i>NYS Ed. Code</i>
Applied Linguistics	1505	85420
Art History	1003	02728
Audiology*	1220	77460
Biology	0401	02698
Chemistry & Biochemistry	1905	02796
Computer Science	0701	02705
Economics*	2204	02812
English	1501	02762
French	1102	02737
Geology	1914	02801
History	2205	02814
Italian	1104	02744
Latin Am. Area Studies*	0308	02693
Mathematics	1701	02780
Media Studies*	0601	02703
Music	1004	02731
Physics	1902	02784
Political Science & Govt.*	2207	02816
Psychology	2001	02806
Psychology: Clinical Behavioral Applications in Mental Health Settings	2099	90172
Sociology	2208	02819
Spanish	1105	02748
Speech Pathology	0815.00	26448
Urban Affairs	2214	02820

MA IN LIBERAL STUDIES

4901 82492

MA IN SOCIAL SCIENCES

2201.00 20082

MASTER OF FINE ARTS

Studio Art 1002 02726

MASTER OF LIBRARY SCIENCE

Library Science 1601.00 02778
School Media Specialist-Library 0899.01 26411

MASTER OF SCIENCE DEGREES

Accounting & Info. Systems 0502.00 22642
Nutrition & Exercise Sciences 1299.30 22412

MASTER OF ARTS IN TEACHING

Childhood Ed. (Grades 1–6) 0802.00 26436
Childhood Ed., Bilingual
Extension (Grades 1–6) 0899.00 26441
Early Childhood Ed. (Birth–Grade 2) 0823.00 26434

MASTER OF SCIENCE IN EDUCATION

<i>Program</i>	<i>HEGIS Code</i>	<i>NYS Ed. Code</i>
Adoles. Ed.: Biology	0401.01	26425
Adoles. Ed.: Chemistry	1905.01	26426
Adoles. Ed.: Earth Sci.	1917.01	26428
Adoles. Ed.: English	1501.01	26423
Adoles. Ed.: French	1102.01	26430
Adoles. Ed.: Italian	1104.01	26431
Adoles. Ed.: Mathematics	1701.01	26424
Adoles. Ed.: Physics	1902.01	26427
Adoles. Ed.: Social Studies	2201.01	26429
Adoles. Ed.: Spanish	1105.01	26432
Art Ed. (Visual Arts)	0831.00	26446
Childhood Ed. (Grades 1–6)	0802.00	26439
Childhood Ed. with Bilingual Extension (Grades 1–6)	0899.00	26440
Counselor Ed.	0826.01	02712
Early Childhood Ed. (Birth–Grade 2)	0823.00	26438
Family & Consumer Sci. Teacher Ed. (K–12)	1301.01	26422
Literacy Teacher (Birth–Grade 6) (Grades 5–12)	0830.00	26420 26421
Music Ed.	0832.00	26449/50
Physical Education	0835.00	26414
School Psychologist	0826.02	02711
Teacher of Special Ed. (Birth–Grade 2) (Grades 1–6)	0808.00	26412 26482
(Grades 7–12)	0808.00	26417
Teaching English to Speakers of Other Languages (TESOL)	1508	26444

CERTIFICATE PROGRAMS

POST-BACCALAUREATE ADVANCED CERTIFICATES

<i>Program</i>	<i>HEGIS Code</i>	<i>NYS Ed. Code</i>
Adoles. Ed.: Biology	0401.01	26868
Adoles. Ed.: Chemistry	1905.01	26869
Adoles. Ed.: Earth Science	1917.01	26870
Adoles. Ed.: English	1501.01	26864
Adoles. Ed.: French	1102.01	26865
Adoles. Ed.: Italian	1104.01	26866
Adoles. Ed.: Mathematics	1701.01	26872
Adoles. Ed.: Physics	1902.01	26871
Adoles. Ed.: Social Studies	2201.01	26873
Adoles. Ed.: Spanish	1105.01	26867
Applied Behavior Analysis	2299.00	22225
Art Ed. (Visual Arts)	0831.00	26447
Childhood Ed. (Grades 1–6)	0802.00	26437
Early Childhood Ed. (Birth–Grade 2)	0823.00	26435
Family & Consumer Sci. Teacher Ed. (K–12)	1301.01	26442
Physical Ed.	0835.00	26416

ALTERNATIVE CERTIFICATES (TRANS B)

Alt. Cert.: Adoles. Ed.: Biology	0899.50	27480
Alt. Cert.: Adoles. Ed.: Chemistry	0899.50	27481
Alt. Cert.: Adoles. Ed.: Earth Science	0899.50	27482
Alt. Cert.: Adoles. Ed.: English	0899.50	27476
Alt. Cert.: Adoles. Ed.: French	0899.50	27477
Alt. Cert.: Adoles. Ed.: Italian	0899.50	27478
Alt. Cert.: Adoles. Ed.: Mathematics	0899.50	27484
Alt. Cert.: Adoles. Ed.: Physics	0899.50	27483
Alt. Cert.: Adoles. Ed.: Social Studies	0899.50	27485
Alt. Cert.: Adoles. Ed.: Spanish	0899.50	27479
Alt. Cert.: Childhood Ed.	0899.50	27071
Alt. Cert.: Music Ed.	0899.50	27072

*Applications not currently being accepted.

EDUCATIONAL LEADERSHIP

School Administrator & Supervisor	0828.00	02714
School Building Leader	0828.00	28942

(These advanced certificate programs lead to a specialist diploma in Educational Leadership at both elementary and secondary school levels.)

SCHOOL PSYCHOLOGY

Advanced Certificate Program	0826.02	12900
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(This professional certificate program is offered in conjunction with the Master of Science in Education Program.)

LIBRARIANSHIP

Children/Youth Serv. in Public Lib.	1699.00	26916
Archives./Records Mngmnt./Presrvtn.	0699.00	28084
Lib. Sci. – Public Librarianship	1601.00	02778
Lib. Sci. – School Media Specialist	0899.01	26411
Post-Master's Certificate Program	1601.00	76018

wish to transfer credits must file a departmentally approved Advanced Standing Form in the Graduate Admissions Office (Jefferson Hall, 1st floor).

Permits

Currently enrolled matriculants who wish to take courses at another institution must first file for an official permit through the Office of the Registrar *prior* to taking the course. The “permit” acts as an agreement to allow the student to receive credit for a course(s) completed at another institution. Both CUNY E-Permits and non-CUNY permits must be filed during the registration period for the term in which the course is to be taken. *Retroactive permits will not be issued.* There is *no* guarantee that courses taken at other institutions without prior approval will be accepted for credit.

There are two types of permits:

1. CUNY permits (E-Permits) are filed online by logging on to the CUNY Portal System at www.cuny.edu.
2. Non-CUNY permits are filed by submitting a permit-request form to the Office of the Registrar. The form must be signed by a faculty advisor to indicate departmental permission for the courses to be taken, and must be processed by the Office of the Registrar. Forms are available online at www.qc.cuny.edu/registrar.

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, the student must:

1. be matriculated in a graduate degree or certificate program;
2. have obtained the approval of the departmental Graduate Advisor for the permit; and
3. have registered for and com-

pleted 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 Queens while simultaneously registering elsewhere for the permit course(s).

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

Transfer and Permit Course Grades and GPA

Neither the grades earned for transfer credits nor for coursework completed on permit at a non-CUNY institution are to be counted into the cumulative grade-point average (GPA); only the course equivalent or elective credits are posted to the student's record at the college. A minimum grade of *B-* must be earned in order to receive credit for the course. It is the responsibility of the student to have an official transcript sent to the Office of the Registrar once the course is completed. 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.

Important note: Effective for the Fall 2004 semester, grades earned for coursework completed on permit at a CUNY institution other than Queens College *will* be posted to the student's record and *will* be counted into the student's GPA. The CUNY Host College will automatically send official transcripts to the Office of the Registrar. If the transcript is not received, the student should contact the Host College for information on requesting

an official transcript, which must be sent to the attention of the Registrar.

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 advisor 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 Social Sciences, *or* Master of Library Science in (Department) in the Graduate Division of Queens College of the City University of New York, date.” Thesis approvals must be submitted to the Office of Graduate Studies prior to or on the degree conferral date specified by the Office of the Registrar.

After the manuscript has been approved, the student must arrange for binding. A \$25 binding fee must be paid at the Bursar's window, and a receipt will be issued. 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 of 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 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 CUNY 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 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 319J; 793-8321

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 Behavioral Psychology Club
Graduate Biology Club
Graduate Counselor Education Club
Graduate Education Administration and Supervision Club
Graduate Elementary Education Club
Graduate Family, Nutrition, and Exercise Sciences Association
Graduate Fine Arts Club
Graduate History Club
Graduate LEAP Association
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, of \$500 each, are awarded to recognize outstanding 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 Social Sciences, Master of Arts in Teaching, Master of Fine Arts, Master of Library Science, Master of 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. The 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 six graduate credits in the semester the award is granted.

The statement and letters of recommendation must be submitted to the Office of Graduate Admissions no later than the closing date each year. For more information, including closing dates, contact the Office of Graduate Studies (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 the Registrar's Office (Jefferson Hall, 1st floor) at the time of registration. Students must notify the certifying official of all changes in their credit load

to ensure their eligibility for future benefits.

OFFICE OF THE VICE PRESIDENT FOR STUDENT AFFAIRS

Frese Hall, 1st floor; 997-5500; fax 997-5508

The Office of the Vice President for Student Affairs provides a variety of services designed to assist students outside of the classroom. The office's professional staff is committed to facilitating emotional, psychological, social, and intellectual growth and development within the student population. The various services offered are noted below.

Counseling & Advisement Center

**Frese Hall, 1st Floor; 997-5420
Hours: Monday-Friday, 9:00 am-5:00 pm**

Students have to deal with a variety of personal, emotional, and interpersonal issues that can affect their general college adjustment. Many students have found it helpful to discuss their current life situations and plans with a staff member of the Counseling and Advisement Center.

Students will be seen on an individual basis. There is no fee for services. Students can make appointments on their own or may be referred by an advisor, an instructor, or an administrative office. The staff is also ready to consult with faculty members and departments concerned with student needs or problems.

The staff, which includes certified psychologists, sees students for personal counseling for as few as one or two sessions to as long as one or two semesters. The contact may involve referral to other college services such as Career Development, the Office of Special Services, the Graduate Scholastic Standards Committee, and Honors & Scholarships, or to various community resources including longer-term counseling centers and practitioners.

All counseling services are strictly confidential.

**Career Development & Internships
Frese Hall 213; 997-4465; fax 997-4463
Hours: Mon.-Thurs., 9:00 am-4:00 pm; Fri., 9:00 am-12 noon. Evening hours: Wed. until 7:30 pm, when classes are in session. Summer evening hours by appointment**

The Career Development & Internships Office is the student's link between the academic and the business and professional worlds. In addition to one-on-one career counseling, many other resources are available:

- Counseling on how to select a career.
- Computer-assisted counseling and information to explore different graduate schools and part-time job placement for current students who wish to develop practical work experience while earning money.
- Internship referral and assistance.
- Workshops on career exploration for students who are in the process of defining their career goals.
- Job-search counseling for graduating students who are preparing to enter the work force.
- Summer job placement as well as job referrals.
- Workshops on resume writing, interview techniques, and job-search strategies in which students are assisted in developing skills to organize their educational and work experience to prepare for the transition from college to work.
- On-campus recruitment for graduating students through an extensive campus interview program.
- Full-time job information for graduating students and recent alumni.
- Information on recruiting organizations, employer and career directories, current job vacancy listings, and an array of other career resources.
- Credential Services: For a modest fee, students can maintain a file in which recommendation letters from professors can be stored and forwarded to graduate schools and prospective employers to support applications.
- An Internet-based internship, career, and job information system (QC CAREERLINK).

An internship is a supervised education program that integrates classroom learning with work experience. The program provides students with an individualized, structured, career-exploration plan that includes:

- Career counseling
- Resume preparation
- Interviewing techniques
- Job-search strategies
- Work experience
- Professional enrichment

The program is administered by the Office of Career Development & Internships in cooperation with the academic departments that sponsor internships.

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 Campus Bistro, a full-service restaurant, is open for lunch. The Cellular 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, underground parking, 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.

The Westside Cafe is the largest of the dining rooms. Complete breakfast,

lunch, and dinner are served here. Choose from Pizza Pasta Pizzazz, QC Chicken Company, Campus Corner Charbroiled Burgers, David's NY Sandwich Shop, or Friendly's Ice Cream Shoppe. An ATM machine is also located in this room.

The Food Court has three serving areas and is open for breakfast, lunch, and dinner. It is home to Panda House, which serves a variety of Chinese takeout food. Just a Nosh is a special area that serves only Kosher food under strict rabbinical supervision. Broadway Cafe is a sandwich and dessert shop that serves fresh bagels, muffins, cookies, pastries, and flavored coffees.

The Patio Room is home to City Lunch, which features gourmet sandwiches, soups, salads, and vegetarian specialties. In addition, the Sushi Spot serves sushi freshly made by our own sushi chef, and the Cactus Grill offers homemade southwestern cuisine. The Bring Your Own Lunch Club (BYOL) is located here for faculty and staff dining.

Office of Special Services

**Kiely Hall 171; 997-5870; fax 997-5895
Hours: 8:00 am–4:00 pm**

The Office of Special Services provides a full range of services to enhance educational and vocational opportunities for students with disabilities. These services include orientation, alternative registration, counseling, academic advisement, vocational testing, peer counseling, and career development activities.

In addition to serving students on campus, the Office of Special Services offers a program for homebound students via a two-way telephone conference system.

The Child Development Center

at Queens College

Kiely Hall 245; 997-5885

www.qc.cuny.edu/qcchild

Hours: Monday–Thursday, 8:00 am–

8:00 pm; Friday, 8:00 am–4:00 pm

Open during Summer Sessions

The Child Development Center provides quality child care and an early childhood education program for children (30 months to 6 years) of QC stu-

dents. There is also a school-aged care program for students aged 5 to 9 from 4:00 to 8:00 pm. Students are able to register their children according to their own class and study schedule. Fees are based upon the number of hours each child is registered. The center is licensed by the NYC Department of Health and staffed by professional early childhood educators.

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, including 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. An air-supported structure covers six of the tennis courts.

Health Service Center

Frese Hall, 3rd floor; 997-2760

www.qc.cuny.edu/Health_Services

Hours: Monday–Friday, 9:00 am–5:00 pm. There are no evening hours at this time.

The Health Service Center is the campus's health ambulatory/infirmiry site. A registered nurse provides walk-in services to students, faculty, and staff who are injured or require medical assistance.

Free MMR, Hepatitis B, and flu clinics are scheduled during the year for students and faculty who meet the criteria for these services. The center works to ensure that all students meet the New York State Health Immunization mandate of Public Health Laws #2165 and #2167.

Education, assistance, and referrals are provided by the center's nurse and health and wellness advisor on HIV/AIDS, STDs, substance and alcohol abuse, safer sex, nutrition, hypertension, cardiovascular disease, and other health and wellness issues.

Scales for height and weight, eye



tests for drivers, as well as blood pressure monitoring, health care referrals, first aid supplies, and feminine hygiene products are available. Assistance for disabled students is offered, and dressing changes can be provided. Evaluations of emergencies are made for the Emergency Medical Services of New York. Health-related reading materials and health insurance application forms are available in the reception area.

Students' health records and consultations are *strictly* confidential. The staff is especially sensitive to the needs of students, and preventive health care is a high priority.

International Student Services Frese Hall 211; 997-4440

The International Student Services office assists international students in obtaining student visa and immigration status so they may legally enter and temporarily stay in the United States for the purpose of studying at the college. The office provides ongoing student visa/immigration advisement; issuance of U.S. government documents for the purpose of obtaining and maintaining student visa/immigration status; and work authorizations to eli-

gible students. Advisement and information on registration procedures, campus life, the U.S. higher education system, and cross-cultural adjustment issues are offered.

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

The Queens College Campus Ministers is an association of the Catholic, Greek Orthodox, Hillel: The Foundation for Jewish Campus Life, and Protestant ministries on campus. Its purpose is to foster harmony among religious traditions and to join in campus 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. All unaffiliated students, faculty, and staff are welcome to participate in the activities of the various centers.

The Catholic Newman Center (Student Union 207 and 208; 793-3130; e-mail: catholic_center@qc.edu or frpaw@yahoo.com) provides a ministry of worship and pastoral outreach to the Catholic community on campus.

The Greek Orthodox Center (Stu-

dent Union 209, 997-5251) 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 the Very Reverend Cleopas Srongylis, 458-5251. For other matters, call the Byzantine and Modern Greek Studies Office, Jefferson Hall 301, 997-4520.

The Hillel/JACY Center (Student Union 206; 793-2222; fax 793-2252; www.qchillel.org) provides religious, cultural, and social programming, counseling, and outreach for Jewish students, faculty, and staff.

The Protestant Center (Student Union 203; 997-3979, 261-1550) welcomes students, faculty, and staff from the various Protestant denominations for worship and Bible study, counseling, and a variety of educational programs.

FACILITIES

Colden Center for the Performing Arts

Colden Center contains the 476-seat Goldstein Theatre and the 2,143-seat

Colden Auditorium, a TV center, an academic wing – Karol Rathaus Hall (Drama, Theatre & Dance) – and many other facilities for instruction, practice, production, and performance in the arts. A concert series, jazz series, contemporary events, and family theater 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 1988, is the centerpiece of the campus. The Library maintains a carefully selected collection of print and non-print materials, including over 800,000 books and over 6,000 current print and electronic periodicals, as well as a growing collection of multimedia in its Media Center. There is also 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 Queens College Art Center for exhibits are on the sixth floor. In addition to books and periodicals, the Art Library has over 110,000 slides, pictures, and exhibition catalogs and pamphlets. The Music Library, in the east wing of the Music Building, contains scores and audio recordings as well as books and journals.

These libraries offer a constantly expanding number of electronic resources and services. Resources include online databases, electronic journals and reference sources, electronic books, and internet resource options available from workstations on all floors of the Library. Electronic services include off-campus access to

CUNY+ Web (the Web version of CUNY's Online catalog) as well as many of the Library's electronic resources; online renewal of borrowed books; interlibrary loan service that allows for e-mail requests and document delivery; the option of electronic reserve for required readings; word processing at selected workstations; and printing capabilities from all workstations.

At the same time, the libraries continue to provide traditional in-house services: reference; on-site interlibrary loan; a reserve library for print and media reserves; instructional services; multimedia center; education curriculum center; services for students with disabilities; and photocopying capabilities.

The Rosenthal Library's Archival Center 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, also housed here, are open for scholarly consultation. Contact Michael Cogswell at 997-3670 for an appointment.

Additional information on the Queens College Library departments, resources, and services can be found on the Library's homepage at www.qc.cuny.edu/Library.

Office of Converging Technologies

The Office of Converging Technologies provides a full range of academic and administrative computing and multimedia support to the college community. OCT support areas include the operation of computer laboratories and classrooms; design and maintenance of the campuswide computing infrastructure; maintenance of the college's presence on the Internet; delivery and presentation of media materials for classroom instruction; and coordination of satellite teleconferences. In addition, OCT operates the interactive video classroom that is affiliated with CUNY's Distance Learning/Media Distribution Project. OCT offices are located in I Building and Kiely Hall, with user facilities in I Building, the Dining Hall Building, the

Science Building, Kiely Hall, and Rosenthal Library.

Microcomputer Facilities: Extensive microcomputer laboratory and classroom facilities managed by OCT are located on the second floor of I Building, in the Science Building, Kiely Hall, and Library. In total, OCT facilities provide more than 500 IBM, IBM-compatible, and Apple Macintosh computers for classroom and open laboratory use. A wide range of software is available.

Most OCT labs are open seven days and four evenings a week. For current lab hours, check the OCT Web site (www.qc.cuny.edu/OCT/), postings in each lab, or call the labs in I Building (997-5967) or the Science Building (997-3518).

Electronic Classrooms: Located in Kiely Hall 226, the Learning Center has interactive audio facilities and advanced computer classrooms where students meet for instruction in a variety of academic areas. The Learning Center also provides playback services for students who wish to review audiotaped lecture materials. The Interactive Video classroom facility, located in Kiely Hall 115, can be networked with similar classrooms at other CUNY colleges to participate in distributed teaching, distance-learning, conferencing, and multimedia distribution.

Web site: OCT operates the college's Web server (www.qc.cuny.edu), which has information on admissions, registration requirements, class schedules, alumni, scholarships, student services, study abroad, and Weekend College, as well as graduate and undergraduate academic programs. Information is also provided on computing and library facilities, the academic calendar, and special events and entertainment at the college and at Colden Center. Many academic departments have Web sites with details of their offerings. In addition, one can find out about special research and academic programs, and check employment opportunities. There is also a wealth of detail at www.satchmo.net, a site devoted to Louis Armstrong.

Computing Resources: Centralized time-shared computing facilities operated by OCT include a Compaq Computer Corporation AlphaServer 4100 5/466 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 sales system that supports the Bursar's Office; and the Alumni/Development information system. The Registrar's Web site allows students to register for classes online, and an interactive voice-response system allows students to register by phone.

Communications: OCT operates several data communications networks. The major on-campus local area network (LAN) consists of almost 40 interconnected 10/100 Megabit/sec ethernet subnets. More than 5,000 users access the LAN using microcomputers. OCT provides users connected to the LAN with high-speed communications to all the facilities mentioned above, plus access to the Internet in full graphics/multimedia mode. The college utilizes a gigaspeed fiber-optic backbone to interconnect the ethernet subnets.

OCT currently supports more than 15 LAN server machines. The LANs permit wide-band exchange of information between student labs, academic departments, administrative offices, and the Internet. CUNY is a member of NYSERNET 2000, a project of the New York State Educational & Research Network, whose goal is to advance Internet technologies and to improve research and education collaboration.

Media Services: The Media Services division of OCT, with offices in Kiely Hall 183, is responsible for delivering materials for classroom instruction (videotapes, films, slides, overhead projectors, etc.). Photographic services (slides, prints, and location photography) are available to faculty and staff in Kiely 108. The division operates and schedules the college's satellite system that is used in teleconferences and

to download licensed copyrighted programs. Media Services also operates the Interactive Video classroom in Kiely Hall 115. Services are also provided in Kiely Hall 183 for students wishing to review videotaped lecture materials or to purchase lecture materials on audio tape.

Other OCT Services: The college's Help Desk provides a variety of services to faculty and staff, including consulting on computer purchasing, software, computer installation, troubleshooting, and call tracking. The City University and Queens College have established volume purchasing agreements for a variety of software packages about which the Help Desk can provide additional information. You can access the Help Desk at HelpDesk.qc.edu for information on the status of outstanding Help Desk calls.

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 (G Building, 997-2930) is a unit of the Department of Linguistics and Communication Disorders. Among the services extended are diagnostic speech, language, and hearing evaluations, plus speech and language therapy. The center's facilities are used for research and to provide clinical practical 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.

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 thus contribute to the cultural life of the campus and community.

Colden Center for the Performing Arts provides a variety of concerts and jazz, family theater, and 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 fund-raising event.

The QC Choral Society 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 when the college is in session. Admission is 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 free hours and on Friday afternoon. In addition, concerts are occasionally given on Tuesday or Thursday afternoon and in the evening. There are also recitals and concerts by guest artists or ensembles in residence, lectures, and master classes.

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

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.

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 covers the general admissions requirements for matriculated and non-matriculated students and the special requirements of certain departments. Information concerning admissions 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 admissions requirements, including minimum hours of undergraduate preparation, submission of compositions and portfolios, or audition performances.

All students applying for admission as master's degree 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. Inter-

views, letters of recommendation, and prior academic records may be determinative.

Applicants must submit a 500-word essay explaining their objectives in pursuing graduate study.

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

Immunization Requirements

New York State Public Health Law requires that anyone born on or after January 1, 1957, must be immunized against measles, mumps, and rubella before starting school, and be provided with information about meningococcal disease and vaccination. Students are required to file a QC Immunization Form (available online at www.qc.cuny.edu/Health_Services) with the Health Service Center (Frese Hall, 3rd floor, 997-2760). Failure to file this form will jeopardize the student's continuation in the graduate program, and the student's registration will be blocked if the immunization requirement is not satisfied.

Application Requirements*

Students who apply for the Master of Arts, Master of Arts in Liberal Studies, Master of Arts in Social Sciences, Master of Fine Arts, Master of Library Science, or Master of Science degrees, or for the post-baccalaureate Certificate Program in Applied Behavior Analysis or the post-baccalaureate and post-master's Certificate Programs 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

*All graduate applications and forms are available online at www.qc.cuny.edu/gadm.

position to attest to the applicant's capacity to successfully complete a program of graduate studies.

2. The applicant may be required to submit test results for the Graduate Record Examination (GRE). Students should refer to the application packet issued by the Office of Graduate Admissions or seek advice from the appropriate department Chair or Graduate Advisor. The institutional code number of Queens College is 2750.

Students who apply for the Master of Arts in Teaching or Master of Science in Education degrees, or for the post-baccalaureate Certificate Programs in Education, must also meet the following requirements:

1. Most programs require completion of an undergraduate education sequence; however, special transitional programs (post-baccalaureate Advanced Certificate Programs) are available 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.

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.

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 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 a course of study will meet in full the licensing and certification requirements for New York City and State, and, where relevant, for states other than New York. The college's library contains relevant materials, and assistance is provided by Graduate Advisors 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 admissions 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.

Such students must meet all admissions 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 (F-1) must submit with their 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 (Frese Hall 211, 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. 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 to the Graduate Division. Applications and information regarding the TOEFL may be obtained from: TOEFL Services, PO Box 6151, Princeton, NJ 08541-6151, U.S.A. (phone 609-771-7100; www.TOEFL.org). 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

600	Accounting
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	Music
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 <i>must</i> be enclosed with application)
500	All programs not listed here

Admission to Matriculation

Applications for matriculated admission to the Graduate Division are considered for both Fall and Spring semesters. (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 reactivate their applications, which may be reviewed again. 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 during the semester of registration.

Admission Procedures

The procedure for applying to matriculate in the Graduate Division is self-managed. Complete instructions are

*Please see departmental listing for special instructions regarding TOEFL.

included in the application packet, which may be obtained online from the college's Web site or from the Office of Graduate Admissions, Jefferson Hall, 1st floor, Queens College, CUNY, Flushing, NY 11367 (997-5200; email: graduate_admissions@qc.edu). Office hours are 9:30 am–4:30 pm, Monday through Thursday, and until 7 pm on Wednesday, when classes are in session during the Fall and Spring semesters.

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

For Fall admission

Applicants with international education credentials	March 1
Counselor Education applicants (Fall <i>only</i>)	March 1
Literacy Education (B–6) applicants (Fall <i>only</i>)	April 1
MFA applicants	March 15
Speech-Language Pathology applicants (Fall <i>only</i>)	February 1
School Psychology applicants (Fall <i>only</i>)	March 15
All others	April 1

For Spring admission

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

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 individual departments to see if courses are available.

As of Fall 2005, a nonrefundable fee of \$125 will be payable at time of filing the application for admission. Note also that some departments may require special 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 first semester of attendance. Unless other-

wise 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 “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.

Non-Matriculated Status

A special application is required for admission as a non-matriculated student. As of Fall 2005, a nonrefundable fee of \$125 will be payable at the time of filing the application. The application must be accompanied by proof of receipt of a bachelor's degree and must have the signed approval of the Graduate Advisor 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 visas (F-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 have been filled during earlier registration periods; many courses have prerequisites, and some courses and programs are not open to non-matriculants. Applicants for non-matriculated status must confer with the appropriate Graduate Advisor and/or class instructor *prior to* filing their applications 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 Advisor's signed approval on the admissions application.

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

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 their 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. Currently enrolled non-matriculants who have taken 6–9 credits are encouraged to apply for matriculation before completing 12 credits; only courses related to the program for which they are accepted 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 coursework, 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 section on *Time Limits*, page 9.

Inactive students who wish to re-enter to the college within the same program must file an Application to Reenter with the Office of Graduate Admissions, Jefferson Hall, 1st floor, by the following dates:

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

A nonrefundable reentry application fee of \$10 is required. Inactive students whose programs began eight or more years before the semester of reentry must also appeal to the Graduate Scholastic Standards Committee, Kiely Hall 139A, 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 Advisor 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 Graduation Application with the Office of the Registrar in accordance with the following deadlines:

For graduation in February: on or before November 1.

For graduation in May: on or before March 1.

For graduation in September: on or before July 1.

Graduation Applications may be

obtained at the Office of the Registrar, Jefferson Hall, 1st floor. Candidates are encouraged to file Graduation Applications at the time they register for their last semester.

A Graduation Application should be filed only if 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 Graduation Application must be filed. Students who submit a Graduation Application after the deadline will be asked to refile for a future semester.

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

Current fees for maintenance of matriculation are \$630 for New York State residents and \$1,070 for out-of-state students. Registration for maintenance of matriculation is *not* required for any semester other than the semester before the graduation date, and the fee may not be waived. Students may also fulfill the requirement to be registered by enrolling in undergraduate or extra graduate courses.

Payment of the fee allows students to use the facilities of Queens College as a regularly registered student (library, laboratories, etc.).

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 partial payments, and notification will be given of the additional amount due and the time and method of payment. Class schedules should be checked for fee changes prior to registration.

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 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 social security number 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 \$59.10 for each session of attendance. The breakdown of the fee is shown on page 23.

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. Exceptions may be 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 \$5 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
\$230 per credit plus
\$65 per additional contact hour
Maximum of \$2,720

Out-of-State Students
\$425 per credit plus
\$85 per additional contact hour
(No maximum)

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 & Transportation/Field Charges

Material/film and transportation/field (MAT) charges may be applied in addition to tuition for various courses in this *Bulletin*. Charges are listed in the current online *Class Schedule*, available prior to registration.

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

Special Fees

The following fees will also be charged:

1. All students are required to pay a non-refundable fee of \$125 at the time of filing an application for the Fall 2005 semester and beyond for either matriculant or non-matriculant status in a master's degree or certificate program.

2. A reentry 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.

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 makeup examination is given, and \$5 is charged for each additional examination, up to a maximum of \$25 per semester.

8. A fee of \$175 per year, including 6% New York City parking tax, is charged for campus parking, if granted. (See *Campus Parking*, page 30.)

9. Duplicate Records fees are: (a) duplicate ID 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 \$25 is charged for the binding of the master's degree thesis.

11. The per-semester fees for maintenance of matriculation are: \$630 for NYS residents; \$1,070 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 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 Friday from 9:30 am to 4:30 pm, and Tuesday and Wednesday from 5:00 to 7:00 pm, when classes are in session.

Refund of Tuition Fees

To receive a 100% refund of tuition, students must drop their courses online at www.qc.cuny.edu/registrar or by calling the Telephone Registration System at 718-606-1100 (or notify the Registrar's Office in writing) 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.

Fall and Spring Withdrawal from course before the official scheduled opening date of the semester _ 100%

Withdrawal within one week after the official scheduled opening date of the semester ___ 75%

Withdrawal during the second week after the official scheduled opening date of the semester _____ 50%

Withdrawal during the third week after the official scheduled opening date of the semester _____ 25%

Withdrawal after completion of the 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 Registration Review Committee, c/o the Registrar's Office (Jefferson Hall, 1st floor).

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's Office 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 paragraph 13 on this page, any check tendered to the college by a student that is not honored by the bank upon which the check is drawn 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 the \$15 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.

Activity Fees

	Total	Stud Govt.	College Assoc.	Serv. Corp.	Disabled Students Fee	PIRG Fee	Univ. Govt. Fee	Special Non-Instructional Fee	Sports Allocation Board	Child Care
<i>Full-time</i>	\$59.10	\$2.45	\$4.55	\$40	\$2	\$5	\$.85	-0-	\$3	\$1.25
<i>Part-time</i>	59.10	\$2.45	\$4.55	\$40	\$2	\$5	\$.85	-0-	\$3	\$1.25
<i>Cooperating teacher</i>	25.00	-0-	-0-	-0-	-0-	-0-	-0-	\$25	-0-	-0-

All students will be charged a Consolidated Service Fee of \$5 for each semester or session in addition to the fees shown above. All students will also be charged a Technology Fee of \$75.00 for full-time students, \$37.50 for part-time students.



FINANCIAL AID PROGRAMS

Students seeking information on costs, resources, and eligibility criteria for financial aid should contact the Financial Aid Office (Jefferson Hall 202, 997-5100). The office is open Monday through Friday from 9:30 am to 4:30 pm, and Tuesday and Wednesday from 5:00 to 7:00 pm, 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 (FWS)

Veterans Administration Educational Benefits

Queens College Programs

Emergency Student Loan Funds

Adele Fox Book Loan Fund

Graduate Partial 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 current application deadline is May 1. 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 repayment of a student loan.

The maximum TAP award for graduate students is \$550 per year; the minimum is \$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

For purposes of receiving Title IV Federal Student Assistance, a student is considered to be making satisfactory progress toward a degree by meeting or exceeding the Graduate Division requirements concerning grade-point average, as explained in the section *Required Grade-Point Average, Probation, and Dismissal* (page 29). In addition the student must 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, Kiely Hall 139A.

Attendance

Title IV aid is awarded with the assumption that a student will attend school for the entire period for which the aid is awarded. If a student withdraws from all classes, he/she may no longer be eligible for the full amount of Title IV funds originally scheduled to be awarded. The amount of Title IV funds a student has “earned” is based on the amount of time he/she has spent in academic attendance. Students are advised to contact the Financial Aid Office prior to withdrawal.

Federal Perkins Loan Program

Application Procedures

Application is made through Queens College. A student enrolled at the college can apply for a loan by completing a Free Application for Federal

TAP PROGRAM PURSUIT

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

Academic Progress for Students in Graduate Programs

To Be Eligible for TAP Payment No.	Minimum Cumulative Credits Earned Through Last Semester of Attendance	Minimum Grade-Point Average Through Last Semester of Attendance
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.

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 for federal programs.

Awards

Amounts that may be awarded by CUNY for an academic year range from \$800 to \$3,500.

The maximum amount that may be borrowed under the Federal Perkins Loan Program is \$20,000 for graduate study. The aggregate loan limit for both graduate and undergraduate study is \$40,000.

The current interest rate, payable during the repayment period, is 5% on the unpaid principal. Repayment begins nine months after a student graduates, leaves school, or is enrolled less than half-time, and may extend over a period of 10 years.

For additional information about repayment schedules, deferral, and cancellation of repayment, contact the Financial Aid Office, or visit www.ed.gov.

Federal Direct Loan 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 Loan Program, up to a combined total of \$138,500, including any loan for undergraduate study. The amount you may 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 non-profit 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

30% 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 Fund

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

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 coursework completed.

WF (Withdrawn Failing): Given when a student withdraws formally after the eighth week of the semester with a failing grade in the coursework 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 Laws #2165 and #2167 (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 coursework 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 Procedures

Withdrawals from courses during the first eight weeks of the semester require no special approval. During this period, students *must* use the Web or Telephone Registration System, both to drop courses within the first three weeks of classes and to withdraw, receiving a grade of *W* from the fourth through eighth week of the semester.

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 may be obtained online or from the Office of the Registrar. It must be signed by the course instructor and by the student's Graduate Advisor and filed in the Registrar's Office up to the fourteenth week of classes.

Beginning with the fourteenth week of the semester, 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 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. Withdrawal may also have implications for federal financial aid. Students are advised to contact the Financial Aid Office prior to withdrawal.

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 a student has made a satisfactory record in coursework 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

makeup examination. A graduate student receiving this grade is required, with the permission of the departmental advisor, to take a makeup 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 23.)

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 they must have completed 12 credits in the semester of the award in order to receive 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 Advisor before registering for courses. New matriculants and non-matriculated students are required to obtain permission from the Graduate Advisor *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 (GPA)

The grade-point average (GPA) is a numerical index of the student’s academic record at Queens College, and 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 calculated to three decimal places.

Important Note: Grades for courses transferred from other institutions are *not* included in the computation of the GPA; it is based *only* on grades received in Queens College courses. An exception to this is course(s) taken at other units of CUNY for which enroll-

ment was by e-permit (see *Transfer Credits* (page 9) and *Permits* (page 11)).

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 GPA. No more than four credits may be replaced.

Transcripts

A fee of \$4 is charged to order a copy of your Queens College record. (*Note:* There is no fee for transcripts to be sent to other branches of CUNY.) The fee covers a complete transcript for all divisions attended. A Transfer Request form must be filed with your fee in order to fill your request. There are three ways to file: online, by mail, or in person.

You may order the transcript online at www.qc.cuny.edu/registrar with a credit card, or you may download the Transcript Request form, complete all the information on the form, and bring or mail it to the Office of the Registrar, Queens College, 65-30 Kissena Blvd., Flushing, NY 11367-1597 with a check or money order, made payable to Queens College. (Be sure to include your Student ID number and current address on the check or money order.)

If you are paying for the transcript in person, first go to the Bursar’s payment windows on the second floor of Jefferson Hall. When you pay your fee, you will be given a receipt to bring to the Registrar’s Office. You must give the Registrar’s representative the Registrar’s copy of the receipt to receive a transcript request form. Fill out the form completely and be sure to sign it. Return both copies of the form to the Registrar’s Office, and allow three to four weeks for delivery. (There is no same-day service.)

If a hold has been placed on your record, you will be notified. Requests for transcripts will not be honored until the hold has been cleared.

COMPUTING THE GRADE-POINT AVERAGE

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

$$135 \div 45 = 3.00$$

The GPA is 3.00.

*Credit granted in computing the GPA, but not toward the degree.



Required Grade-Point Average, Probation, and Dismissal

All programs must be completed with a minimum GPA of at least *B* (3.0). A matriculated graduate student whose GPA 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 GPA to 3.0. If this standard is not met, 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 21). 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 their GPA. 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 to attempt to raise the GPA, permission

to do so must be obtained from the Office of Graduate Studies.

Appeals of Grades

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

1. Consult with the instructor.
2. If no satisfactory resolution can be reached with the instructor, consult with the departmental 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.

At the departmental level, a grade appeal may be based on the academic quality of the student's work. The only basis for an appeal to the Office of Graduate Studies and the Graduate Scholastic Standards Committee is that the student feels he/she 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.

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 any 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 27).

Students who wish to request a grade of *Incomplete (Inc.)* should refer to the section on *Incomplete Work* (page 27).

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 document called *Your Right to Know*; it is available online via the QC Web site at www.qc.cuny.edu/Security. *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 at the Main Gate Security Building after they have completed their initial registration. The Bursar will mail a validation sticker for the ID card 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 also are used in the library system. A validated ID must be shown to collect any check from the Bursar's Office.

A \$5 fee is charged for the replacement of lost or stolen ID cards. A \$5 fee is also charged if the ID is not obtained during the student's first semester at Queens College. Students

may contact the Security and Public Safety Office at 997-4443/5912 for further information.

Campus Parking

Parking in college parking lots is by decal only. All vehicles must be registered with the Security & Public Safety Office (Jefferson Hall 201) in order to park on college property.

Applications for parking are available at the Security & Public Safety Office. All unregistered vehicles or vehicles parked in violation of the Parking & Traffic Regulations are subject to both ticketing and immobilization ("booting"). A fee of \$50 will be charged for removal of the immobilization boot in addition to the parking violation penalty for the ticket(s).

Parking for Students with Disabilities

Requests for parking privileges based on physical disabilities must be made through the Health Service Center (Frese Hall, 3rd floor). Students with disabilities *must* have a license plate or a hangtag issued by the Department of Motor Vehicles. The tag *must* be displayed at all times. (This is *in addition* to the Queens College decal.)

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 infor-

mation is available from the Registrar's Office (Jefferson Hall, 1st floor) during the hours the 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 Hall 805, 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/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 of New York.

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 prior written consent from the student, by completing 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.

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. Additional information and the names of the members of the AA Committee is available in *Your Right to Know* (www.qc.cuny.edu/Security.) or from the Affirmative Action Office, (Razran Hall, 3rd floor, 997-5536).

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, courses and activities, 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* (see page 30) or contact the Counseling and Advisement Center (Frese Hall, 1st floor, 997-5420) or the Office of Special Services (Kiely Hall 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. Additional information about Title IX is available in *Your Right to Know* or from Jane Denkensohn, Esq., Title IX Coordinator (Kiely 805, 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 CUNY students, faculty, and staff. Harassment of employees or students based upon sex is inconsistent with this objective and contrary to CUNY 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 CUNY.

CUNY, through its colleges, will disseminate this policy and take other steps to educate the CUNY community about sexual harassment. CUNY 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 CUNY 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 an individual college/CUNY to investigate the allegations.

Prohibited Conduct

It is a violation of CUNY policy for any member of the CUNY community to engage in sexual harassment or to retaliate against any member of the CUNY community for: raising an allegation of sexual harassment; filing a complaint alleging sexual harassment; or 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 CUNY 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 con-

flicts of interest may arise when a faculty member, supervisor, or other member of the CUNY 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.

Accordingly, faculty members, supervisors, and other members of the CUNY community who have professional responsibility for other individuals 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 within CUNY if he/she performs functions including, but not limited to, teaching, counseling, grading, advising, evaluating, hiring, supervising, or making recommendations or decisions 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

CUNY shall develop procedures to implement this policy. The President of each constituent college of CUNY, 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/her respective unit of CUNY. In addition, each dean, director, department chair, 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 CUNY 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 CUNY 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 CUNY.

Sexual Harassment Panel

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

Dr. Elizabeth McCaffrey

Coordinator

Counseling and Advisement

Frese Hall, 1st floor 997-5421

Ms. Rena Smith-Kiawu

Financial Aid

Jefferson Hall 202 997-5100

Two students also serve on the panel. Please contact the Office of the Vice President for Student Affairs (Frese Hall 102, 997-5100) 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 members of the Sexual Harassment Panel or other CUNY employee who may be involved in the complaint process.

Making a Complaint of Sexual Harassment

Any member of the CUNY 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 to report allegations of sexual harassment, within the time limits provided in those agreements, or, they may report such allegations directly to a member of the panel as provided in these Procedures. Members of the CUNY 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 chair, 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 Sexual Harassment 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’s 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 CUNY policy against sexual harassment; the names, titles, telephone numbers, and office locations of the college’s Sexual Harassment Panel members; and any other materials provided to him or her by the Sexual

Harassment Education Committee for posting.

Responsibilities of the CUNY Community-At-Large

Members of the CUNY 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 Sexual Harassment Panel.

COMPLAINT PROCEDURES

Student Complaints

Student complaints are heard initially by the Vice President of Student Affairs. 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 Vice President of Student Affairs 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 Vice President’s Office, and the Vice President 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

CUNY 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* (see page 35).

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 above-mentioned 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 37.

A student who is experiencing difficulty with alcohol or chemical dependency may be referred to the Vice President of Student Affairs or the Counseling and Advisement Center by

members of the instructional staff or may seek assistance directly. The Vice President 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. CUNY employees 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 Queens College and CUNY 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 New York 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 CUNY's policy to discourage violations of federal, state, and city laws. Where appropriate, CUNY 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, Frese Hall, 1st floor (997-5420); Health Service Center, Frese Hall, 3rd floor (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 those bearing a valid Queens College ID 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 Vice President of Student Affairs 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 New York State law.

Smoking

Smoking is prohibited in all CUNY buildings: classrooms, offices, auditoriums, gymnasiums, hallways, elevators, restrooms, libraries, stores, and medical facilities.

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 stu-

dents 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 advisor 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, resolu-

tions, 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 cam-

pus within the university/college, or whose presence on any such campus obstructs and/or forcibly prevents others from the exercise of their rights or interferes with the institution's educational processes or facilities, or the rights of those who wish to avail themselves of any of the institution's instructional, personal, administrative, recreational, and community services.

7. Disorderly or indecent conduct on university/college-owned or -controlled property is prohibited.

8. No individual shall have in his possession a rifle, shotgun, or firearm or knowingly have in his possession any other dangerous instrument or material that can be used to inflict bodily harm on an individual or damage upon a building or the grounds of the university/college without the written authorization of such educational institution. Nor shall any individual have in his possession any other instrument or material which can be used and is intended to inflict bodily harm on an individual or damage upon a building or the grounds of the university/college.

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 CUNY employees in the workplace is prohibited. Employees of CUNY must also notify the college's 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 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 Appendix below: admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion, complaint to the civil authorities, and/or ejection.

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 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 accordance with applicable provisions of the Education Law or Civil Service Law.

3. Any visitor, licensee, or invitee engaging in any manner in conduct prohibited under substantive Rules 1–11 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 online just before registration periods.

Curricula are subject to change. Students are advised to check with the department 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 each department. 500-level courses *cannot* be credited toward the Master of Arts, Master of Arts in Liberal Studies, Master of Arts in Social Sciences, Master of Fine Arts, or Master of Library Science degrees, but *are* counted toward the Master of Arts in Teaching and Master of Science in Education degrees.

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 Advisor 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 Division 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, such graduate courses cannot be counted toward the undergraduate major or used to meet other undergraduate 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 chair or graduate advisor of their academic department. (See also *BA/MA Degree Programs* on page 10.)

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 CUNY Graduate School. 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 the permit process before registering at the Graduate School. (See *Transfer Credits*, page 9 and *Permits*, page 11.)

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.

Accounting & Information Systems

Chair: Israel Blumenfrucht

Graduate Program Directors: Neal B. Hitzig, Marvin F. Milich

Dept. Offices: Powdermaker Hall 215, 997-5070

The Master of Science Program in Accounting is certified by the New York State Education Department under HEGIS Code 0502.00. This 30-credit program provides advanced education in Accounting and related areas so that the student completing this program (following a suitable undergraduate program in Accounting) will meet the fundamental requirements for taking the Uniform CPA Examination in New York State.

Further, students successfully completing the program will be well prepared for careers in public, private, or governmental accounting, or for the teaching of accountancy in secondary schools. The Queens College MS in Accounting builds upon successful completion of an undergraduate program in Accounting. In addition to the technically oriented courses in Accounting and Economics, the Queens College MS in Accounting Program allows a set of elective courses outside the technical areas, in liberal arts disciplines, that provide a broader background for the professional accountant.

Faculty

Blumenfrucht, Israel, Chair, *Professor*, PhD 1981, New York University, CPA: taxation

Milich, Marvin F., Graduate Program Director, *Associate Professor*, JD 1971, New York University School of Law; CPA: law

Hitzig, Neal B., Graduate Program Director, *Professor*, PhD 1985, City University of New York, CPA: business

Adelberg, Arthur H., *Professor*, PhD 1977, City University of New York, CPA: managerial accounting

Dauber, Nicky A., *Lecturer*, MS 1982, C.W. Post Institute of Finance, CPA: auditing

Davidovits, Murray, *Lecturer*, JD 1983, New York University School of Law: law

Erlach, David, *Assistant Professor*, PhD 1997, University of San Jose; JD, Hofstra University: financial accounting

Hornung, David, *Lecturer*, MBA 1975, Baruch College: financial accounting

Kim, Chansog, *Associate Professor*, PhD 1994, CUNY Graduate Center: information systems

Klinger, Carol D., *Lecturer*, MS 1978, C.W. Post, CPA: information systems

Leibowicz, Barry, *Associate Professor*, LLM 1973, New York University School of Law: taxation

Levine, Marc H., *Professor*, PhD 1983, Yeshiva University, CPA: financial accounting

Qureshi, Anique, *Professor*, PhD 1993, Rutgers University, CPA: managerial accounting

Siegel, Joel, *Professor*, PhD 1977, City University of New York, CPA: financial accounting

Simon, Abraham J., *Professor*, PhD 1971, University of Pennsylvania, CPA: governmental accounting

Silliman, Benjamin R., *Assistant Professor*, EdD 2004, New York University: higher education administration

Walker, John P., *Professor*, PhD 1976, University of Cincinnati, CPA: auditing

MASTER OF SCIENCE PROGRAM

Requirements for Matriculation

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

1. An undergraduate degree (BA or BS) in accounting from an accredited college or university.

2. Students should have earned an overall GPA of at least 3.0 in their undergraduate program, as well as a GPA of at least 3.0 in their undergraduate accounting courses.

3. GMAT (may be waived under certain circumstances; consult Graduate Program Director).

Requirements for the Master of Science Degree

Students must complete at least 30 graduate credits with a minimum overall GPA of 3.0 and successfully complete a comprehensive accounting examination, which may be retaken once in the event of initial failure. The 30 graduate course credits include:

a) The three required courses (9 credits) in Accounting:

712. Advanced Financial Accounting Theory

723. Advanced Auditing Theory and Practice

757. Taxation of Business Entities

b) The two required courses (6 credits) in Economics:

Economics 703. Price & Distribution Theory

Economics 715. Corporate Finance

c) One course (3 credits) from the following set of Economics courses:

Economics 705. Mathematical Economics

Economics 721. Econometrics

Economics 726. Introduction to Operations Research

d) Four courses (12 credits) from among the following set, at least two of which must be from Accounting and/or Economics, and of the remaining two, only one may be from a given department unless special permission is granted by the candidate's advisor:

Accounting 707. Contemporary Issues in Management Accounting

Accounting 747. Communications and Accountants

Accounting 748. Advanced Accounting Information Systems

Accounting 751. Public Interest Law

Accounting 758. State and Local Taxation

Accounting 759. Estate and Gift Taxation and Administration

Accounting 773. Government and Not-For-Profit Accounting and Auditing

Computer Science 615. Survey of Information Technology

Economics 711. Money and Capital Markets

Economics 750. Industrial Organization and Control

Economics 770. Urban Economics: Tools, Methodology, and Applications

History 774. History of American Business

Philosophy 760. Business Ethics

Political Science 640. Public Administration

Political Science 715. Organization Theory

Psychology 754. Behavioral Science and Business

Sociology 716. Professional Writing and Communication for Social Research

Sociology 728. Sociology of Organizations and Industry

Urban Studies 727. Public Management

Urban Studies 742. Public Budgeting

Courses in Accounting

707. Contemporary Issues in Management Accounting. 3 hr.; 3 cr. The purpose of this course is to build upon the basic concepts of management accounting introduced in Accounting 305/306. The most current theories and practices that comprise Accounting 707 have been developed over the past decade in response to rapid changes in the external and internal environment that business organizations face. Accounting 707 will examine in depth the most recent management accounting literature with respect to: 1) information that managers need for decision making, and 2) the role of the management accountant in the accumulation, analysis, and use of that information.

712. Advanced Financial Accounting Theory. 3 hr.; 3 cr. The emphasis of this course is on the examination of current issues and research methodologies related to accounting theory in such areas as the objectives of financial statements, financial statement elements, asset-valuation concepts, income-determination models, and cutting-edge topics under scrutiny by the accounting profession. Students will analyze the literature in accounting theory relating to current pronouncements of the Financial Accounting Standards Board and prior pronouncements of the Accounting Principles Board and Committee on Accounting Procedure. A primary focus will be the application and influence of accounting theory on the development of current Generally Accepted Accounting Principles and corporate financial reporting.

723. Advanced Auditing Theory and Practice. 3 hr.; 3 cr. This course focuses on the philosophical aspects of the professional accountant's relationship with clients and third parties. Accordingly, the Code of Professional Conduct issued by the American Institute of CPAs (AICPA) is examined in detail. The auditing pronouncements issued by the AICPA are analyzed in detail. Requirements of the Securities and Exchange Commission are also explored. Other areas scrutinized are compilation and review, attestation engagements, statistical sampling and auditing in an electronic data processing environment. The case method is used in solving problems of a more complex nature.

747. Communications and Accountants. 3 hr.; 3 cr. The examination, both verbally and non-verbally, of communications required in the business life of an accountant. The objectives of this course will be to enhance the ability to write, speak, and listen more effectively in the

business environment. Topics covered will be writing a resume and a job application for an accounting position, writing instructions to staff for an audit, writing a letter to a client on the results of an audit, preparing an analysis of an annual report, communicating during an interview and a business meeting, listening skills, and preparing a financial presentation with multimedia aids.

748. Advanced Accounting Information Systems. 3 hr.; 3 cr. Methods and techniques of using accounting as an information system. The design, analysis, installation, and evaluation of a system, either manual or computer-based, will be covered. Topics will include accounting systems theory, design theory, accounting file structure, implementation, maintenance, and evaluation of the system. General ledger software and database programs will be discussed and used in the classroom. The use of the Internet and expert systems as they relate to accounting information will be included.

751. Public Interest Law. 3 hr.; 3 cr. This course seeks to examine the various aspects of Public Interest Law. It will study public institutions and the phenomenon of bureaucracy in order to gain some understanding of the public law system. Emphasis will focus on the relationship of the government and its citizens with respect to a variety of specific areas of concern. Topics will include: Administrative Law: Civil Rights and Civil Liberties, Law and Education, Immigration Law, Consumer Protection, Environmental Law, Poverty Law, Disability Rights, Children and the Law, and International Human Rights.

757. Taxation of Business Entities. 3 hr.; 3 cr. This course focuses on the taxation of the primary forms of business entities: sole proprietorship, corporations, including S corporations, and partnerships, including limited liability companies (LLCs). The decision process necessary to select a particular type of business entity as well as the tax advantages and disadvantages inherent in the operations, liquidation, and termination of these entities will be stressed. Emphasis is placed on tax planning, problem solving, and research.

758. State and Local Taxation. 3 hr.; 3 cr. This course examines the law of state and local taxation with a particular emphasis on the Tax Laws of the State of New York. Income, Corporate Franchise, Inheritance, and Sales Taxes are studied where appropriate, distinguished from the rules of Federal Taxation that apply. Both Substantive and Procedural rules are studied. Problems of multi-state

residence and taxation, related constitutional issues, and conflict of laws are studied. The course addresses ongoing compliance issues as well as tax dispute resolution mechanisms such as making and pleading disputes to the Tax Tribunal.

759. Estate and Gift Taxation and Administration. 3 hr.; 3 cr. This course focuses on the rules and regulations governing Estate and Gift Taxation and the administration of estates. Topics covered include the rules and regulations governing gifts and bequests, both from the standpoint of tax compliance and tax planning. The administrative rules governing probate administration are covered, as is the role of the accountant in the administrative process.

773. Government and Not-For-Profit Accounting and Auditing. 3 hr.; 3 cr. The course focuses on accounting, financial reporting, and auditing relevant to governmental and not-for-profit entities. Financial information that is required internally by public officials and governmental and not-for-profit managers is discussed. The financial reporting standards covered are those of the Government Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB). Auditing standards set out in the "Yellow Book" issued by the General Accounting Office (GAO) and by the Office of Management and Budget (OMB) circulars of the Federal Office of Management and Budget are discussed. The "single audit" approach is covered. The foundation of accounting and reporting for governmental entities is developed in terms of public goods theories of governmental activities.

Courses in Economics

703. Price and Distribution Theory. 2 hr. plus conference; 3 cr. One-semester course in microeconomic theory.

705. Mathematical Economics. 3 hr.; 3 cr. Prereq.: A one-semester course in differential calculus and a course in price theory; and either graduate matriculation or permission of the Chair. An introduction to applications of mathematics to economic theory and problems. Illustrations are drawn from linear programming, theory of games, and difference equations.

711. Money and Capital Markets. 2 hr. plus conference; 3 cr. Examination of the sources and uses of funds in financial markets; market structure of interest rates; flow-of-funds analysis.

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

Art

715. Corporate Finance. 2 hr. plus conference; 3 cr. Prereq.: Business 241 or equivalent. The theory of investor and firm behavior in financial markets under uncertainty. Among the topics discussed are portfolio theory, the capital asset pricing model, arbitrage pricing theory, asset valuation theory, and optimum firm decision-making rules with regard to capital budgeting, capital structure, and dividend policy.

721. Econometrics. 2 hr. plus conference; 3 cr. Prereq.: One semester of calculus and Economics 249 or equivalent. Analysis of the classic single equation regression models (simple and multiple), simultaneous equation models, and special problems associated with time series and qualitative data.

726. Introduction to Operations Research. 3 hr.; 3 cr. Prereq.: Economics 249 or equivalent; calculus recommended. Methods of operations research in economic and business decision-making. Topics include linear and nonlinear programming, queuing, theory, and sensitivity analysis.

750. Industrial Organization and Control. 2 hr. plus conference; 3 cr. Structure of the American economy; governmental policies aiming at the preservation of competition in industrial markets and regulation of trade practices.

770. Urban Economics: Tools, Methodology, and Applications. 2 hr. plus conference; 3 cr. Introduces students to major subject areas, theories, and research tools of urban and regional economics and their applications.

Courses in Other Departments

(see department listings for complete course information)

Computer Science 615. Survey of Information Technology.

History 774. History of American Business.

Philosophy 760. Business Ethics.

Political Science 640. Public Administration.

Political Science 715. Organization Theory.

Psychology 754. Behavioral Science and Business.

Sociology 716. Professional Writing and Communication for Social Research.

Sociology 728. Sociology of Organizations and Industry.

Urban Studies 727. Public Management.

Urban Studies 742. Public Budgeting.

Art

Chair: Barbara G. Lane

Graduate Advisors: See Department

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, auction houses, publishing, and teaching. This 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 PhD 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 MFA degree is generally recognized as the appropriate academic credential for teaching art in college.

The Art Department also provides both art history and studio courses to students seeking the Master of Science in Education degree.

Faculty

Lane, Barbara G., *Chair, Professor*, PhD 1970, University of Pennsylvania:

Medieval art, Northern Renaissance
Binstock, Benjamin, *Assistant Professor*, PhD 1997, Columbia University:

Baroque art
Brody, Lisa Renée, *Assistant Professor*, PhD 1999, New York University: Ancient art

Chave, Anna C., *Professor*, PhD 1982, Yale University: twentieth-century art

Clark, William W., *Professor*, PhD 1970, Columbia University: Medieval art, architecture

Cohen, Arthur M., *Professor*, MFA 1969, Indiana University: painting, drawing, design

Connor, Maureen, *Professor*, MFA, 1973, Pratt Institute: sculpture
Gonzalez, Antonio L., *Assistant Professor*, MFA 1989, Yale University: photography

Goodman, Carole, *Assistant Professor*, MFA 1996, Cranbrook Academy of Art: graphic design

Hoshino, Marvin, *Professor*, MFA 1972, Indiana University: graphic design

Lin, Xiaoping, *Associate Professor*, PhD 1993, Yale University: Chinese painting

Mitchell, Tyrone, *Associate Professor*, Art Students League, New York Studio School: sculpture

Percival, Brian R., *Lecturer*, BArch 1961, University of Pennsylvania: architecture, modern art, Asian art and architecture

Porter, Liliana, *Professor*, MFA 1962, Universidad Iberoamericana: printmaking, drawing

Priestly, Debra, *Associate Professor*, MFA 1996, Pratt Institute: painting, drawing

Saslow, James M., *Professor*, PhD 1983, Columbia University: Italian Renaissance

Snider, Jenny R., *Associate Professor*, MFA 1966, Yale University: painting, drawing, design

Sund, Judy, *Associate Professor*, PhD 1986, Columbia University: nineteenth-century art

MASTER OF ARTS PROGRAM IN ART HISTORY

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 Study in Art History, which has the authority to recommend acceptance or rejection to the Office of Graduate Admissions. In making its selection, the committee will consider such factors as breadth and depth of preparation, level of achievement, and the suitability of the applicant's interests to the curriculum.

2. Applicants must have completed a minimum of four courses (normally 12 credits) in Art History beyond the introductory level.

3. Applicants must have completed at least two documented semesters of college-level study of a foreign language or the equivalent; equivalencies will be determined by the Graduate Committee. Applicants whose native language is not English may satisfy the first foreign lan-

guage requirement with a TOEFL score of 575 or higher.

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. Full details about program policies and expectations may be found in the handbook for MA candidates; each incoming student may obtain a copy of this handbook from the department office and is responsible for all schedules and guidelines outlined it.

1. Incoming students are assigned a faculty advisor for guidance in working out a course of study; students must consult with the advisor each semester and have their program approved before registration. Programs will be planned to allow for concentration on a field of special interest with, at the same time, a balanced range of study in other areas. Students must pass at least one course in three of the five broad areas of study: Ancient, Medieval, Renaissance-Baroque, Modern, and Asia/Americas.

2. Students accepted for matriculation in the program are required to pass a Qualifying Examination during their first semester. This examination, which is normally given during the opening weeks of each term, is intended to demonstrate general competence in art history. In case of failure, this examination may be re-taken during the student's second semester. Students failing twice may petition the department's Graduate Committee for a third attempt, but may be asked to withdraw from the program.

3. Art 740 (Art History Methods Colloquium) is required of all students who have not taken a comparable undergraduate course in art-historical methods; the course must be taken during the student's first year.

4. Of the 30 credits required for the degree, 24 must be in Art History. The remaining six credits may be taken in other departments (e.g., history, literature), with the approval of the advisor. The auditing of courses in Art History and at the college is recommended.

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

6. Not later than the completion of the first 15 credits, each student must complete two college-level semesters of a second foreign language, or the equivalent, with a grade of B or better. The second foreign language must be chosen in consultation with the student's advisor.

7. A thesis is required. The student must obtain permission from an appropriate faculty member willing to serve as thesis advisor, who may be different from the student's academic advisor. After arriving at a suitable topic, the student must submit to the Graduate Committee a brief abstract approved by the thesis advisor. Every thesis must also have a second faculty reader, who should be consulted before the thesis is begun.

MASTER OF FINE ARTS PROGRAM

Requirements for Matriculation

These requirements are in addition to the college's 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 BA, subject to the determination of the department's MFA 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 department's MFA 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 MFA 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 MFA

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 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 MFA Committee each semester. The 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 MFA degree.

2. A grade-point average of 3.0 shall be maintained.

3. Participation in the program is usually full time, and the degree is normally completed within two years. Exceptions may be granted by the MFA Committee.

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

Courses in Art History

Courses numbered in the 500s (see Art Education, below) are intended for graduate students whose primary area of study is not art history, including MFA candidates; 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 at the 700 level, which assume a good background in art history and, in some instances, the ability to read in foreign languages. In addition, seminars and Art 740 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. In the past, course topics have ranged from major artists like Michelangelo and Vermeer, to seminars in women's imagery and mythology, to lecture courses on numerous periods and cultures worldwide.

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

Art

700. 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.

701. Topics in the History of Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of instructor. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.

702. Seminar in the History of Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of instructor. The topic may vary and will be announced each time the course is given. May be repeated for credit when the topic is different.

740. Art History Methods Colloquium. 2 hr. plus conf.; 3 cr. Prereq.: Permission of the instructor. The basic problems and techniques of art historical scholarship, stylistic and iconographic analysis, sources, and documentation.

770. The Major Artist. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

Courses in Ancient Art

741.1. Ancient Painting. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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 MA in Art History *or* permission of instructor. The leading masters and centers: Athens, Olympia, Delphi, Pergamon.

741.4. Studies in Ancient Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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 the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

Courses in Medieval Art

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

742.2. Gothic Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of the instructor. Stylistic evolution in architecture, sculpture, the minor arts, or painting.

742.3. Studies in Medieval Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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 the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

Courses in Renaissance and Baroque Art

743.2. Art of the High Renaissance in Italy. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of instructor.††

743.3. Renaissance and Baroque Architecture. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of instructor. Development of the classical tradition from 1400 to 1800 and its spread across the globe,

743.4. Early Netherlandish Painting. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of instructor.

743.5. Studies in Renaissance Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

744.1. Dutch Painting in the Seventeenth Century. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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 MA in Art History *or* permission of instructor. Antimannerist reform, the Carracci, Caravaggio, and the impact of their styles on later generations.

744.3. Studies in Baroque Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the

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

754.1-754.9. Seminar in 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. May be repeated for credit when the topic is different.

Courses in Modern Art

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

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

745.4. Art of the United States from the Colonial Era to 1900. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA in Art History *or* permission of instructor.

745.6. Studies in 18th-Century Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

745.7. Studies in Modern Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

745.8. Studies in Contemporary Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

745.9. Studies in the Art of the United States. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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. Seminar in 18th-Century Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission

of the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

755.2-755.5. Seminar in Modern Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

755.6. Seminar in Contemporary Art. 2 hr. plus conf.; 3 cr. Prereq.: Permission of the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

755.7. Seminar in Art of the United States. 2 hr. plus conf.; 3 cr. Prereq.: Permission of the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

755.8. Seminar in Photography. 2 hr. plus conf.; 3 cr. Prereq.: Permission of the instructor. The particular area to be studied will vary and will be announced prior to each offering. May be repeated for credit when the topic is different.

Courses in Art of Asia and the Americas

747.1. Studies in Asian Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

747.2. Studies in Chinese Art and Architecture. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

747.3. Studies in Japanese Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

747.4. Studies in Indian Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

748.1. Studies in Mesoamerican Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

748.2. Studies in Andean Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

757.1. Seminar in Asian Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

757.2. Seminar in Buddhist Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

757.3. Seminar in Chinese Painting. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

757.4. Seminar in Contemporary Chinese Art. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation for the MA 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.

Independent Research

760. Special Problems. Hr. to be arranged; 3 cr. Work in some particular area of research for advanced candidates in Art History. Approval of the department's Committee on Graduate Study is required. A student may take only one course at this level.

760.1. Special Problems in Ancient Art.

760.2. Special Problems in Medieval Art.

760.3. Special Problems in Renaissance Art.

760.4. Special Problems in Baroque Art.

760.5. Special Problems in Modern Art.

760.6. Special Problems in American Art.

760.7. Special Problems in Photography.

760.8. Special Problems in Asian Art.

760.9. Special Problems in Art of the Americas.

790. Thesis. Hours to be arranged; 3 cr. Prereq.: Approval of a thesis advisor and The department's Committee on Graduate Study. Supervised thesis writing.

MFA 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 MFA program and completion of appropriate prior courses. In each of these courses the student will be assigned an instructor as advisor, 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 coursework for the MFA 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 MFA 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 MFA 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

Art

further define different areas inherent in the newer media.

727.1. Printmaking. Hr. to be arranged; 3 cr. Prereq.: Permission of MFA Committee.

727.2. Photography. Hr. to be arranged; 3 cr. Prereq.: Permission of MFA 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 MFA 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 MFA Committee. The work will consist of a particular topic or focus established between 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 MFA 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 MFA 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)

Requirements for Admission

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

1. Applicants must have the equivalent of 20 credits in studio art and at least 6 credits in art history, including a general survey of Western Art. The minimum grade-point average acceptable in these courses is *B* (3.0).

2. Two letters of recommendation and a 500-word statement of purpose are required. In addition, the applicant must submit a portfolio of art work consisting of 15 slides. The following information about each slide must be provided on a separate page: title (if any), size, material, and date. (Photos or other flat images, no larger than 10 x 13 inches may also be included and may be substituted for some of the slides).

3. Students should consult the listing under Secondary Education & Youth Services for education requirements for admission.

Requirements for the Degree

1. 15 credits of art courses on the graduate level are required for the degree.

2. Art History requirement: Of the 15 art credits, 3 credits (one course) must be in art history, to be chosen from 500- and 700-level course offerings.

3. Studio Art requirement: 12 credits from the graduate offerings in Studio Art are required. With permission of the Graduate Advisor, students may take Art 620, Special Projects in Design, and Art 621, Special Projects in Fine Arts. Without obtaining permission of the Graduate Advisor, students may take any offering in the MFA program, with the exception of courses in the 721 and 722 series, which are not open to MS in Education students.

4. Students should consult the listing under Secondary Education & Youth Services for education requirements for the degree.

Courses in Art History

Any of the art history courses 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; these courses are also open to qualified undergraduates who have had two courses in art history. Courses on the 700 level (see above) are designed for art history students who have a reading knowledge of foreign languages and research skills. MS in Education candidates must obtain per-

mission of the instructor before registering in these courses.

501. The Language of Art. 2 hr. plus conf.; 3 cr. Prereq.: Two semesters of art history. A survey of the principal categories of visual experience, the conceptual terms for describing it, and the criteria used to analyze and evaluate the arts. Includes an exercise in designing classroom applications of aesthetic theory, history, and/or criticism.

502. 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.

503. 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.

504. Topics in Renaissance and Baroque 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. 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.

506. Topics in Art of the United States. 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.

507. Topics in Asian 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.

508. Topics in Art of the Americas. 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.

Courses in Studio Art

603. **Advanced Design Studio.** 4 hr.; 3 cr. Prereq.: Two semesters of work in design principles or workshop experience in applied design.

607, 608. **Advanced Drawing Studio I, II.** 4 hr.; 3 cr. Prereq.: A two-semester course in drawing

609. **Advanced Painting.** 4 hr.; 3 cr. Prereq.: Two semesters of work in the principles and practice of painting

610, 611. **Graphic Design I, II.** 4 hr.; 3 cr. Prereq.: Two semesters of graphic design principles or workshop experience in graphic design.

612. **Advanced Sculpture Studio.** 4 hr.; 3 cr. Prereq.: Two semesters of work in sculpture.

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

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

Biology

Chair: Corinne A. Michels

Doctoral Studies Advisors: Cathy Savage-Dunn, Timothy Short, Zahra Zakeri

MA Program Advisor: Pokay Ma

Department Office: Science Building 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 PhD 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 PhD program. Opportunities for specialization in applied and basic research are included below in the listing of the supervising faculty.

The Biology Department offers a variety of graduate courses appropriate for

master's-level students in Education. Students should meet with the Biology Graduate Advisor for guidance in the selection of Biology courses.

In addition to the program of courses described below, students are encouraged to participate in the extensive research programs of the Biology faculty. Their research activities have recently been funded by various agencies, including the National Science Foundation, National Institutes of Health, Howard Hughes Medical Institute, and a number of private foundations, including the American Cancer Society and American Heart Association. Participation in research is one of the best ways for students to learn biology first-hand, and to appreciate how scientific methodology is used to answer important biological questions. A description of current faculty research can be found at www.qc.cuny.edu/biology/faculty.

The department has excellent research facilities for cell and molecular biology, as well as well-equipped research laboratories and core facilities. 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.

Faculty

Michels, Corinne A., Chair, *Distinguished Professor*, PhD 1969, Columbia University: molecular genetics, regulation of gene expression, yeast genetics

Ma, Pokay, MA Program Advisor, *Assistant Professor*, PhD 1986, Washington University: neuroscience, neural control of behavior, structure and development of *locus coeruleus* in zebra fish

Savage-Dunn, Cathy, Doctoral Studies Advisor, *Associate Professor*, PhD 1992, Columbia University: development, molecular genetics, signal transduction, *C. elegans*

Short, Timothy W., Doctoral Studies Advisor, *Associate Professor*, PhD 1991, Stanford University: plant physiology and molecular biology; light control of plant development

Zakeri, Zahra F., Doctoral Studies Advisor, *Professor*, PhD 1984, St. John's University: molecular developmental biology, regulation of gene expansion in aging and cell death

Alsop, David W., *Associate Professor*, PhD 1970, Cornell University: comparative insect morphology, insect genetics, arthropod systematics and evolution

Baker, Mitchell B., *Assistant Professor*,

PhD 1998, University of California at Davis: behavioral ecology, dispersal, evolution, arthropods, birds

Barry, Michael A., *Assistant Professor*, PhD 1998, University of Delaware: neurobiology of sensory systems in vertebrates

Boissinot, Stephane, *Assistant Professor*, PhD 1997, Université de Montpellier: molecular evolution, genomics, bioinformatics

Calhoun, Robert E., *Associate Professor*, PhD 1972, Purdue University: quantitative genetics, selection and mating systems, genetics of natural populations

Chabora, Peter C., *Professor*, PhD 1967, Cornell University: population ecology, evolution of parasite-host interactions

Fath, Karl, *Assistant Professor*, PhD 1997, Case-Western University: cell biology of intracellular transport, molecular motors and cytoskeleton

Greller, Andrew M., *Professor Emeritus*, PhD 1967, Columbia University: bioclimatology, forest ecology, tropical botany

Koepfer, H. Roberta, *Associate Professor*, PhD 1984, City University of New York: behavioral ecology; evolution and genetics of behavior

Mundinger, Paul C., *Professor*, PhD 1968, Cornell University: animal behavior, bird song dialects, development and learning, sociobiology

Rifkin, Jared L., *Associate Professor*, PhD 1969, Johns Hopkins University: cell physiology, developmental mechanisms in cellular slime molds, chemotaxis

Roze, Uldis, *Professor Emeritus*, PhD 1964, Washington University: natural history, mammalogy, biology of the porcupine

Seeling, Joni, *Assistant Professor*, PhD 1996, University of Iowa: signal transduction in embryogenesis of amphibians

Sperling, Jon A., *Associate Professor*, PhD 1972, University of Wisconsin: algal and bryophyte ecology and physiology, limnology

Wasserman, Marvin, *Professor Emeritus*, PhD 1954, University of Texas: evolution and cytogenetics, population genetics and evolution of *Drosophila*

Waldman, John R., *Professor*, PhD 1986, City University of New York: ecology, evolution, conservation biology of fish

MASTER OF ARTS PROGRAM

Requirements for Matriculation

These requirements are in addition to the

Biology

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 statistics 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 Advisor.

2. A minimum of either 24 graduate course credits and 6 thesis credits, or 32 graduate course credits, is required. Students who have taken a 300-level Queens College biology course that is also offered at the 600-level may not take that 600-level course for credit. All graduate students must take at least 10 credits of 700-level lecture courses. Furthermore, the combination of 788 (Cooperative Education Placement), 799 (Research), 791 (Colloquium), and 792 (Tutorial) may not exceed 12 credits.

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

4. Programs: Students must choose one of the following degree options before completing 15 credits of 49 graduate courses.

A. *Course Oriented.* 32 course credits chosen in consultation with the Graduate Advisor. 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. *Research Oriented.* Participation in thesis research is subject to the approval of a thesis advisor.

An oral examination shall be a requirement of the research-oriented Biology MA degree and shall be conducted by an Examination Committee established for each candidate. The Chair of the Examination Committee shall be a member of the Biology Department, cho-

sen by the candidate in consultation with the Biology Department MA Advisor. The remaining members of the Committee shall be chosen by the Committee Chair in consultation with the candidate. The content and nature of the oral examination shall be determined by the Chair of the Examination Committee in consultation with the student to be examined. Each student will be limited to two attempts to pass this examination.

Cellular, Molecular, and Developmental Biology. 24 credits chosen in consultation with the thesis advisor, plus 6 credits of research under the direction of a thesis supervisor.

Evolution, Ecology, and Behavior. 24 course credits chosen in consultation with the thesis advisor, plus 6 credits of research under the direction of a thesis supervisor.

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 PhD Program in Biology. Arrangements can be made to transfer graduate credits earned at Queens College to the PhD Program at CUNY. Students are encouraged to discuss their long-range goals with the Master's Program Graduate Advisor as soon as possible.

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

Courses in Biology*

500-Level Courses

585. Genetics. 3 lec., 1 rec.; 4 cr. Prereq.: Biology 108 and Chemistry 114 or equivalent. Not open to students who have completed Biology 285 except by permission of the Chair. The inheritance, structure, and mode of genetic material. Designed for the Master of Science in Education candidates who are concentrating in science education. Cannot be used to fulfill requirements for the Master of Arts degree in Biology.

586. Cell Biology. 3 hr.; 3 cr. Prereq.: Biology 108 and Chemistry 114 or equivalent. Not open to students who have completed Biology 286 except by permission of the Chair. Structure, function, and regulation of cells, including cell cycle, subcellular compartmentalization, signal transduction, and cell-cell in-

teractions. Designed for the Master of Science in Education candidates who are concentrating in science education. Cannot be used to fulfill requirements for the Master of Arts degree in Biology.

587. Evolutionary Biology. 3 lec., 1 rec.; 4 cr. Prereq.: Biology 108. Not open to students who have completed Biology 287. The mechanisms and processes of biological evolution. Designed for the Master of Science in Education candidates who are concentrating in science education. Cannot be used to fulfill requirements for the Master of Arts degree in Biology.

600-Level Courses

610. Lower Plants. 2 lec., 1 rec., 3 lab. hr.; 4 cr. 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 in-

*-MAT charges are possible.

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

††-May be offered; see Class Schedule.

structor. 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. Students 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 a field station 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.††

640. General Ecology. 2 lec., 1 rec., 2 lab. hr.; 4 cr. Prereq.: A course in field biology. Theory and analysis of structure, growth, biological communities in terms of their structure, species abundance and diversity, interspecific interactions, and integration with the physical environment.

644. Biology and Society. 3 hr.; 3 cr. Prereq.: Courses in genetics and in cell biology. Critical analysis of selected subjects encompassing current biological research and related technological developments in context of their ethical, scientific, and economic impact on the human social systems.

645. Evolution and Cultural Behavior. 3 hr.; 3 cr. Prereq.: BS or BA, a major or minor in biology, zoology, or equivalent,

or permission of instructor. A lecture/seminar course that examines several recent evolutionary theories associated with culture, i.e. behavioral ecology, evolutionary psychology, memetics, and biocultural coevolution. These theories are compared and assessed in seminars on current research, critiques, and application to human and animal cultures.

646. Limnology. 2 lec., 1 rec., 3 lab. hr.; Prereq.: A course in field biology. Survey of the physical, chemical, and biological properties of streams, rivers, and lakes. A comparative analysis of inland waters. Students should expect to reside at a field station and/or the Audubon Center at Greenwich, CT. The site selected depends on scheduling and the availability of space. Three to five other field trips, including two all-day trips are planned. Students should expect to be involved full-time during the duration of this summer course.

666. Immunology. 3 lec. hr.; 3 cr. Prereq.: A course in cell biology. The components and mechanisms of action of the immune system. Topics include requirements for antigenicity, types of antibodies, humoral and cell-mediated responses including allergy, graft rejection, and autoimmune diseases.

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 Advisor. May be repeated for credit if the topic is different. May include laboratory or field experience.

700-Level Courses

700. Genetics. 4 hr.; 4 cr. Prereq.: Biology 710 or equivalent. Structure and function of genes and genomes. Topics will include genetic model organisms and

recombinant DNA technology.

700.4. Laboratory Techniques in Molecular Genetics. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 700.

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.

706.7. Topics in Systematics. 3 hr.; 3 cr. Prereq.: A course in evolution or in some major group of organisms. Topics in classification, phylogenetic inferences, and systematics of a group of organisms. Course may be taken more than once if topic changes.

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 fish-like chordates; the second semester to emphasize the amphibia, reptiles; the third semester to emphasize mammals;

Biology

and the fourth semester to emphasize birds.

707.2, 707.4, 707.6, 707.8. Laboratory in Zoology and Phylogeny of the Chordata. 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. Molecular Biology. 4 hr.; 4 cr. Prereq.: Undergraduate degree in biology or biochemistry to include a one-year course in organic chemistry, or permission of instructor. Structure, function, and synthesis of DNA, RNA, and proteins.

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. Cell Biology. 4 lec. hr.; 4 cr. Prereq.: Undergraduate degree in biology or biochemistry to include a one-year course in organic chemistry, or permission of instructor. Characteristics and properties of cells and cellular components. Mechanisms underlying cell function and interactions of cells with their environment.

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.††

723. Ornithology. 3 lec., 3 lab. hr.; 3 cr. Prereq.: A course in evolution or in some major group of organisms is expected. Permission of the instructor required. The evolution, classification, origin of flight, anatomy, physiology, migration, ecology, and reproductive behavior, and

conservation of birds. Laboratory includes techniques used in ornithological research and field trips to focus on bird identification and behavior. Students will be expected to attend at least one overnight field trip (e.g., to Cape May, NJ). A library research paper will be submitted and presented in class.

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. Developmental Biology. 3 hr.; 3 cr. Prereq.: 714 or equivalent; a graduate course in biology or genetics is recommended. Cellular and molecular mecha-

nisms underlying the development of vertebrates, invertebrates, and plants. Embryogenesis, axis specification, organogenesis, and cell differentiation.

750.4. Laboratory in Developmental Biology. 4 lab. hr.; 2 cr. Prereq. or coreq.: Biology 750.

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 a field station, 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 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 advisor. A written report and an oral or written examination are required. Open only to students who pursue the 32-credit-coursework track; a maximum of 4 credits may be applied toward the MA in Biology.

790.1. Seminar in Evolution. 2 hr. plus conf.; 3 cr. Topics relating to the general subject of evolution. Course may be taken more than once if topic changes.††

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.: Biology 710 or equivalent, or permission of instructor. Seminar 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. 3 hr.; 3 cr. Prereq.: Biology 750 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. Course may be taken more than once if topic changes.

790.6. Seminar in Ecology. 2 hr. plus conf.; 3 cr. Prereq.: Biology 760.1 or equivalent and/or permission of instructor. Seminar in topics of the interrelationships of plants and animals with their biotic and abiotic environments. Course may be taken more than once if topic changes.††

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. Course may be taken more than once if topic changes.†

792. Tutorial. 1–4 hr.; 1–4 cr. Prereq.: A minimum of two 600- or 700-level courses in biology.

Chemistry & Biochemistry

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 permission 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.: Biology 714 or equivalent, or permission of instructor. Seminar 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. Course may be taken more than once if topic changes.

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. Course may be taken more than once if topic changes.

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. Course may be taken more than once if topic changes.†

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. Course may be taken more than once if topic changes.†

799. Research. Up to 6 cr. Prereq.: A minimum of two 600- or 700-level courses in biology. Research under the guidance of a faculty advisor.

Chemistry & Biochemistry

Chair: William H. Hersh

Graduate Advisors: A. David Baker (Chemistry); Wilma A. Saffran (Biochemistry)

Dept. Office: Remsen 206, 997-4100

The Department of Chemistry & 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 CUNY Graduate School.

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 recent years have been funded by the National Science Foundation, National Institutes of Health, Research Corporation, Pfeiffer Research Foundation, Howard Hughes Medical Institute, and Department of Defense. Participation in research is one of the best ways for the student to gain an appreciation for the daily activities of a working chemist. A brochure listing the research interests of the faculty may be obtained in the department office, or students can access the department's Web page at: www.qc.cuny.edu/Chemistry.

The department is also an active par-

ticipant in the Graduate Cooperative Education Program, and has an active Preparing Future Faculty program supported by the National Science Foundation and the American Chemical Society. Students should contact the Graduate Advisor for details and a discussion of the opportunities this program offers.

Faculty

Hersh, William H., Chair, *Professor*, PhD 1980, Columbia University: organic and organometallic; synthetic and mechanistic organometallic chemistry; organometallic Lewis acids; chiral catalysis of Diels-Adler reactions and hydroformylation; synthesis of electron-deficient phosphorus compounds and chiral phosphorus compounds; tungsten nitrosyl compounds; coordination of "noncoordinating" anions; synthesis of chiral phosphorus compounds for antisense oligonucleotides.

william_hersh@qc.edu

Baker, A. David, Graduate Advisor (Chemistry), *Professor*, PhD 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; synthesis of drugs that inhibit protein kinase C activity. adbaker@forbin.qc.edu

Saffran, Wilma A., Graduate Advisor (Biochemistry) *Associate Professor*, PhD 1979, Cornell University: biochemistry, molecular biology: DNA damage and repair; mutagenesis; recombination; carcinogenesis. wsaffran@forbin.qc.edu

Axelrad, George, *Professor Emeritus*, PhD 1960, University of Kansas: organic chemistry. gaxelrad@qc1.qc.edu

Berkowitz, William F., *Professor Emeritus*, PhD 1963, Massachusetts Institute of Technology: organic chemistry. wberkowitz@qc1.qc.edu

Bittman, Robert, *Distinguished Professor*, PhD 1965, University of California at Berkeley: biochemistry and organic chemistry: lipid second messengers, antitumor ether lipids; development of new methods for chemical synthesis of glycerolipids and sphingolipids; photoactivatable lipids. robert_bittman@qc.edu

Disch, Raymond L., *Professor Emeritus*, PhD 1959, Harvard University: physical chemistry: electric, magnetic, and optical studies of molecular structure; laser polarimetry; electro- and magnetic-optical effects; ORD/CD; ab initio molecular orbital theory. raymond_disch@qc.edu

Engel, Robert R., *Professor*, PhD 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, polycationic organic salts; ionic liquids. robert_engel@qc.edu

Evans, Cherice M., *Assistant Professor*, PhD 2000, Louisiana State University: physical chemistry: applications of synchrotron radiation in chemistry, laser spectroscopy, solvation in supercritical fluids, molecular Rydberg-Rydberg transitions, field effects on molecular Rydberg states, non-linear dynamical systems, oscillatory chemical reactions. cherice_evans@qc.edu

Gafney, Harry D., *Professor*, PhD 1970, Wayne State University: inorganic chemistry and material science: photochemistry of transition and main group metal complexes, hybrid catalysis, photoinduced electron transfer; excited state acid-base chemistry; photodeposition and characterization of metal and metal oxide clusters in glass; photochemical generation of gradient indices in glass. hgafney@qc1.qc.edu

Gersten, Bonnie L., *Assistant Professor*, PhD 1999, Rutgers University: physical/inorganic/photonic/materials science/nanotechnology: nanoparticle synthesis, self-assembly fabrication, material and optical properties. bgersten@qc1.qc.edu

Koepl, Gerald W., *Professor*, PhD 1969, Illinois Institute of Technology: physical chemistry: 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. gkoepl@qc.cuny.edu

Locke, David C., *Professor*, PhD 1965, Kansas State University: analytical separations; chemistry of biosolids. dclqc@forbin.qc.edu

Mirkin, Michael V., *Professor*, PhD 1987, Kazakh State University: electrochemistry/physical/analytical: reactions at liquid interfaces; bioelectrochemistry; electrochemical kinetics; scanning electrochemical microscopy; electrochemical systems approaching molecular dimensions, mathematical modeling of electrochemical processes. mvm\$chem@qc1.qc.edu

Muthyala, Rajeev S., *Assistant Professor*,

PhD 1988, University of Hawaii: organic and bioorganic chemistry: design and synthesis of estrogen receptor ligands; photodynamic therapy; synthesis of long-wavelength absorbing furanocoumarins; synthesis of non-natural amino acids; backbone engineering of peptides; synthesis of helical receptors; synthesis of chromogenic receptors for sensing biologically important analytes. rajeev_muthyala@qc.edu

Rotenberg, Susan A., *Professor*, PhD 1985, Brown University: biochemistry, enzymology, protein chemistry, enzyme inhibitors, site-directed mutagenesis, signal transduction, anti-neoplastic drug design. susan_rotenberg@qc.edu

Schulman, Jerome M., *Professor Emeritus*, PhD 1964, Columbia University: physical chemistry. schulman@forbin.qc.edu

Strekas, Thomas C., *Professor*, PhD 1973, Princeton University: inorganic and biochemistry: Raman and resonance Raman studies of transition metal diimine complexes; metal complex interactions with nucleic acids. thomas_strekas@qc.edu

Tropp, Burton E., *Professor*, PhD 1966, Harvard University: biochemistry: genetic and pharmacological aspects of phosphoglyceride metabolism. burton_tropp@qc.edu

MASTER OF ARTS PROGRAM

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, organic, 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 coursework 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. 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:

For a specialization in Chemistry:

	<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	10 (maximum)

or, alternatively

For a specialization in Biochemistry:

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	
<i>or</i>	
Chemistry 770 – Chemical Thermo-dynamics	
<i>or</i>	
Biochemistry 770 – Physical Biochemistry	3
Chemistry 780 or 781 – Advanced Seminar	
<i>or</i>	
Biochemistry U810A – Seminar in Biochemistry	2
Chemistry 790 (or Biochemistry 796) – Basic Laboratory Techniques for Research	4

Chemistry & Biochemistry

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 are 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.

PROGRAM FOR THE MASTER OF SCIENCE IN EDUCATION DEGREE

Requirements for Matriculation

In general students should have an undergraduate major or minor in Chemistry. Students lacking this but showing promise to succeed in master's-level chemistry courses may be permitted to enter as probationary matriculants and may be required to make up undergraduate course deficiencies. Probationary status will be removed upon completion of 9 credits of approved coursework with a minimum average of *B*.

Requirements for the Degree

1. Candidates in this program have two advisors, one in the Division of Education and one in the Department of Chemistry and Biochemistry. Both advisors must be consulted before registering in the program, and both must sign the approved program of studies. The Education Advisor should be consulted *first*.

2. Course requirements include 15 credits in 700-level courses in Chemistry and/or Biochemistry. Chemistry 504 is also acceptable toward this degree.

Relationship to the CUNY PhD Programs in Chemistry and Biochemistry

1. The doctoral programs in Chemistry and in Biochemistry based at the Graduate School and University Center are described in the *Bulletin* of the Graduate School of the City University of New York. Up to 30 credits of 700-level coursework in Chemistry or Biochemistry taken at Queens College may be transferred to meet the PhD programs' course requirements.

2. Although the required MA courses listed above are similar to the core courses for the CUNY doctoral programs in Chemistry and in Biochemistry, students should be aware that if they wish to enter the corresponding CUNY PhD program after earning a Queens College MA degree, they must still pass the doctoral programs' first-level examinations. This may be accomplished through exemption examinations or by taking or auditing U700-level courses at the Graduate School

3. Consequently, students who anticipate proceeding to the PhD should consider applying directly to those programs rather than to the Queens College MA program. Inquiries should be addressed to the Executive Officer of the PhD Program in Chemistry or in Biochemistry, CUNY Graduate School, 365 Fifth Avenue, New York, NY 10016.

Courses in Chemistry & Biochemistry

501, 502. **Modern Concepts of General Chemistry.** 2 hr.; 2 cr. each. Prereq.: Permission of department. An introduction or review for the present teacher, with emphasis on background information helpful to the high school chemistry teacher. Not open to candidates for the MA degree in Chemistry. Spring

503. **Selected Topics in Chemistry.** 3 hr.; 3 cr. Prereq.: Matriculation for the Master of Science Degree in Education and an undergraduate major in biology, geology, or physics. With particular emphasis on the high school chemistry curriculum, the course is designed for matriculants in a science educational program for high school teachers of general science and biology, physics, or geology. Not open to candidates for the MA degree in Chemistry.††

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 chro-

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

matographic 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 Advisor. 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

786. Spectroscopic Methods of Structure Determination. 3 lec. hr.; 3 cr. Prereq.: Permission of the department. A survey of the main methods for determining the structures of compounds from physical measurements. Interpretation of data from infrared, mass, and nuclear mag-

netic resonance spectrometry. Discussion of other physical methods such as diffusion fraction techniques and ultraviolet spectroscopy.

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 advisor. 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. 2 lec., 6 lab. hr.; 4 cr. Prereq.: Permission of the department. Modern instrumental methods of analysis including high-performance liquid chromatography; gas chromatography; gas chromatography/mass spectrometry; capillary electrophoresis; flame and graphite furnace atomic absorption spectrophotometry; and UV-visible, fluorescence, and Fourier transform infrared spectrophotometry applied to various organic and inorganic materials.

790.2. Basic Laboratory Techniques for Research in Organic and Inorganic Chemistry. 1 rec., 5 lab. hr.; 3 cr. Prereq. or coreq.: Chemistry 786. Modern techniques for the preparation and characterization of organic and inorganic 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 MA credits in Chemistry. Tutorial in advanced topics to be performed under the supervision of a department faculty member with the approval of the Graduate Advisor. May be taken more than once for different topics. 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 advisor. 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; development of experimental rationale for biochemical research.

Course in Reserve

751. Advanced Organic Chemistry II.

Classical, Middle Eastern & Asian Languages & Cultures

Chair: Yunzhong Shu

Graduate Advisor: Joel B. Lidov

Dept. Office: King 203, 997-5570; Fax 997-5577

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.

MA and PhD 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

Shu, Yunzhong, Chair, *Associate Professor*, PhD 1994, Columbia University: modern Chinese Literature

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

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

Computer Science

- PhD 2004, Columbia University: Arabic, Arabic literature
- Kim, Jinyo, *Assistant Professor*, PhD 1992, Columbia University: Greek and Latin language and literature, Greek epic
- Schoenheim, Ursula, *Professor*, PhD 1958, Cornell University: Latin and Greek language and literature, Roman satire
- Sukhu, Gopal, *Assistant Professor*, PhD 1993, Columbia University: Chinese poetry, philosophy, and East Asian religion

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: Jennifer Whitehead

Deputy Chair, Curriculum Committee
Chair: Zhigang Xiang

Assistant Chair for Undergraduate Studies: Kenneth J. Lord

Assistant Chair for Graduate Studies: Keitaro Yukawa

Graduate Admissions Officer: S. Ali Ghozati

Dept. Office: Science Building 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 PhD program offered by the CUNY Graduate School. For information on the PhD program, consult the department.

The department's faculty members conduct a wide range of research in computer science, and received external

funding from such federal agencies as the National Science Foundation, National Institutes of Health, and Department of Defense, as well as from corporate sources. Current areas of faculty research include bioinformatics, computer vision, information retrieval, data mining, instructional technology, medical and document imaging, networking, and parallel processing, among others. Please examine our Web page for the most up-to-date information: www.cs.qc.cuny.edu

We have about 230 computers running various operating systems (Solaris, Linux, IRIX, Microsoft Windows, etc.) networked in the department, available for research and instruction, and the college provides many additional PCs and servers. A list of our facilities may be accessed at the Web address above.

Faculty

- Whitehead, Jennifer, Chair, *Associate Professor*, PhD 1975, University of Warwick, England: continuous computational complexity, p-adic computing, real-time scheduling, file transfer scheduling
- Xiang, Zhigang, Deputy Chair, Curriculum Committee Chair, *Associate Professor*, PhD 1988, State University of New York at Buffalo: computer graphics, image processing, interactive techniques
- Lord, Kenneth J., Assistant Chair for Undergraduate Studies, *Lecturer*, PhD 1995, CUNY Graduate Center: Web programming
- Yukawa, Keitaro, Assistant Chair for Graduate Studies, *Assistant Professor*, PhD 1987, University of Waterloo: database systems, database aspects of multimedia documents, programming languages
- Ghozati, S. Ali, Graduate Admissions Officer, *Professor*, PhD 1976, Columbia University: computer communication networks, parallel processing
- Boklan, Kent D., *Assistant Professor*, PhD 1992, University of Michigan at Ann Arbor: cryptography and computer security
- Brown, Theodore D., *Professor*, PhD 1971, New York University: simulation methodology, analytic modeling, parallel algorithms, analysis of algorithms
- Chen, Jinlin, *Assistant Professor*, PhD 1999, Tsinghua University: Web information service, embedded systems, software engineering
- Fluture, Simina, *Lecturer*, MA 1999, Queens College: medical applications of computer vision, bio-informatics
- Friedman, Carol, *Professor*, PhD 1989, New York University: computational

- linguistics, medical informatics, databases
- Goldberg, Robert R., *Professor*, PhD 1989, Courant Institute of Mathematical Science, New York University: biomedical image processing, computer vision, formal languages and automata, genetic algorithms, graphics, scheduling theory
- Goodman, Seymour, *Professor Emeritus*, PhD 1962, Columbia University: microprogramming; computer architecture
- Gross, Ari D., *Associate Professor*, PhD 1991, Columbia University: computer vision, computer graphics, shape modeling, computational geometry
- Kong, T. Yung, *Professor*, PhD 1986, University of Oxford, England: geometrical and topological problems related to computer vision graphics and image processing
- Kwok, Kui-Lam, *Professor*, PhD 1965, University of Manchester, England: information retrieval (IR), application of neural networks to IR, data structures
- Obrenić, Bojana, *Assistant Professor*, PhD 1993, University of Massachusetts at Amherst: algorithm design, especially for parallel and concurrent systems, databases, computational combinatorics, graph theory
- Phillips, Tsaiyun Ihsin, *Professor*, PhD 1984, University of Maryland at College Park: computer vision; image processing; performance evaluation; document image analysis
- Ryba, Alexander, *Associate Professor*, PhD 1985, University of Cambridge, U.K.: computational group theory, finite group theory, combinatorial game theory
- Song, Mingzhou, *Assistant Professor*, PhD 2002, University of Washington: statistical pattern recognition, computational molecular biology, computer vision, neural signal analysis
- Sy, Bon K., *Professor*, PhD 1988, Northeastern University: uncertain reasoning, use of AI augmentative communication, recognition of impaired speech, data mining, data warehouse, wireless networking, VoIP technology
- Vickery, Christopher, *Professor*, PhD 1971, City University of New York: computer organization and architecture, software design, logic design
- Wasserman, Howard C., *Associate Professor Emeritus*, PhD 1971, University of Pennsylvania: theory of computation
- Waxman, Jerry J., *Professor*, PhD 1973, New York University: voice/data systems, algorithms, computer science education

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 Mathematical Applications and Algorithms.

The *Software* area is the primary focus of the program, and includes courses in fundamental algorithms, software design, database systems, distributed software systems, 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 *Mathematical Applications and Algorithms* 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 also include a working knowledge of at least one high-level, object-oriented programming language (some courses, including core courses, require knowledge of specific languages; consult the department for current requirements), assembly language programming, data structures, principles of programming languages, operating systems, computer organization, and theory of computation. 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 pro-

vided by the department. Courses taken to meet admissions deficiencies do not count toward the credits requirements for the degree; the average (mean) grade in these courses must be at least *B* (3.0), and each one of these courses must be completed with a grade of *B-* or better.

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, Computability and Complexity, and Computer Architecture and Networks). In addition, the student must choose one course in each of the three semi-core categories: Software, Hardware, and Mathematical Applications and Algorithms. After completion of 21 credits, each student must satisfy a "Capstone requirement" by completing a Software Development Practicum, a Hardware Design Practicum, a Research Practicum, an approved Research Project, 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 Mathematical Applications and Algorithms

Any course for which the title begins "scs," "sch," and "scm" (respectively: software, hardware, and mathematical applications and algorithms) satisfies the semi-core requirement in that particular area.

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
- 722. Computability and Complexity

744. Computer Architecture and Networks

Note: Students who passed CSCI 323 or 344 with a grade of *B+* or better may apply for a waiver from CSCI 700 or 715, respectively. Students who received this waiver will still be required to complete 30 credits of 700-level courses.

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

Mathematical Applications and Algorithms 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. Database Systems
- 780, 782, 784, 786, 783. Special Topics in Computer Science
- 790, 792, 794, 796, 793. Seminars 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
- 799.3. Research

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.

Remedial Background Courses

603. Data Structures. 4 hr.; 3 cr. Prereq.: Computer Science 195 or 101. Design and implementation of data structures using C++. Introduction to C++, including objects, classes, and inheritance. Stacks and queues. Pointers and dynamic

Computer Science

storage allocation. Linked lists. Recursion. Sorting and searching. Binary trees. Hash tables.

615. Survey of Information Technology. 3 hr.; 3 cr. Information technology for organization. Computational tools, the Internet's structure and capabilities, distributed computing, information management, and recent advances in computing applications of special interest to commerce and industry. Not usable toward the master's degree in Computer Science.

642. Assembly Language and Computer Organization. 4 hr.; 3 cr. Prereq.: Computer Science 95 and Mathematics 120. 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.

MA 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. 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. Database 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. RPCs. 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.

722. Computability and Complexity. 3 hr.; 3 cr. Prereq.: CS 320. Models of computation such as Turing machines, random access machines, and circuits. Time complexity classes, including P and NP, space complexity classes, including L and NL, and the interrelationships among them. Mapping reducibility and its specializations, including polynomial-time and log-space reducibility. Establishing a first NP-complete problem, such as circuit satisfiability or Boolean-formula satisfiability. P-complete decision problems; NP-complete decision problems; and related approximation algorithms.

731. Software Development Practicum. Hours to be arranged; 3 cr. Prereq.: Completion of 21 credits, including any software semi-core course. 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 mem-

ber of the department and by a thesis committee chosen by the department. (For college requirements regarding theses, see page 11 of this *Bulletin*.)

734. Hardware Design Practicum. Hours to be arranged; 3 cr. Prereq.: completion of 21 credits, including a hardware semi-core course. Each student will complete a significant hardware development project approved by the instructor. Projects may be based on existing development platforms, or may involve construction of a hardware platform specific to the project. Designs may involve various areas of digital design, such as signal processing, robotics, networking, or peripheral interfacing.

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. Special Topics in in Computer Science. 3 hr.; 3 cr. May be repeated for credit for differing titles.

788.1–3. 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.

790, 792, 793, 794, 796. Seminars in Computer Science. 3 hr.; 3 cr. May be repeated for credit if the topic changes.

799.1–3. Research. 1–3 hr.; 1–3 cr. Prereq.: Permission of department. May be repeated for credit for different topics, to a maximum of 3 credits. Student research reports shall be written; they will be placed on file with departmental technical reports. The 799.3 can be used to satisfy the capstone requirement if the proposal is approved for such by the department. Students may take such a course only after they have completed at least 21 credits of 700-level courses with a cumulative GPA of 3.3 or better, and the research involved must be an individual work.

School of Earth & Environmental Sciences

Director: Daniel Habib

Assistant for Graduate Advisement: Cecilia M.G. McHugh

Office: Science Bldg. D216, 997-3300

E-mail: geology@forbin.qc.edu

The school 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 school'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.

Faculty participate fully in the City University of New York PhD program in Earth and Environmental Sciences. Cooperative research projects exist with the American Museum of Natural History, the Lamont-Doherty Earth Observatory, and the Smithsonian Institution.

Exciting projects are being performed by students and faculty, and include: arsenic contamination in the potable water supply and its hydrological effects, dust climatology, environmental health and safety, environmental geochemistry, study of sewage effluent contamination in the benthic foodweb in Long Island Sound, paleoclimatological history of the Hudson River, use of recycled plastics for construction in New York harbor, hurricane patterns of the past and the future, long-term climate changes and weather patterns, tectonic history of Westchester County and of Maine, radiometric ages of ancient rocks, effects of asteroid impacts on the evolution and extinction of life, and earthquake hazards. Current funding for research is from the National Science Foundation,

National Institutes of Environmental Health, Hudson River Foundation, New York City Department of Environmental Protection and the PSC/CUNY Research Awards. Students who have successfully completed the program have found employment in industry or government, or have entered PhD programs.

Faculty

Habib, Daniel, Director, *Professor*, PhD 1965, The Pennsylvania State University: dinoflagellates, biostratigraphy, sedimentology of organic matter, environmental palynology. daniel_habib@qc.edu

McHugh, Cecilia M.G., Assistant for Graduate Advisement, *Professor*, PhD 1993, Columbia University; Research Associate, Lamont-Doherty Earth Observatory; marine geology, sedimentology, sedimentary petrology, geomorphology. cmmqc@forbin.qc.edu

Brock, Patrick W. G., *Associate Professor*, PhD 1963, University of Leeds: field geology, igneous and metamorphic petrology, structural geology, geomorphology. pbrock@qc.edu

Bruceckner, Hannes K., *Professor*, PhD 1968, Yale University; Senior Research Associate, Lamont-Doherty Earth Observatory: structural geology, geotectonics, isotope geology, geochemistry. hannes_bruceckner@qc.edu

Coch, Nicholas K., *Professor*, PhD 1965, Yale University: sedimentology, coastal geology, environmental geology. nicholas_coch@qc.edu

Eaton, Timothy T., *Assistant Professor*, PhD 2002, University of Wisconsin at Madison: hydrogeology, water resource management. timothy_eaton@qc.edu

Hemming, N. Gary, *Assistant Professor*, PhD, 1993, State University of New York at Stony Brook; Adjunct Research Scientist, Lamont-Doherty Earth Observatory: boron geochemistry, environmental geochemistry, chemical oceanography. hemming@qc.edu

Hendrey, George R., *Distinguished Professor*, PhD 1973, University of Washington at Seattle: earth systems science. george_hendry@qc.edu

Kohfeld, Karen E., *Assistant Professor*, PhD 1998, Columbia University; Senior Research Scientist, Max Planck Institute for Biogeochemistry: dust climatology, environmental biogeochemistry, micropaleontology.

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

Earth & Environmental Sciences

karen_kohfeld@qc.edu
Ludman, Allan, *Professor*, PhD 1969, University of Pennsylvania: field geology, metamorphic petrology, tectonics. allan_ludman@qc.edu
Markowitz, Steven, *Professor*, MD 1981, Columbia College of Physicians and Surgeons; Director, Queens College Center for the Biology of Natural Systems: occupational and environmental medicine, occupational health and safety. markowitz@cbns.qc.edu
Pekar, Stephen F., *Assistant Professor*, PhD, 1999, Rutgers University, State University of New Jersey, Member, U.S. Steering Committee for AN-DRILL (Antarctic Drilling Program): sedimentology, stratigraphy, paleontology. stephen_pekar@qc.edu
Zheng, Yan, *Professor*, PhD 1999, Columbia University; isotopic geochemistry in earth surface processes. yzheng.sees.qc

ADVANCED GRADUATE CERTIFICATE PROGRAM IN EARTH SCIENCE

The Advanced Graduate Certificate Program in Earth Science is designed to provide Grade 8–12 teachers with the broad background necessary to teach Regents Earth Science. It is intended primarily for teachers who are already licensed in another science and have therefore completed their required pedagogy courses. The Program covers the Regents Earth Science Core Curriculum in six courses (20 credits), two more than the minimum required for state certification.

Requirements for Matriculation

Teachers matriculate directly into the Advanced Certificate Program and pay CUNY graduate tuition. Applicants must submit a copy of their current teaching certification to demonstrate appropriate pedagogy background.

Program Requirements

Candidates for the Advanced Certificate must complete the following courses with a grade of *B* or better:
Geol 501: Earth Composition and Earth Processes (4 cr.)
Geol 502: Earth History and the Fossil Record (3 cr.)
Geol 520: Meteorology (3 cr.)
Geol 521: Oceanography (3 cr.)
Geol 522: Applied Geological Reasoning: Geology of New York State (3 cr.)
Astr 501: Astronomy (4 cr.)

Relationship to Master of Science in Education Degree

Students matriculated in the MS in Education program who wish to specialize in

Earth Science should have two advisors, one in the Division of Education and one in the School of Earth and Environmental Sciences. MS in Education students with little prior Geology training should follow the Advanced Certificate curriculum outlined above; those with an undergraduate Geology degree should take 700-level Geology courses.

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 advisors prior to registering for these courses.

501. Earth Composition and Earth Processes. 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. Earth History and the Fossil Record. 2 lec., 2 seminar/lab 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 red tides, 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., 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. Fieldwork involves obtaining, recording, and interpreting data from a diverse set of geologic terrains.††

520. Meteorology. 2 lec. and 2 lab./rec. hr.; 3 cr. Prereq. or coreq.: Matriculation in the program or permission of depart-

ment. This course is designed to give middle and high school teachers a non-mathematical background in meteorology, the science of the atmosphere, and its effects on the surface of the earth and on life in general. Topics include the history, structure, and dynamics of the atmosphere (physical meteorology); fronts and frontal weather, storms (dynamical meteorology), observational methods (observational meteorology); temporal changes in climate (climatology). Observational methods and data are used throughout to support the understanding and concepts important in meteorology.

521. Oceanography. 2 lec. and 2 lab./rec. hr.; 3 cr. Prereq. or coreq.: Matriculation in the program or permission of department. This class provides middle and high school teachers with background information about the earth's oceans that encompasses: the history of oceanography and sea-floor exploration; the evolution of the oceans and atmosphere; Plate Tectonics; ocean sedimentation; properties and chemistry of ocean waters; ocean/atmosphere interactions and their effects on climate; coasts; life in the oceans; marine resources and environmental concerns.

522. Applied Geologic Reasoning: Geology of New York State. 2 lec., 3 lab. hr., field trips; 3 cr. Prereq. or coreq.: Matriculation in the program or permission of department, SEES 501 and 502 (or equivalent courses) and at least one 300-level undergraduate geology course. The geologic history of New York, with special emphasis on the New York City region as we currently understand it, is used as a platform for examining, in lecture, lab, and in the field, the evidence and logic that goes into elucidating the geologic history and completion of a geologic map, cross-section, and stratigraphic column.

599. Special Topics in Geology. 599.1, 1 lec. hr., 1 cr.; 599.2, 2 lec. hr., 2 cr.; 599.3, 3 lec. hr. or 2 lec. hr., 2 lab. hr., 3 cr.; 599.4, 3 lec. hr., 3 lab. hr., 4 cr. Prereq.: Permission of department. This course will cover topics of current interest in a particular aspect of the geological sciences. Topics may vary. The course may be repeated for credit if the topic is changed.

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 in-

structor. 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 semin., 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 semin. 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 fieldwork, 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 fieldwork, with the results presented in a geologic map accompanied by a written report, cross sections,

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

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 fieldwork and a detailed field report of acceptable standards with geologic map, diagrams, and illustrations.††

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.†

721. Optical Mineralogy. 2 lec., 4 lab. hr., plus field trip; 2 cr. (for half a semester). Prereq.: Undergraduate course in mineralogy assumed. Use of the petrographic microscope as a rigorous tool in the identification of minerals and the study of rocks.

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.††

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. fieldwork 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, structures, 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.††

760. Techniques in Environmental Geochemistry. 2 lec., 4 lab. hr.; 4 cr. Prereq.: Chem 113 or ENSCI 111 or Geol 100; Chem 241 or Geol 270; permission of the instructor. The objective of this course is to train students in field and laboratory techniques used to characterize and regulate water quality in surface water, groundwater, and coastal water systems. Sampling techniques appropriate for each water regime are practiced,

with emphasis placed on maintaining and documenting sample integrity. Standard parameters such as temperature, conductivity, dissolved oxygen, pH, and Eh, are measured in the field. In the laboratory, titrimetric methods are used for alkalinity and dissolved oxygen. Instrumental techniques include atomic absorption spectrometry for major ions and trace elements, ion chromatography for anions, and spectrophotometry for nutrients. Total and fecal coliform counts are also conducted.

761. Field Methods in Hydrology.

3 weeks; 3 cr. Offered in summers, primarily at Caumsett State Park and Queens College campus. Prereq.: Geology 745. Application of the latest techniques for sampling, monitoring, and evaluating groundwater and surface water systems. Emphasis on drainage basin analysis, aquifer testing selected geophysical techniques, and hydrologic software application.

762. Shallow Subsurface Geophysics.

2 lec., 2 rec./dem./ hr.; 3 cr. Prereq. or coreq.: 2 semesters undergrad. Calculus; 2 semesters undergrad physics; or equivalents. Graduate course will train environmental scientists, technologists to apply geophysics to field methods and procedures, and to train in magnetic methods. Training will also include electromagnetic, gravimetric, and marine seismological methods.

763. Geographic Information Systems and Geologic Mapping. 3 hr.; 3 cr. Prereq. or coreq.: Graduate standing in geology, environmental science, or related discipline. Introduction to the uses of Geographic Information Systems in geologic mapping and environmental fieldwork. Hands-on application of GIS techniques and digital information to prepare base maps, plan field programs, record and analyze data, and prepare professional-quality maps and poster presentations.

764. Contaminant Hydrology. 3 hr.; 3 cr. Prereq. or coreq.: Geology 745. This course provides a largely quantitative understanding of the processes controlling physical transport and biogeochemical reactions that determine contaminant concentrations in groundwater resources. The content will include the sources and different types of groundwater contaminant, the mechanisms that control contaminant behavior, and the most up-to-date technologies for groundwater remediation.

765. Surface Processes and Products.

2 lec., 3 lab. hr.; 3 cr. Field trips may be required. The origin of terrestrial and

near shore sediments, sediment sequences, soils and land forms. Emphasis is placed on the laboratory and field techniques used in areal surficial and shallow subsurface surveys.

766. Analytical Techniques in Environmental Geosciences. 2 lec., 3 lab. hr.; 3 cr. Prereq.: Permission of instructor. Geological, geochemical, and hydrological techniques used to analyze samples from various aqueous environments. Emphasis on laboratory analysis including instrumentation and application of requisite software.

767. Field Techniques in Environmental Sciences. 9 lab. hr.; 3 cr. Prereq. or coreq.: Geology 701, plus two advanced Geology or ENSCI graduate courses. Series of exercises designed to train students to collect reproducible data in the field, to analyze and interpret the data, and to present their findings in maps, written reports, and supporting illustrations.

768. Soils, Wetlands, and Bioremediation. 2 lec., 3 lab. hr.; 3 cr. Prereq. or coreq.: Undergraduate major in Biology, Chemistry, Environmental Science, or Geology. An introduction to wetland science, with an emphasis on the capacities of wetlands and soil systems for biogeochemical remediation of pollutants. The course will begin with an overview of wetland structure, diversity and function, with particular emphasis on biogeochemical mechanisms of nutrient cycling and pollutant uptake and degradation. Engineering, design, and monitoring necessary for wetlands construction and restoration will be covered. Case studies will be examined of uses of wetland for wastewater, heavy metal and hydrocarbon treatment in a variety of climate regimes. Scientific, management, policy, and regulatory implications of this approach to pollution control and mitigation will also be explored.

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.

Division of Education

Dean: Penny L. Hamrich

Assistant Dean: Michelle Myers

Director of Office of Teacher Certification, Clinical Experiences, and Career Placement; Title II Coordinator: Christine Howard

Field Placement: Suzanne Abruzzo, SEYS; Eileen Bowen, EECE

Enrollment, Information, and Retention: Clarice Wasserman

Department of Elementary & Early Childhood Education

Chair: Helen L. Johnson

Department of Secondary Education & Youth Services

Chair: Eleanor Armour-Thomas

Department of Educational & Community Programs

Chair: Jesse M. Vázquez

PROGRAMS IN EDUCATION

Queens College offers integrated programs of advanced studies leading to the degree of Master of Science in Education. Through these programs students 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 successful professional practice.

In addition to master's degree programs, Queens College offers 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, initial certificate programs are available in Elementary and Early Childhood Education (*Master of Arts in Teaching*, page 68) and Secondary Education (*Initial Certificate Program*, page 77).

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 three years of the date of the first credit earned, with a one-year extension possible.

The Master of Science in Education is granted in the following areas:

	<i>HEGIS Code</i>
Art Ed (p. 81)	0831
Childhood Ed, Grades 1–6 (p. 66)	0802
Counselor Ed (p. 94) School Counseling Mental Health/Substance Abuse Counseling	0826.01
Early Childhood Ed (p. 65)	0823
Elementary Ed–Specialization in Bilingual Ed (p. 70)	0899
English Ed (p. 96)	1501.01
Family and Consumer Science (p. 101)	1301.01
Foreign Languages Ed (p. 74) French (p. 102) Italian (p. 103) Spanish (p. 110)	1102.01 1104.01 1105.01
Literacy Ed, Birth-Grade 6 and Grades 5–12	0830
Mathematics Ed	1701.01
Music Ed	0832
Physical Ed	0835
School Psychology	0826.02
Science Ed Biology Chemistry Earth Science Physics	0401.01 1905.01 1917.01 1902.01
Social Studies Ed (p. 79)	2201.01
Special Ed (p. 91)	0808

Teaching English to Speakers of
Other Languages (p. 126) 1508

Professional Certificate Programs

*Initial Certificate and Diploma programs are offered in the following areas:

Childhood and Early Childhood Ed
(post-baccalaureate)
Educational Leadership (post-master's)
School Psychology
Secondary Ed (post-baccalaureate)

Awards

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 Alice Artzt Mathematics Teaching Award. \$1,000 is granted to a graduating student in the Master of Science Program in Mathematics Education. The criteria employed by the committee in choosing the individual are: grade-point average – 3.75 education index; 3.50 college index along with grade of A in student teaching (if taken at the college). Demonstration of special traits such as dedication, extra effort, need; a philosophy of teaching reflecting the approach recommended by the National Council of Teachers of Mathematics.

The Clarence Bunch Art Education Award. \$100 is granted to a graduating undergraduate or graduate student in the Art Education Program. This award is administered in honor of Clarence Bunch, who was a faculty member in the program for many years and Chair of the Department of Secondary Education & Youth Services. The criteria in choosing the individual are grade-point average and dedication to arts in education.

The Robert Edgar Award in Social Studies. \$150 is granted to a graduating undergraduate or graduate student in the Social Studies Secondary Education Program. This award is administered in honor of Robert Edgar, who was a faculty member in the Department of Secondary Education & Youth Services. The criteria in choosing the individual are grade-point average and a dedication to teaching Social Studies.

The Alan Richard Hamovitch Award for Excellence in Special Education.

*30-credit initial certificate

\$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 John Lidstone Award in Education. \$500 is granted to an undergraduate or graduate student who plans on returning to the field of education. This award is administered in honor of John Lidstone, who was a faculty member and Dean of Education. Criteria in choosing the individual are grade-point average and dedication to the teaching profession.

The Dr. O Bernard Liebman Award is given annually to an exceptional school psychology student in her/his internship year who demonstrates dedication and service to the field of school psychology.

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 of Educational & Community Programs. Professor Weithorn was strongly supportive of all her students. In particular, she was aware of the difficulties experienced by graduate students who were also mothers of young 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.

Field Opportunities

Fieldwork opportunities are available for graduate students in numerous schools and agencies. All programs in education require extensive field experiences closely related to specific coursework.

Career Placement Services

As a service to its students, the Division of Education maintains a Career Placement Office (718-997-5545). Students, including classroom teachers, curriculum specialists, guidance and counseling personnel, school psychologists, and elementary and secondary school administrators and supervisors, may register with the office by setting up a career placement file with recommendations and an ongoing record of their professional qualifications and experience.

Students are urged to register with the Career Placement Office when they have completed 12 credits of graduate work at

Queens. Those who have registered as undergraduates need not re-register, but should bring their records up to date.

Field Placement Offices

Two Field Placement Offices (EECE and SEYS) coordinate assignments for student teaching and other field experiences required in the programs.

New York State Certification

All programs are registered with the New York State Education Department to provide initial and/or professional certificates in teaching or educational practice. Candidates for graduation or program completion should apply for NY State certification at the Office of Teacher Certification.

New York City Licensing

New York City licensing requirements occasionally change. 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 Career Placement Office (718-997-5545).

Elementary & Early Childhood Education

Chair: Helen L. Johnson

Dept. Office: Powdermaker Hall 054, 997-5300

The Department of Elementary & Early Childhood Education (EECE) offers graduate programs leading to New York State certification in Childhood Education, Grades 1–6, and Early Childhood Education, B–2. The programs prepare teachers to support learning and development within the family, culture, and community contexts of students and schools. EECE programs share a commitment to educational practices that honor linguistic and cultural diversity, and integrate technology and instruction to enhance learning.

The department offers a 39-credit program leading to the Master of Science in Education degree (MSEd) for students who have completed a teacher certifica-

tion program in elementary/early childhood and currently hold a provisional or initial teaching certificate. For students who did not complete an elementary education certification program as undergraduates, EECE offers a 45-credit program leading to the Master of Arts in Teaching degree (MAT).

Courses are generally offered in the late afternoon and evening. 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.

Important note: To conform to changing NYS regulations, EECE graduate programs have been substantially restructured. Each semester, the department holds informational sessions about NYS certification and program requirements. Students considering graduate study in elementary and early childhood are encouraged to attend. Contact the department (997-5300) for the schedule.

Faculty

- Johnson, Helen L., *Chair, Professor*, PhD 1972, University of Wisconsin: children's cognitive development, literacy and consequences of early deprivation in children
- Akiba, Daisuke, *Assistant Professor*, PhD 2000, Brown University: interdisciplinary studies in experimental psychology and education
- Alkins, Kimberley, *Assistant Professor*, PhD 2002, University of Chicago: urban education
- Baghban, Marcia M., *Professor*, EdD 1979, Indiana University: language arts and reading education
- Bisland, Beverly, *Assistant Professor*, EdD 2004, Teachers College, Columbia University: social studies education
- Bushnell Greiner, Mary, *Associate Professor*, PhD 1998, University of Virginia, educational foundations, cultural anthropology
- Colman, Penelope, *Distinguished Lecturer*, MAT 1967, Johns Hopkins University: history
- Engel, Liba, *Assistant Professor*, PhD 1999, University of Wisconsin at Madison: curriculum & instruction, educational policy studies
- Fraboni, Michelle, *Lecturer*, MSEd 1998, Queens College: elementary education; doctoral work in progress at Teachers College, Columbia University: instructional technology and media
- Furani, Helene Alpert, *Assistant Professor*, PhD 2000, Michigan State University: curriculum teaching & educational policy, concentration mathematics
- Gullo, Dominic, *Professor*, PhD 1979, Indiana University: interdisciplinary

Elementary & Early Childhood Education

doctoral program on young children (IDPCY), specialization in child development, early cognitive and language development, the effects of familial and social environments on development/academic achievement, and the father's role in child development
Harris, Gloria A., *Assistant Professor*, EdD 1968, Teachers College, Columbia University: social studies, multicultural education

Kirch, Susan A., *Assistant Professor*, PhD 1996, Harvard University: cell and development biology

Love, Angela, *Assistant Professor*, PhD 2001, Georgia State University: educational psychology, cognate in educational research methods

Malow-Iroff, Micheline S., *Assistant Professor*, PhD 2000, CUNY Graduate Center: educational/school psychology

Martin, Sonya N., *Substitute Lecturer*, PhD pending, Curtin University of Technology, Perth, Australia: research and development in science education

O'Connor, Evelyn, *Assistant Professor*, PhD 1998, CUNY Graduate Center: educational/school psychology

Olivares, Rafael A., *Associate Professor*, EdD 1985, Teachers College, Columbia University: teacher education

Salz, Arthur E., *Associate Professor*, EdD 1967, Teachers College, Columbia University: open education, mainstreaming handicapped children

Samson, Florence, *Assistant Professor*, PhD 1998, University of Toronto, Ontario Institute for Studies in Education: curriculum

Schwartz, Judith Iris, *Professor*, PhD 1970, New York University: early linguistic and cognitive development, early childhood education, reading and language arts instruction

Schwartz, Sydney L., *Adjunct Professor Emerita*, EdD 1965, Teachers College, Columbia University: early childhood curriculum, mathematics and science in elementary/early childhood education, study of teaching behavior and children's learning

Scott, Lisa J., *Assistant Professor*, PhD 2004, Claremont Graduate University: educational studies

Spradley, Patricia, *Assistant Professor*, EdD 1996, Teachers College, Columbia University: higher and adult education administration

Spring, Joel, *Professor*, PhD 1969, University of Wisconsin, educational policy studies

Steuerwalt, Karen M., *Lecturer*, MA 1990, Adelphi University: elementary education

Swell, Lila, *Associate Professor*, EdD 1964, Teachers College, Columbia

University: creative methods in affective education

Turkel, Susan B., *Associate Professor*, EdD 1977, Teachers College, Columbia University: mathematics, science, computer education

Zarnowski, Myra S., *Professor*, EdD 1983, University of Georgia: language arts and social studies education

New York State Certificates in Elementary and Early Childhood Education

New York State is currently changing the certificate titles for elementary and early childhood education. In conformance with these changes, students entering EECE graduate programs with NYS provisional certification in Pre-K-6 (awarded through February 2, 2004) will be eligible for NYS permanent certification in Pre-K-6 upon completion of the MSEd program. Students entering EECE with NYS initial certification in Childhood Education, Grades 1-6, will be eligible to obtain professional certification in Childhood Education, Grades 1-6, and/or Early Childhood Education, B-2, as indicated in the program descriptions that follow.

MASTER OF SCIENCE IN EDUCATION (MSED), EARLY CHILDHOOD EDUCATION, BIRTH-GRADE 2

Advisor: Judith Iris Schwartz

The MS in Ed in Early Childhood Education, B-2, is designed for students with initial certificates in Childhood Education, Grades 1-6, who are interested in adding a second certificate area. The program presents an integrated approach to curriculum and environmental design. The program acknowledges the unique needs and learning patterns of very young children as the foundation for shaping the content of courses for professionals in early childhood education. The sequence of coursework is summarized in Table 1 on page 67.

MASTER OF SCIENCE IN EDUCATION (MSED), CHILDHOOD EDUCATION, GRADES 1-6

Advisors: Fraboni, Gullo, Johnson, Kirch, Olivares, Turkel, Zarnowski

The MS in Ed in Childhood Education, Grades 1-6, is designed for students with initial certificates in Childhood Education, Grades 1-6, who are interested in pursuing advanced pedagogical study within their certificate area. It emphasizes an inquiry-based approach to the

study of learning and teaching. In addition to fulfilling core course requirements, students in this program complete a 4-course specialization in one of seven areas: Children's Literature, Education for Diverse Learners, Family and Community Studies, Instructional Technology, Language and Literacy, Mathematics Education, or Science Education (specializations are described below). Students also are required to complete four interdisciplinary courses that have been developed in collaboration with the liberal arts and sciences departments. In some instances, the interdisciplinary courses also fulfill requirements for some of the specializations. The sequence of coursework is summarized in Table 2. Courses that lead to the Bilingual Extension may be taken as part of this program. Students interested in obtaining the Bilingual Extension should contact Dr. Rafael Olivares (997-5318).

Children's Literature

Advisor: Myra S. Zarnowski

In this specialty, teachers develop an appreciation of the broad range of children's literature, a critical perspective for reading literature, and strategies for sharing books with children for instructional purposes and for enjoyment. Major themes in the courses include deepening students' understanding of various types of literature, aligning literature with instructional goals and strategies, and understanding theory and research in children's literature. Elective courses may be selected from other specialties with the Advisor's approval.

Education for Diverse Populations

Advisor: Rafael A. Olivares

In this specialty, teachers examine ways to integrate non-native speakers of English into elementary school classes. Major themes in the courses include theory and research in second language learning, differences in oral and written bilingual learning, content learning in bilingual contexts, assessment, cross-cultural communication, and communication with families. Elective courses may be selected from other specializations with the Advisor's approval.

Family and Community Studies

Advisor: Helen L. Johnson

In this specialty, teachers examine the social systems and contexts that support and shape children's learning and development. Major themes in the courses include families as contexts for learning, sociocultural influences on child development and learning, building home-

TABLE 1

**Coursework for New York State Professional Certificate
Early Childhood Education, B-2**

Note: The Early Childhood Education, B-2 professional certificate program is designed for students with an initial certificate in Childhood Education, 1-6. The requirement for interdisciplinary courses does not apply to students seeking to add B-2 as an additional certificate title. However, students are required to have a field placement in the new certificate area. For students entering the program with NYS provisional certification in Pre-K-6 (this certificate will be awarded through February 2, 2004), EECE 730 is not required. Instead, students take an additional course within their specialization.

Advanced Study Core (15 credits)

EECE 703. Classroom Realities in Diverse Settings 3 cr.

Students select one of the following 3-credit courses:

EECE 702. Social Foundations of Education

EECE 704. Major Contemporary Issues in Education

EECE 705. School and Community Relations 3 cr.

EECE 710. Ecological Perspectives on Development: The Early Years 3 cr.

EECE 780. Introduction to Educational Research 3 cr.

EECE 782. Teacher as Researcher 3 cr.

B-2 Core (15 credits)

EECE 721. Professional Issues in Early Childhood 3 cr.

EECE 722. Language Learning in Cross-Cultural Perspective 3 cr.

EECE 724. Curriculum and Environmental Design for Early Childhood, Part I 3 cr.

EECE 725. Curriculum and Environmental Design for Early Childhood, Part II 3 cr.

EECE 730. Practicum in Early Childhood 3 cr.

Electives (6 credits)

EECE 728. Integrating Expressive Arts into the Early Childhood Curriculum *Recommended* 3 cr.

Other 3 cr.

TABLE 2

**Coursework for New York State Professional Certificate
Childhood Education, Grades 1-6****Advanced Study Core (15 credits)**

Students select one of the following 3-credit courses:

EECE 702. Social Foundations of Education

EECE 704. Major Contemporary Issues in Education

EECE 705. School and Community Relations 3 cr.

Students select one of the following 3-credit courses:

EECE 710. Ecological Perspectives on Development: The Early Years

EECE 711. Ecological Perspectives on Development: The Childhood Years

EECE 717. Ecological Perspectives on Development: Early Adolescence 3 cr.

EECE 703. Classroom Realities in Diverse Settings 3 cr.

EECE 780. Introduction to Educational Research 3 cr.

EECE 782. Teacher as Researcher 3 cr.

Interdisciplinary Core (12 credits)

EECE 796. Exploring Problems in History Through Literature 3 cr.

EECE 797. Queens County as a Learning Lab 3 cr.

EECE 798. Reading and Writing for Learning in Science 3 cr.

EECE 799. Exploring Mathematical Ideas Through Literature 3 cr.

Specialization (12 credits)

Students are required to complete 12 credits in a specialty area:

Two required courses 6 cr.

Two electives 6 cr.

Total 39 cr.

All students are required to complete a specialization in a high priority area. The seven specializations are described on page 66 and on this page.

community-school collaborations, and strategies for strengthening family participation in school settings. Elective courses may be selected for other specializations with the Advisor's approval.

Language and Literacy

Advisor: Dominic Gullo

In this specialty, teachers examine how language develops in young children, the relations between language and cognition, and the sociocultural factors that influence language learning. Major themes in the courses include the development of literacy as a continuum, language diversity, language assessment, and the teaching strategies that foster the development of reading and writing. Elective courses may be selected from other specializations with the Advisor's approval.

Learning Technology

Advisor: Michelle Fraboni

In this specialty, teachers enhance their expertise in the use of technology to become leaders in learning technology in their schools. Major themes in the courses include the integration of technology with language arts, social studies, mathematics, and science. Elective courses may be selected from other specializations with the Advisor's approval.

Mathematics Education

Advisor: Susan B. Turkel

In this specialty, teachers explore trends and issues in mathematics education in courses that promote their own risk-taking, perseverance, and confidence. Major themes in the courses include mathematics as communication, reasoning and problem-solving, integration of mathematics into subject fields such as art, literature, science, and history, and ways to build supportive mathematical communities in which students feel safe to pose questions, offer conjectures, and explain their reasoning. Elective courses may be selected from other specializations with the Advisor's approval.

Science Education

Advisor: Susan A. Kirch

In this specialty, teachers integrate knowledge about science with knowledge about learning and pedagogy. Major themes in the courses include facilitation of student learning, development of inquiry-based science programs, assessment of science teaching and learning, and creation of communities of science learners in physical, life, and environmental sciences. Elective courses may be selected from other specializations with the Advisor's approval.

**TABLE 3. Master of Arts in Teaching
Sequence of Coursework Leading to New York State Initial Certificate
Early Childhood Education, B-2**

Pedagogical Core (12 credits)

Ecology of Childhood (Students select one):

EECE 702. Social Foundations of Education	
EECE 704. Major Contemporary Issues in Education	
EECE 705. School and Community Relations	3 cr.

Ecological Perspectives on Development:

EECE 710. Ecological Perspectives on Development: The Early Years	3 cr.
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Language and Literacy Development Across the Curriculum

(Students take both):

EECE 520. Language Development and Emergent Literacy	3 cr.
EECE 525. Language and Literacy Learning in the Elementary Years	3 cr.

Curriculum in Action (12 credits)

EECE 721. Professional Issues in Early Childhood	3 cr.
EECE 724. Curriculum and Environmental Design for Early Childhood, Part I	3 cr.
EECE 725. Curriculum and Environmental Design for Early Childhood, Part II	3 cr.
EECE 750. Modern Learning Technologies	3 cr.

Student Teaching (6 credits)

EECE 565.	6 cr.
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Upon completion of these 30 credits, students are eligible for the NYS Initial Certificate in Early Childhood Education, B-2, contingent upon passing LAST, ATSW, and CST Exams, and completing state-approved training seminars on child abuse, maltreatment and abduction; substance abuse; school violence; safety education; fire and arson prevention.

Research into Practice (15 credits)

EECE 703. Classroom Realities in Diverse Settings	3 cr.
EECE 780. Introduction to Educational Research	3 cr.
EECE 781. Inquiry into Teaching	3 cr.
Specialty Electives	6 cr.
Total	45 cr.

Upon completion of these 45 credits, students receive the degree of Master of Arts in Teaching.

Admissions Requirements and Prerequisites for MEd Programs

Students are required to hold a bachelor's degree with a minimum cumulative GPA of 3.0, and a NYS initial certificate in Childhood Education, Grades 1-6, or provisional certificate in Pre-K-6. Applicants are required to provide writing samples on site. Additional application requirements are specified on the application form. Applicants may enter the program only as matriculating students. The department holds several workshops about program requirements and application procedures; interested students are encouraged to contact the department (997-5258) for application deadlines and further information.

Once students are accepted, they will be invited to an orientation meeting. Students can schedule a meeting with an advisor to review the student's background and interests and assist with course selection and program planning.

Literacy B-6

EECE also offers an MS in Literacy Education with a NYS Professional Certificate as a Literacy Teacher, B-6. This competitive professional program requires at least a 3.0 GPA and an Initial Certificate as a classroom teacher as a part of the application.

The 39 credits of coursework include foundations, diversity, pedagogy, content areas studies, literature studies, and specifically designed courses in authentic and standards-based assessment, the role of and strategies for the literacy specialist, and a one-semester reading practicum with children. Because the students in this program are teachers, there is a strong emphasis on research with issues and a project related to literacy learning.

**Sequence of Coursework for New York State Literacy Professional Certificate
Literacy Teacher, B-6, MSED**

Note: The literacy professional certificate

program is designed for students with an initial certificate in Childhood 1-6 or the equivalent.

SEMESTER I

EECE 773. Families, Stories, and Literacy. 3 hr.; 3 cr. Students apply constructs from developmental psychology to consider how families shape the young child's approach to language, stories, and literacy while in turn being shaped by the child's encounters with spoken and written words.

EECE 722. Language Learning in Cross-Cultural Perspectives. 3 hr.; 3 cr. This course examines the social and cultural bases of language acquisition and formal language education, highlighting the interrelationships between language acquisition and enculturation processes.

SEMESTER II

EECE 731. Teaching Beginning Reading and Writing. 3 hr.; 3 cr. This course 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 780. Introduction to Educational Research. 3 hr.; 3 cr. This course examines basic principles of quantitative and qualitative research design in educational settings.

SEMESTER III

EECE 801. The Role of Literacy Specialist. 3 hr.; 3 cr. This course is designed to provide the reading specialist with the knowledge, skills, and processes necessary to collaborate with other professionals in the school and community.

EECE 764. Learning the Content Areas in Multilingual Settings: Teaching and Assessment. 3 hr.; 3 cr. This course examines teaching strategies for multilingual classrooms. Students practice different methodologies in teaching mathematics, science, social studies, and other content areas in the first and second language. Consideration is given to the evaluation issues related to language and content in the bilingual-multicultural classroom.

SEMESTER IV

EECE 802. Teaching Strategies for the Literacy Specialist. 3 hr.; 3 cr. This course is designed to present the various techniques that the literacy specialist will need. It will prepare teachers to use their knowledge of literacy teaching techniques to meet the needs of individuals, small groups, and whole classes.

**TABLE 4. Master of Arts in Teaching
Sequence of Coursework Leading to New York State Initial Certificate
Childhood Education, Grades 1–6**

Pedagogical Core (12 credits)	
<i>Ecology of Childhood</i> (Students select one):	
EECE 702. Social Foundations of Education	
EECE 704. Major Contemporary Issues in Education	
EECE 705. School and Community Relations	3 cr.
<i>Ecological Perspectives on Development</i> : (Students select one):	
EECE 710. Ecological Perspectives on Development: The Early Years	
EECE 711. Ecological Perspectives on Development: The Childhood Years	3 cr.
EECE 717. Ecological Perspectives on Development: Early Adolescence	
<i>Language and Literacy Development Across the Curriculum</i> (Students take both):	
EECE 520. Language Development and Emergent Literacy	3 cr.
EECE 525. Language and Literacy Learning in the Elementary Years	3 cr.
Curriculum in Action (12 credits)	
EECE 545. Social Studies in the Elementary School	3 cr.
EECE 550. Mathematics in the Elementary School	3 cr.
EECE 555. Science in the Elementary School	3 cr.
EECE 750. Modern Learning Technologies	3 cr.
Student Teaching (6 credits)	
EECE 566.	6 cr.
Upon completion of these 30 credits, students are eligible for the NYS Initial Certificate in Childhood Education, Grades 1–6, contingent upon passing LAST, ATSW, and CST Exams and completing state-approved training seminars on child abuse, maltreatment and abduction; substance abuse; school violence; safety education; fire and arson prevention.	
Research into Practice (15 credits)	
EECE 703. Classroom Realities in Diverse Settings	3 cr.
EECE 780. Introduction to Educational Research	3 cr.
EECE 781. Inquiry into Teaching	3 cr.
Specialty Electives	6 cr.
Total	45 cr.

Upon completion of these 45 credits, students receive the degree of Master of Arts in Teaching.

EECE 803. Authentic Assessment. 3 hr.; 3 cr. (Lab Fee) This course is designed to provide the literacy specialist with the knowledge and skills necessary for the use of authentic assessment. Teachers practice classroom diagnostic procedures to assess, analyze, and provide instruction to enhance the reading and writing performance of students.

SEMESTER V

EECE 787. Research in Language and Literacy. 3 hr.; 3 cr. This course examines contemporary issues relevant to literacy learning in the family, community, and schools. Students develop projects for the improvement of practices in homes and schools.

EECE 804. Standards-Based Assessment. 3 hr.; 3 cr. (Lab Fee) This course is designed to provide the literacy specialist with the knowledge and skills of standardized assessment. The teacher will

learn techniques for using and interpreting standardized tests and become thoroughly familiar with specific literacy assessments. Teachers will practice administering standardized tests to assess, analyze, and provide instruction to enhance the reading and writing performance of students.

SEMESTER VI

EECE 782. Teacher as Researcher. 3 hr.; 3 cr. Students integrate the work they have done in their specialty program with principles of educational research. Students prepare a culminating project for public presentation that proposes and/or implements enhanced practice based on the theory and research they have studied in the professional certificate program.

EECE 805. Practicum. 3 hr.; 3 cr. This course is designed to allow teachers to use all the knowledge and skill they have

gained from their coursework to work with children who are struggling with literacy. Teachers will administer appropriate tests, analyze these tests, and determine an appropriate instruction for each child.

Unblocked Courses That Are Taken Outside the Blocked Sequence*

EECE 746. Non-Fiction for Children. 3 hr.; 3 cr.* This course introduces students to quality nonfiction books for children and explores ways to promote children's comprehension of informational books.

MASTER OF ARTS IN TEACHING (MAT)

Advisors: Akiba, Bushnell, Love, Malow-Iroff, Salz, Scott, Steuerwalt

This program is designed for students with undergraduate degrees in fields other than education who are interested in entering the teaching profession. The program stresses reflective teaching and the proactive role of the teacher in enhancing educational quality. The MAT program offers students the option of earning NYS initial certification in either Early Childhood Education, B–2, or Childhood Education, Grades 1–6. The program exposes students incrementally to pedagogy, curriculum, and assessment, with principles of field practice integrated into the coursework at each level. Students are required to take Student Teaching, with two placements as mandated by New York State, when or before they have completed 24 credits in the program. With faculty guidance, each student compiles a teaching portfolio that documents the development of reflective practice and self-assessment, and highlights the connections between course and field experiences within the program.

Coursework: The course requirements for this program fall into four categories: *pedagogical core*, *language and literacy development across the curriculum*, *curriculum-in-action*, and *research-into-practice*. In addition, students select two courses from one of the graduate specialization programs.

The pedagogical core, language and literacy development across the curriculum, and curriculum-in-action courses must be taken prior to or concurrently with Student Teaching. The research-into-action courses must be taken concurrently with or after Student Teaching.

*Students can choose to take this course at any point during the program.

CHART 1**Liberal Arts and Sciences Requirements for Students Entering the MAT Program**

Learning Standards	Course Work
English Language Arts	Successful completion of 2 courses selected from the following areas: reading, writing, listening and speaking for information and understanding, literary response and expression, critical analysis and evaluation, and social interaction, e.g., comparative literature, genre studies; communications; journalism.
The Arts	Successful completion of 2 courses selected from the following areas: creative and/or performing arts, knowing and using art materials and resources, responding to and analyzing works of art, and understanding the cultural dimensions and contributions of the arts, e.g., art history, drama, theatre or dance; performance/studio in drama, theatre, dance, and/or studio art; and music.
Social Studies	Successful completion of 4 courses selected from the following areas: major ideas, eras, themes, development, and turning points in history; geography of the interdependent world in which we live; economic systems; and governmental systems, civics, and citizenship, e.g., world history and world civilizations; economics, political science, cultural anthropology, and/or archaeology; theology, clinical psychology; sociology; philosophy; and American history.
Math, Science, and Technology	Successful completion of 6 courses selected from the following areas: historical and contemporary scientific inquiry, mathematical analysis in real-world settings, and the interrelations and contributions of science, mathematics, and technology to address real-life problems and propose informed decisions, e.g., evolution, genetics, and/or ecology; mechanics, heat, electricity, magnetism, ecosystems, and/or geology; statistics, probability, and/or research design; experimental psychology; and technology.
Foreign Language	Successful completion of one college year of foreign language or documentation of Regents-level foreign language.

Elective credits can be taken at any time during the program.

Upon completion of 30 credits including Student Teaching, as well as NYS-approved seminars in drug abuse, child abuse, child abduction, fire prevention, and school violence, students are eligible for NYS initial certification in Childhood Education, Grades 1–6 or Early Childhood Education, B–2, contingent upon passing LAST, ATS-W, and CST Exams. Upon completion of all program coursework and requirements, students receive a MAT degree. The course sequences for the Early Childhood, B–2 and Childhood, Grades 1–6 initial certificates are summarized in Tables 3 and 4, respectively.

The department offers an accelerated daytime program (DMAT) in which students take courses and student teach for a full year. The DMAT program begins in Summer Session and concludes in the following summer. Interested students should contact the department in early spring.

Admissions Requirements and Prerequisites

Students are required to hold a bachelor's degree with a cumulative GPA of at least 3.0, and to have taken a concentration of no fewer than 30 credits in one of the liberal arts or sciences subject areas during their undergraduate programs. Specializations such as business adminis-

tration, advertising, sales management, accounting, design, and nursing do not usually meet these requirements. Applicants are required to provide writing samples on site, and may be asked to participate in focus groups. Prior to beginning of student teaching, students are required to complete 50 hours of work with children in organized educational or community settings. Students also must have completed two sequential years of study in a foreign language, as well as courses in the general liberal arts and sciences in their undergraduate program that include the areas summarized in Chart 1.

Note: Applicants may provide evidence of Advanced Placement credits or equivalent experiences to demonstrate compliance with any of the required New York State Learning Standards.

Additional coursework in the liberal arts may be required to comply with NYS Learning Standards for Elementary School Teachers; students should check with the department at time of application. Students who lack some of these foundation courses but meet other admissions requirements may be admitted to the program. Applicants may enter the program only as matriculating students. Although many program courses are offered late afternoons and evenings, students must plan for one semester of daytime attendance for student teaching.

In order to continue in the program, students must maintain a *B* average and cannot receive a grade lower than *B–* in any course. Students who receive a grade lower than *B–* in any course are required to meet with an advisor or the department's review committee for advisement. Students must also display appropriate professional behavior in their field settings.

Extension in Bilingual Education, Grades 1–6

Advisor: Rafael A. Olivares

The NYS Extension in Bilingual Education program is designed for graduate students in the NYS initial and professional certificate programs in Childhood Education, Grades 1–6. The program provides coursework and practicum experiences to prepare students for the special challenges of working with language minority students in mainstream as well as bilingual classrooms.

The courses required in the 21-credit Bilingual Extension are listed in Table 5. Both the MAT Initial Certificate and the MEd Professional Certificate Childhood Education programs include some of the courses in the Bilingual Extension program. Specifically, courses required for the Bilingual Extension are offered within the Language and Literacy, Education for Diverse Populations, and Family and

TABLE 5
Courses in Bilingual Extension, Grades 1-6

EECE 761.	Educating the Non-native Speaker of English: Theory and Research
EECE 762.	Schooling in a Diverse Society
EECE 763.	Teaching of Reading and Language Arts in Bilingual Education
EECE 764.	Learning the Content Areas in Multilingual Settings: Teaching and Assessment
EECE 765.*	Internship in a Bilingual Classroom
EECE 766.	English Language Learning in a Bilingual Classroom: Theoretical Background
EECE 767.	English Language Learning in a Bilingual Classroom: Pedagogical Applications

*In MAT initial certificate program, internships may be fulfilled with student teaching placement in a bilingual class setting.

Community Studies specializations. This means students can complete some requirements for the Bilingual Extension as part of their regular coursework, but will need to take additional courses to complete the Bilingual Extension.

For students in the 45-credit Initial Certificate MAT Program in Childhood Education, Grades 1–6, completing the Extension requires 9 additional credits. For students in the 39-credit Professional Certificate MEd program in Childhood Education, Grades 1–6, completing the Extension requires 6 additional credits.

Certificate Programs

The Department of Elementary & Early Childhood Education offers four graduate certificate programs: an Initial Certificate/ MAT program in Early Childhood Education, B–2; an Initial Certificate/ MAT program in Childhood Education, Grades 1–6; a Professional Certificate/ MEd program in Early Childhood Education, B–2; and a Professional Certificate/ MEd program in Childhood Education, Grades 1–6. An extension in bilingual education for students in the Childhood Education, Grades 1–6 MAT and MEd programs is also offered. Course requirements and options in these programs overlap. For each course, the description includes information about the requirements it fulfills.

EECE 520. Language Development and Emergent Literacy. 3 hr. plus fieldwork; 3 cr. Required course for MAT students; open only to MAT students. Students examine how language develops in young children, the relation between language and cognition, and the sociocultural factors that impinge upon language learning. Among the major topics are: language assessment, language diversity, and emergent literacy. Emphasized throughout are teaching strategies and classroom experiences that foster language development in the young child.

EECE 525. Language and Literacy Learning in the Elementary Years. 3 hr. plus fieldwork; 3 cr. Prereq.: EECE 520. Required course for MAT students; open only to MAT students. Students build upon earlier studies of emergent literacy to plan effective programs in diverse, inclusive elementary settings. Students develop knowledge of theories of literacy development, design and implement effective strategies for teaching reading and writing in inclusive elementary settings, and examine children’s literature to be used across the curriculum. Prospective teachers implement strategies in the field and analyze their teaching with the support of the teacher-research community.

EECE 533. Advanced Methods in Teaching Elementary Art, Pre-K–6. 1 sem. hr.; 4 lab. hr. (leave free the afternoon of the day on which class meets for fieldwork); 3 cr. Prereq.: SEYS 536, 552; coreq.: EECE 711. Advanced methods in teaching art, Pre-K–6, with hands-on experiences in various media.

EECE 545. Social Studies in the Elementary School. 3 hr. plus fieldwork; 3 cr. Prereq.: 1 course in Ecology of Childhood (EECE 702, 704, 705) and a course in Ecological Perspectives on Development (EECE 710, 711, 717). Required course for MAT, Grades 1–6 students; open only to students in this program. Preservice elementary teachers examine the teaching of social studies in the primary and intermediate grades. Emphasis is on the theoretical basis underlying the teaching of social studies and its application in the elementary classroom. Topics include the social studies disciplines, methodologies, and applications in the classroom.

EECE 550. Mathematics in the Elementary School. 3 hr. plus fieldwork; 3 cr. Prereq.: 1 course in Ecology of Childhood (EECE 702, 704, 705) and a course in Ecological Perspectives on Develop-

ment (EECE 710, 711, 717). Required course for MAT, Grades 1–6 students; open only to students in this program. This course examines key concepts, strategies, and skills in the elementary school curriculum. Topics include estimation and mental computation, place value, development of algorithms, algebraic reasoning, fractions and decimals, probability and data analysis, and measurement and geometric concepts. There will be an emphasis on problem-solving, reasoning and proof, communication, and representation of ideas. The course also addresses state and national standards in elementary school mathematics, and discusses uses of technology in the classroom.

EECE 555. Science in the Elementary School. 3 hr. plus fieldwork; 3 cr. Prereq.: a course in Ecology of Childhood (EECE 702, 704, 705) and 1 course in Ecological Perspectives on Development (EECE 710, 711, 717). Required course for MAT, Grades 1–6 students; open only to students in this program. Students learn about state and national standards in elementary school science. They relate current research to the effective teaching of science.

EECE 565. Student Teaching. 3 hr. plus participation; 6 cr. Prereq.: EECE 520, 525, 710, 721, 724, 725, 750 and a course in Ecology of Childhood (EECE 702, 704, 705). Eleven weeks of supervised observation and student teaching at two of the three certificate grade levels: Pre-Kindergarten, Kindergarten, and Grades 1–2.

EECE 566. Student Teaching. 3 hr. plus participation; 6 cr. Prereq.: EECE 520, 525, 545, 550, 555, 750, a course in Ecology of Childhood (EECE 702, 704, 705) and a course in Development (EECE 710, 711, 717). Eleven weeks of supervised observation and student teaching at two grade levels: Grades 1–3 and Grades 4–6.

EECE 700. A History of Ideas in Education. 3 hr.; 3 cr. Offers a historical perspective on central tenets of educational thought. Students examine educational theories and constructs within the context of their historical and cultural roots.

EECE 702. Social Foundations of Education. 3 hr.; 3 cr. Prereq.: EECE 702, 704, or 705 must be taken within the first 9 credits in the MAT and MS programs. Provides a forum for the beginning teacher to further investigate cultural, social, philosophical, and historical elements of education. Building on earlier

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

Elementary & Early Childhood Education

studies in educational foundations, the course explores equity in schooling, school reforms, educational philosophy, and the relationship between schools and society, among other topics. Through readings, course assignments, and field experiences, students study a reflective decision-making model.

EECE 703. Classroom Realities in Diverse Settings. 3 hr.; 3 cr. Prereq.: Required course in all EECE graduate programs. Students in MAT programs must complete *Student Teaching* before taking this course. Sessions are directed at beginning teachers. Students develop strategies to handle the persistent challenges that educators face every day in diverse classrooms, such as increasing numbers of students with limited English ability, cross-cultural misunderstandings, student and parent illiteracy in home languages, lack of parent participation and support, and mainstreamed students with physical and/or emotional difficulties.

EECE 704. Major Contemporary Issues in Education. 3 hr.; 3 cr. Prereq.: EECE 702, 704, or 705 must be taken within the first 9 credits in the MAT and MS programs. In this course students investigate such persistent issues in education as public perceptions of teachers, use of education as a campaign ploy, budgetary limitations and increased demands, de facto segregation, assessment of teachers and students, day care, teachers as surrogate parents, etc. While the course reviews a variety of long-standing issues, it also features contemporary issues particularly relevant at the time the course is offered.

EECE 705. School and Community Relations. 3 hr.; 3 cr. Prereq.: EECE 702, 704, or 705 must be taken within the first 9 credits in the MAT and MS programs. This course is a critical analysis of the relationship between schools and their communities and the confluence of diverse communities within schools. Societal concepts are applied to community concerns related to the schools, to school policies, and to social curriculum. Efforts to adapt the school to social and community needs are examined in light of this analysis. Through readings, course assignments, and field experiences students study a reflective decision-making model.

EECE 710. Ecological Perspectives on Development: The Early Years. 3 hr.; 3 cr. Prereq.: Required course in B-2 MAT and MS programs; must be taken within the first 9 credits in these programs. This course provides a contextually based study of developmental

processes in infants, toddlers, and young children through age 8. Emphasizing the importance of looking at “the whole child,” the contributions of family and culture to the child’s construction of meaning are examined, with special attention to the broad range of variability within normal development in the early years. Cultural and socioeconomic differences in child-rearing practices and parental expectations are discussed in terms of their significance for children’s early linguistic and cognitive functioning. The significance of attachment and autonomy issues for children in early childhood educational and care settings are addressed.

EECE 711. Ecological Perspectives on Development: The Childhood Years. 3 hr.; 3 cr. Prereq.: 1 course within Ecological Perspectives on Development (EECE 710, 711, 717) must be taken within the first 9 credits in the program. This course provides a contextually based study of development, focusing on children during the elementary school years. Highlighting the ongoing interplay between cognition, language, affect and social functioning, students examine individual differences in abilities, learning styles, and academic performance, with attention to ecologically valid assessment strategies for linguistically and culturally diverse populations. Students explore the impact of family dysfunction, stress, poverty, and violence on development and academic performance. Strategies for creating classrooms that support prosocial development and learning are discussed.

EECE 712. Humanistic Psychology: Educational Applications. 3 hr.; 3 cr. Elective course in the EECE Specialty programs in Education for Diverse Populations and Family and Community Studies. This course examines the general principles and practices of motivation and communication, self-concept and its effect on interest, cooperation, and achievement. Values clarification, moral, ethical, and character education are explored. Students develop and implement teaching strategies in Affective Education.

EECE 713. The Psychology and Education of Exceptional Children and Youth. 3 hr.; 3 cr. Elective course within the Education for Diverse Populations specialty. Students examine legislation, assessments, and terminology related to exceptional children. Classroom strategies and interventions for specific categories of exceptional children are explored.

EECE 714. Behavior Problems of Children and Adolescents. 3 hr.; 3 cr. Elec-

tive course within the Education for Diverse Populations specialty. Students examine the range of emotional and behavioral disorders in early childhood through adolescence. The ramifications of behavior problems in classroom settings and techniques for guiding students into constructive activities are explored.

EECE 717. Ecological Perspectives on Development: Early Adolescence. 3 hr.; 3 cr. Prereq.: 1 course within Ecological Perspectives on Development (EECE 710, 711, and 717) must be taken within the first 9 credits in the program. This course provides a contextually-based study of development, focusing on early adolescence. The interacting influences of family, ethnic group, and peer group on the young adolescent’s emerging identity are examined in relation to school behavior and academic performance. Individual differences in abilities, learning styles, and academic achievement are examined, with attention to ecologically valid assessment strategies for linguistically and culturally diverse populations. The links between school experience and the young adolescent’s susceptibility to substance abuse, violence, victimization, school drop out, and premature parenthood are discussed. School strategies for promoting healthy development in the adolescent years are considered.

EECE 721. Professional Issues in Early Childhood. 3 hr.; 3 cr. Required course in the B-2 MAT and MS programs; must be taken prior to student teaching. Based upon review of research data, students examine current issues in the education of children in the B-2 range and alternative views of these issues to develop an understanding of optimal practice.

EECE 722. Language Learning in Cross-Cultural Perspectives. 3 hr.; 3 cr. Required course for the MS Professional Certification/B-2 and for the Language and Literacy Specialty. This course examines the social and cultural bases of language acquisition and formal language education, highlighting the interrelationships between language acquisition and enculturation processes. Major topics include: examination of cross-cultural perspectives on language acquisition, the identification of the cultural bases of school language programs, and the development of effective strategies for teaching B-2 students who come to school with diverse language experiences and capabilities.

EECE 724. Curriculum and Environmental Design for Early Childhood, Part I. 3 hr.; 3 cr. Required course in the B-2 MAT and MS programs; must be taken prior to student teaching. Prereq.: EECE

710 and EECE 702, 704, or 705. This course examines environmental design, instructional strategies, and materials to serve goals of curriculum for B–6-year-old children. Professional study features the role of play, goal-directed teaching within an action-based learning environment, multicultural and technological resources for program development, assessment, working with families in cultural contexts, and meeting individual needs of children.

EECE 725. Curriculum and Environmental Design for Early Childhood, Part II. 3 hr.; 3 cr. Required course in the B–2 MAT and MS programs. Prereq.: EECE 724. Curriculum and Environmental Design II is the second course of a two-course sequence that examines the major ideas and practices that govern the design of educational programs serving grades 1 and 2.

EECE 728. Integrating Expressive Arts into the Early Childhood Curriculum. 3 hr.; 3 cr. Elective course within the B–2 MAT and MS programs. Students explore the range of aesthetic experiences with media, drama, music, and movement that are appropriate for young children. Students examine the ways in which expressive art activities can support children's processing of experiences as they extend understandings about people, communities, economic roles, and events in their world.

EECE 730. Practicum in Early Childhood. 3 hr. plus participation; 3 cr. For students in the MS B–2 program. Six weeks of supervised observation and student teaching in one of the lower certificate grade levels (B–K).

EECE 731. Teaching Beginning Reading and Writing. 3 hr.; 3 cr. Coreq.: Weekly opportunity to work with young children to develop reading and writing experience. Elective course within the Language and Literacy Specialty. Students explore 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. Elective course within the Education for Diverse Populations Specialty. Course focuses on legal bases for mainstreaming of children with special needs, developing individualized educational plans, and 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. Elective

course within the Education for Diverse Populations Specialty. Conceptions of handicap and exceptionality are explored. Students examine affective as well as cognitive considerations in curriculum adaptations, and the roles of teacher, parent, and school support services in providing for children with special needs.

EECE 734. Using Telecommunication and the WWW in the Classroom. 3 hr.; 3 cr. Elective course within the Instructional Technology Specialty. Students design educational WWW activities for use in the classroom using HTML and various web page editors. Students also learn how to locate, evaluate, and use educational WWW resources within an elementary classroom curriculum, and use multimedia tools and web page editors to create educationally sound web-based educational activities. This course assumes ready Internet access outside of the classroom.

EECE 735. Multimedia in the Classroom. 3 hr.; 3 cr. Elective course within the Instructional Technology Specialty. Students learn to use a variety of media and formats to communicate information and ideas effectively to multiple audiences. Students create a Hyperstudio Presentation, develop a Power Point presentation; create a Hyperstudio multimedia template and produce an e-portfolio; and create a project using Microworlds.

EECE 736. Mathematics for Young Children. 3 hr.; 3 cr. Elective course within the Mathematics Education Specialty. Focusing on the development of mathematical thinking of children in the primary grades. It examines current research on children's thinking and emphasizes important instructional strategies. It highlights the key role language plays in mathematical learning.

EECE 740. The Improvement of Reading in the Elementary School. 3 hr.; 3 cr. Elective course within the Language and Literacy Specialty. Students examine developmental growth in reading from beginning to advanced stages. Trends in reading instruction and the more common reading difficulties are addressed.

EECE 741. Language Arts in the Elementary School. 3 hr.; 3 cr. Elective course within the Language and Literacy Specialty. Students study 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. 3 hr.; 3 cr. Required course within the Children's Literature Specialty. Stu-

dents critically examine a wide range of children's literature. Topics of study include: Picture books, traditional literature, fantasy, poetry, realistic fiction, biography and historical fiction, nonfiction, and classics. Teaching strategies for the use of this literature with diverse student populations are addressed.

EECE 744. The Art and Technique of Storytelling. 3 hr.; 3 cr. Elective course within the Language and Literacy Specialty. This course addresses the history of storytelling traditions across different cultures. It discusses the oral tradition in its cultural context and examines the role of storytelling in today's linguistically and culturally diverse classroom. Effective strategies for telling stories are also discussed.

EECE 745. The Reading-Writing Connection. 3 hr.; 3 cr. Elective course within the Language and Literacy Specialty. Reviews current research on the development of children's writing and explores how writing can enhance children's learning to read. Students investigate children's writing through actual writing samples and strategies. Students also work on their own writing and examine the childhoods of famous writers.

EECE 746. Nonfiction for Children. 3 hr.; 3 cr. Elective course within the Children's Literature Specialty. Students become acquainted with quality nonfiction books for children, and explore ways to promote children's comprehension of informational books.

EECE 747. Poetry for Children. 3 hr.; 3 cr. Elective course within the Children's Literature Specialty. This course introduces students to a wide variety of poetry and verse suitable for children, as well as strategies for writing poetry with children, presenting poetry aloud, and making poetry a central part of classroom life.

EECE 748. Myths, Legends, and Folktales. 3 hr.; 3 cr. Elective course within the Children's Literature Specialty. Students examine the traditional roots of a story as a model for better understanding and coping with the complexities of human existence. Through extensive reading and library research, students consider the significance of these prototypes for the study of literature and for the elementary school curriculum.

EECE 750. Modern Learning Technologies. 3 hr.; 3 cr. Required course for all MAT students, and for MS students in the Instructional Technology Specialty. Students learn to use word-processing software, databases and spreadsheets, digital cameras, educational software,

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email, and the WWW as tools to enhance learning of the core curriculum subjects. The objective of this course, technology literacy, is acquired through classroom laboratory experiences, extensive readings, and detailed writing requirements. Students learn basic computer operations and vocabulary, explore the many personal and professional uses of technology, and apply modern learning technology tools to the school curriculum.

EECE 751. Teaching Mathematics in the Elementary School. 3 hr.; 3 cr. Required course within the Mathematics Education Specialty. Examining the content of an elementary school mathematics program, students explore effective teaching strategies that complement the National and New York State Standards for Mathematics. Students are introduced to a wide range of manipulative and technological tools for addressing important concepts, strategies, and skills.

EECE 752. Mathematical Snapshot: Mathematics in Everyday Life. 3 hr.; 3 cr. Elective course within the Mathematics Education Specialty. This course introduces students to geometry content appropriate to the elementary school level. Students explore and develop pedagogical techniques that are applicable to a diverse range of children's abilities.

EECE 753. Teaching Science in the Elementary School. 3 hr.; 3 cr. Required course in the Science Education Specialty. This course emphasizes the selection, organization, and effective use of science materials in the elementary school. Important concepts will be drawn from the various sciences and include: populations and ecosystems, diversity and adaptations of organisms, structure and function in living systems, regulation and behavior, motions and forces, transfer of energy, and properties and changes of properties in matter. State and national standards in elementary school science will also be addressed, including the uses of technology to enhance science instruction.

EECE 756. Geometry, Art, and Mathematical Thinking. 3 hr.; 3 cr. Elective course within the Mathematics Education Specialty. This course addresses key geometric concepts in the context of artistic creations, such as the work of M.C. Escher and the tiling patterns of various cultures. Concepts addressed include congruence, similarity, symmetry, and transformations. Other topics include coordinate geometry, tessellation of shapes, and the relationship between two- and three-dimensional shapes. This course integrates applications to the microcomputer as well.

EECE 757. Physical Science for Elementary School Teachers. 3 hr.; 3 cr. Elective course in the Science Education Specialty. 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 course stresses basic principles, applications, experiments, field-work, and demonstrations.

EECE 758. Life Science for Elementary School Teachers. 3 hr.; 3 cr. Elective course in the Science Education Specialty. Students make connections in the instruction of elementary science across the disciplines within life science as well as draw on their knowledge of developmental stages to motivate students to learn science, build conceptual understanding, and encourage the application of knowledge, skills, and ideas regarding life science in the lives of elementary students.

EECE 759. Environmental Literature. 3 hr.; 3 cr. Elective course in the Science Education and Children's Literature Specialties. Focusing on the natural world and the interaction between humans and the environment, students examine literature, materials, and teaching practices appropriate for pre-school through elementary school children.

EECE 760. Teaching Social Studies in the Elementary School. 3 hr.; 3 cr. Elective course in the Family and Community Studies Specialty. This course is designed for students who have already taken an introductory course in social studies. Students examine the New York and national standards in social studies education and their applications in actual classroom settings. Document-based and inquiry-directed instruction are emphasized.

EECE 761. Educating the Non-Native Speaker of English: Theory and Research. 3 hr.; 3 cr. Elective course in the Family and Community Studies Specialty. This course examines 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 in first and second language acquisition as well as the study of strategies to develop the first language and acquire a second language through the content areas.

EECE 762. Schooling in a Diverse Society. 3 hr.; 3 cr. Elective course in the Educa-

tion for Diverse Populations Specialty. Required course in Bilingual Extension. This course is designed to address the multifaceted dimensions of teaching and learning in a rapidly changing, highly diverse society. Participants review research and theoretical literature in the fields of culture and cognition as they relate to educational practice. Included are traditional elements of culture such as ethnicity, language, and religion as well as less traditional elements of cultural diversity such as age, gender, sexual orientation, social class, and physical disability.

EECE 763. Teaching of Reading and Language Arts in Bilingual Education. 3 hr.; 3 cr. Elective course in the Language and Literacy and Education for Diverse Populations Specialties. Required course in Bilingual Extension. This course discusses the characteristics of language arts in the mother tongue in the bilingual classroom and 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. Learning the Content Areas in Multilingual Settings: Teaching and Assessment. 3 hr.; 3 cr. Elective course in the Language and Literacy and Education for Diverse Populations Specialties. Required course in Bilingual Extension. This course focuses on the study, analysis, application, and creation of appropriate classroom instructional strategies to teach content areas to language minority students. Students practice different methodologies in teaching mathematics, science, social studies, and other content areas in the first and second language, and consider the evaluation issues related to language and content in the bilingual-multicultural classroom. Participants develop skills to examine, evaluate, and create instructional materials to teach language to minority children in their mother tongue.

EECE 765. Internship in a Bilingual Classroom. 3 hr.; 3 cr. Required course in Bilingual Extension. 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. Dur-

ing the internship, bilingual teachers will demonstrate their ability to communicate and teach effectively in the first and second language of the students.

EECE 766. English Language Learning in the Bilingual Classroom: Theoretical Background. 3 hr.; 3 cr. Elective course in the Language and Literacy and Education for Diverse Populations Specialties. Required course in Bilingual Extension. Designed for bilingual teachers, this course concentrates on theoretical approaches to the study of the second language learning process in a bilingual classroom. Students explore aspects of second language acquisition as well as those factors involved in individual variations in achievements of non-native speakers of English attending bilingual programs.

EECE 767. English Language Learning in the Bilingual Classroom: Pedagogical Applications. 3 hr.; 3 cr. Elective course in Language and Literacy and Education for Diverse Populations Specialties. Required course in Bilingual Extension. Designed for bilingual educators, this course surveys the alternative teaching methodologies for the learning of English as a new language. Students analyze and apply classroom practices such as audio-lingual and communicative methodologies used in the field of second language learning. Special attention is placed on integrating English language teaching in the areas of mathematics, science, and social studies.

EECE 768. Supporting Development in Children with Special Needs. 3 hr.; 3 cr. Required course in the Education for Diverse Populations Specialty. This course highlights the variety of developmental paths that children take to successful functioning. Students examine classroom practices that facilitate the performance of children with special needs, and develop strategies for building collaborations with families and communities to increase the effectiveness of educational interventions.

EECE 770. Supervision of Student Teachers in the Elementary School. 3 hr.; 3 cr. Prereq.: Matriculation in the MS 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 772. Families and Communities as Educators. 3 hr.; 3 cr. Required course in the Family and Community Studies Specialty. Examines historical and contemporary interrelationships among families, communities, and schools. Students investigate how schools, families, and com-

munities as cultural agencies promote both continuity and change. Particular attention is given to developing strategies for working successfully within families, communities, and cultures in and around New York schools.

EECE 773. Families, Stories, and Literacy. 3 hr.; 3 cr. Elective course in the Family and Community Studies and Language and Literacy Learning Specialties. Examines the reciprocal influences of families, stories, and literacy in the lives of children. Students apply constructs from developmental psychology to consider how families shape the young child's approach to language, stories, and literacy while in turn being shaped by the child's encounters with spoken and written words.

EECE 774. Social Issues in the Classroom. 3 hr.; 3 cr. Elective course in the Family and Community Studies Specialty. Examines survival skills from a pedagogical perspective of the kind of information children need, a developmental perspective of how children of different ages handle the information offered, and a diagnostic perspective of the risk factors and symptomatic behaviors of children in difficulty. Particular attention paid to questions of home-school domain, cultural differences, and family privacy.

EECE 775. Building Home-School Collaborations. 3 hr.; 3 cr. Elective course in the Family and Community Studies Specialty. Prepares early childhood teachers to establish and maintain positive collaborations with families and communities. Using family systems theory, students examine dynamics, ideas, roles, and relationships within families and communities, and consider different strategies for communicating effectively with parents and involving families in assessment and planning for individual children, including children with special needs.

EECE 776. Culture and Education. 3 hr.; 3 cr. Elective course in the Family and Community Studies Specialty. Deals with the interrelationship between culture and the educational process. Explores how schools are organized as cultural agencies and how culture organizes the activity in schools. Not limited to mainstream U.S. schools. Also looks at cases from other societies in the interest of new perspectives. Gives particular attention to the nature and uses of ethnography for teacher-researchers. Develops strategies to work successfully with the myriad of cultures in New York schools.

EECE 777. Conflict Resolution in Educational Settings. 3 hr.; 3 cr. Elective course in the Family and Community

Studies and Education for Diverse Populations Specialties. Explores the origins and causes of conflict and various styles of conflict management. Conflicts between parents and teachers, teachers and administrators, students and their peers are considered. Students apply problem-solving models to multicultural school settings not included in this program.

EECE 779. Research in Children's Literature. 3 hr.; 3 cr. Prereq.: EECE 742 and two electives in Children's Literature. Required course in the Children's Literature Specialty; open only to MS students specializing in Children's Literature. This course prepares students for later research courses by 1) focusing on exemplary research in the field of children's literature, 2) familiarizing students with professional journals, and 3) introducing students to noteworthy professional books.

EECE 780. Introduction to Educational Research. 3 hr.; 3 cr. Required course for all EECE graduate students. MAT students are encouraged to take this course as early in the program as possible. For MS students, this course must be taken within the first 12 credits. Students are introduced to basic principles of quantitative and qualitative research design in educational settings. Emphasis is given to an examination of interdisciplinary perspectives on educational and social issues and to the integration of research evaluation with professional decision-making.

EECE 781. Inquiry into Teaching. 3 hr.; 3 cr. Prereq.: All MAT coursework and Student Teaching. Open only to MAT students. This culminating course for MAT students synthesizes theory and practice through a student-designed teacher-research project. Ongoing sharing of this classroom-based research provides a forum for discussion of key features of successful teaching. The course also addresses the interviewing process and preparation for entry into the teaching profession.

EECE 782. Teacher as Researcher. 3 hr.; 3 cr. Open only to MS students. This is the culminating course in the MS sequence. It cannot be taken until students have completed all MS coursework. Students integrate the work they have done in their Specialty program with principles of educational research. Students prepare a culminating project that proposes and/or implements enhanced practice based on the theory and research that they have studied in the professional certificate program. Culminating projects must be conducted in the student's area of specialization. Public presentations of the culminating projects are included in this course.

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EECE 784. Research Materials in Learning Technology. 3 hr.; 3 cr. Prereq.: EECE 750 and two electives in Instructional Technology. Required course for the Instructional Technology Specialty; open only to MS students in this specialty. The course examines knowledge of research design, sample selection, instrument choice or design, types of research, data analysis and interpretation, and writing a research report related to technology use in the classroom.

EECE 785. Research in Teaching and Learning Science. 3 hr.; 3 cr. Prereq.: EECE 753 and two electives in Science Education. Required course in the Science Education Specialization; open only to MS students in this specialty. This course is based on the newest framework for research in science education informed by the National Science Teachers Association and the Association for the Education of Teachers in Science's principles governing scientific inquiry of teaching and learning in elementary science education. Students will examine current research regarding key learning standards identified by the NYS Department of Education.

EECE 786. Research in Elementary School Mathematics: Trends and Issues. 3 hr.; 3 cr. Prereq.: EECE 751 and two electives in Mathematics Education. Required course in the Mathematics Education Specialty; open only to MS students in this specialty. This course focuses on important trends and issues in mathematics research. Students acquire a historical perspective on mathematics education as well as a current overview of significant topics for research.

EECE 787. Research in Language and Literacy. 3 hr.; 3 cr. Prereq.: EECE 722 and two electives in Language and Literacy. Required course in the Language and Literacy Specialty; open only to MS students in this specialty. Deals with specific issues in language development, emergent literacy, reading instruction, writing process, language arts, and cross-cultural differences in linguistic and literacy practices and perceptions. Students develop projects for the improvement of practices in homes and schools.

EECE 788. Research in Education for Diverse Populations. 3 hr.; 3 cr. Prereq.: EECE 766 and two electives in Education for Diverse Populations. Required course in the Education for Diverse Populations Specialty; open only to MS students in this specialty. This course focuses on current policies and strategies for enhancing the effectiveness of Education for Diverse Populations. Students will examine issues in assessment, pre-

vention, and classroom interventions for children with diverse strengths and needs.

EECE 789. Research in Family and Community Studies. 3 hr.; 3 cr. Prereq.: EECE 772 and two electives in Family and Community Studies. Required course in the Family and Community Studies Specialty; open only to MS students in this specialty. Deals with schools as institutions of socialization that complement or conflict with families and communities as institutions of socialization and develops practical solutions to their interrelationships.

EECE 790. Independent Study in Education. Prereq.: Matriculation in MS 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.

EECE 791. Independent Study in Bilingual Education. Independent study or special project under faculty supervision. Permission of the Chair required.

EECE 791.1. 1 hr.; 1 cr.

EECE 791.2. 2 hr.; 2 cr.

EECE 791.3. 3 hr.; 3 cr.

EECE 796. Exploring Problems in History Through Literature. 3 hr.; 3 cr. Required interdisciplinary core course for MS 1–6 students. MAT students may take this course as an elective. Takes an interdisciplinary approach to curriculum by combining the content and process of “doing history” with the focused use of language arts (reading, writing, speaking, and listening) as a means of learning in the elementary school. By applying the critical perspective of historians to the study of quality children’s literature dealing with the past, this course engages teachers in curricular issues of both content and process.

EECE 797. Queens County as a Learning Lab. 3 hr.; 3 cr. Required interdisciplinary core course for MS 1–6 students. MAT students may take this course as an elective. Working with organizations, institutions, and historical sites within the borough of Queens, students investigate and reflect on teaching and learning strategies for incorporating a study of Queens into their classrooms. Emphasis is on the historical, geographical, political, economic, and social development of the borough.

EECE 798. Reading and Writing for Learning in Science. 3 hr.; 3 cr. Required interdisciplinary core course for MS 1–6 students. MAT students may take this course as an elective. This course is de-

signed to promote engaged learners who demonstrate curiosity, search for understanding in self-guided ways, communicate with others to share and test their ideas, contribute to the creation of a community of learners, and bring an enthusiastic quality to the classroom. Students learn to create science-learning environments that promote engaged readers and writers, and develop strategies that promote reading and writing across the disciplines.

EECE 799. Exploring Mathematical Ideas Through Literature. 3 hr.; 3 cr. Required interdisciplinary core course for MS 1–6 students. MAT students may take this course as an elective. Explores the role of literature in an elementary school mathematics program. Students discuss criteria for selecting books and address issues of equity in children’s literature, such as gender and multicultural perspectives. Students examine a wide range of math-related literature and develop effective instructional strategies for using these books to explore important mathematical concepts.

EECE 800. Workshop in Education. Designed to assist teachers in solving classroom problems. May be repeated for credit if topic is changed.

EECE 800.2. 2 hr.; 2 cr.

EECE 800.3. 3 hr.; 3 cr.

EECE 800.4. 4 hr.; 4 cr.

Secondary Education & Youth Services

Chair: Eleanor Armour-Thomas

Dept. Office: Powdermaker Hall 150, 997-5150

The department prepares teachers for the middle, junior high, and senior high schools through New York State-accredited programs: 1) the Initial Certificate program leading to initial certification in Adolescence Education; and 2) the Master of Science degree in Secondary Education leading to professional certification in Adolescence Education. Each program has a concentration in a specific

academic area, as well as education content courses.

Faculty

- Armour-Thomas, Eleanor, Chair, *Professor*, EdD 1984, Teachers College, Columbia University: educational psychology, cognitive functioning, human growth and development, instructional psychology
- Anderson, Philip M., *Professor*, PhD 1979, University of Wisconsin at Madison: English education, mass media, reading, curriculum development
- Artzt, Alice, *Professor*, PhD 1983, New York University: mathematics education
- Asher, Rikki, *Assistant Professor*, EdD 1991, Teacher's College, Columbia University: art education
- Bassey, Magnus O., *Associate Professor*, EdD 1989, Rutgers: social and philosophical foundations of education
- Bhattacharya, Alpana, *Assistant Professor*, PhD 2001, CUNY Graduate Center: educational psychology
- Costigan, Arthur T., *Assistant Professor*, PhD 2000, New York University: English education
- Curcio, Frances R., *Professor*, PhD 1981, New York University: graph comprehension, language and discourse in the mathematics classroom, mathematical problem-solving
- Darvin, Jacqueline L., *Assistant Professor*, PhD 2004, Hofstra University: literacy studies
- Davis, Jacqueline Fay, *Assistant Professor*, PhD 1998, University of Georgia: language education
- Dickson, Randi, *Assistant Professor*, EdD 1999, Teacher's College, Columbia University: English education
- Dong, Yu Ren, *Associate Professor*, PhD 1995, University of Georgia: English as a second language (TESOL), teaching composition
- Eddy, Jennifer, *Assistant Professor*, PhD 1999, Columbia University: Spanish and education; foreign language education.
- Gerwin, David, *Assistant Professor*, PhD 1998, Columbia University: social studies education and oral history
- LaFemina, James V., *Assistant Professor*, PhD 2000, CUNY Graduate Center: educational/school psychology
- Miller, June K., *Assistant Professor*, EdD, 1985, Teacher's College, Columbia University: science education and evaluation, education for the gifted and talented
- Moncada-Davidson, Lillian, *Associate Professor*, PhD 1990, Columbia University: sociology and education
- Rhodes, Carole S., *Professor*, PhD 1990, New York University: curriculum & instruction, literacy

Zevin, Jack, *Professor*, PhD 1969, University of Michigan: social studies education, curriculum development, education of the gifted and talented, economics education, philosophy in the elementary classroom

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).

MASTER OF SCIENCE IN SECONDARY EDUCATION PROGRAMS

Students enrolling in Master of Science in Secondary Education programs will be assigned an Advisor in the area of certification who will meet with 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 department during the first semester of attendance. The student may not depart from this approved program without permission of the Advisor. Each academic area has its own course requirements. In general, students take about half of their program in the appropriate academic departments and half in education.

Planning a Program in Secondary Education

Each subject area has its own pattern of instruction. Following is a list of program Coordinators/Advisors:

- Art: R. Asher
- English: A. Costigan, R. Dickson, Y. Dong
- General Science: J. Miller
- Mathematics: A. Artzt, F. Curcio
- Foreign Languages: J. Davis, J. Eddy
- Social Studies: D. Gerwin, J. Zevin

To obtain the Master of Science in Education degree, students must complete 30 or more graduate credits in an approved course of study, and should consult with an Advisor in the appropriate area before choosing courses. In general, students pursuing the MS in Secondary Education take the following sequence of courses:

	<i>credits</i>
Historical, Philosophical, Social Foundations of Education	3
Psychological Foundations	3

Curriculum Methods in Secondary Education	3-6
Research	3-6
Elective (optional)	3
	15-21

Certification Content Area (see department listings in this *Bulletin* or consult an appropriate advisor) 15-18

Although the above sample program represents the general pattern of courses within the MS in Secondary Education sequence, there may be differences for academic areas. Students are strongly urged to see Advisors 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 Advisor 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 Advisors concerning research options and the appropriate semesters in which to undertake research.

Initial Certificate Program

For students who decide late in their undergraduate careers or after they graduate to pursue certification as teachers, the departments offers a sequence of courses, consisting of 21 credits, which leads to an Initial Certificate. This sequence provides an integrated program that includes the coursework and field experience necessary to meet state requirements for initial certification in adolescent education in a specific academic subject area.

Upon completing the Initial Certificate program, students will be recommended for initial certification provided they have also completed the required 36 credits in their major and met all other state requirements for initial certification. The program enables students to begin teaching and gain the experience necessary for professional certification while they complete the coursework required for the master's degree.

Students who earn the Initial Certificate will automatically become eligible for matriculation in the Master of Science in Education program in their major area. As part of the coursework for the Initial Certificate, students will have taken SEYS 700, a 3-credit course that can be applied toward the requirements for the master's degree.

Students who complete the course and credit requirements for the master's program in their respective areas will have met the educational requirements for both professional certification and the degree of Master of Science in Education.

Secondary Education

Alternative Certification Programs: MSEd Leading to Transitional B Certification

Students who are in the New York City Teaching Fellows (NYCTF) program and who meet Queens College's academic requirements for admission, take a 39-credit Transitional B MSEd leading to alternative New York State Certification. Requirements include participation in an initial summer program of supervised teaching and satisfactory supervised full-time teaching in New York City public schools during the program. Academic requirements include 12 credits in graduate-level content-area subjects as well as the following SEYS course levels: 536, 552, and 700. According to subject domain, students will take a Seminar in Teaching, SEYS 560–64, and Curriculum and Assessment, SEYS 580–84. A two-semester 700-level research seminar in the subject domain is required along with a SEYS 700-level cognate to be determined with the students' Graduate Advisor.

Course	credits
SEYS 536 Educational Foundations	3
SEYS 552 Educational Psychology	3
SEYS 700 Language, Literacy, and Culture in Education	3
<i>One of the following</i> (Methods of Teaching)	3
SEYS 560 English	
SEYS 561 Mathematics	
SEYS 562 Science	
SEYS 563 Social Studies	
SEYS 564 Foreign Language	
<i>One of the following</i> (Standards-Based Curriculum and Assessment in Teaching)	3
SEYS 580 English	
SEYS 581 Mathematics	
SEYS 582 Science	
SEYS 583 Social Studies	
SEYS 584 Foreign Language	
<i>One of the following</i>	3
SEYS 740–746, 763, 766, 767 English Curriculum and Instruction	
SEYS 751 Mathematics in the High School	
SEYS 753 Computer Applications in Science Education	
SEYS 754 Curriculum Innovations in Science Education	
SEYS 767.3 Workshop in Secondary Education: Laboratory Experiences in Science Education I	
SEYS 760, 761, 766, 767 Social Studies Education	
SEYS 743 Curriculum and Instruction in Foreign Language Education	
<i>One of the following</i>	3
SEYS 781 Seminar in Research in Language Arts I	
SEYS 775 Seminar in Research in Mathematics Education I	

SEYS 777 Seminar in Research in Science Education I
SEYS 783 Seminar in Research in the Teaching of Social Studies I
SEYS 785 Seminar in Research in Foreign Language Education

<i>One of the following</i>	3
SEYS 782 Seminar in Research in Language Arts II	
SEYS 776 Seminar in Research in Mathematics Education II	
SEYS 778 Seminar in Research in Science Education II	
SEYS 784 Seminar in Research in the Teaching of Social Studies II	
SEYS 786 Advanced Research in Foreign Language Education	
SEYS 700-level course or a graduate level course in the content area to be determined by SEYS Program Director	3

Content Courses	12
Total	39

Program Requirements

Students must hold a bachelor's degree with a major (or equivalent) in the subject 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 recommended for initial certification. These 15 credits will be selected with the approval of the major advisor. Students who have more than 21 subject-area credits but fewer than 36 will be required to make up the corresponding number of missing credits. In all cases, the Advisor will ensure that the distribution of the 36 subject-area 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, in a language other than English. They must also meet the general admissions requirements for graduate study at Queens College, including a cumulative and departmental average of at least *B* (3.0) to remain in the program.

Following fulfillment of the Initial Certificate program (21 credits), students may complete the remaining graduate courses required for the Master of Science in Education degree in Secondary Education (12 credits in education and 15 credits in the content area), which will lead to professional certification. The total number of credits will be 48.

Coursework in Initial Certificate Program

The Initial Certificate program comprises the following:

- 1) An education sequence of 21 credits:
- 2) Completion of 36 credits in the student's area of certification.
- 3) Students are required to take four seminars offered through the college's Continuing Education Program: (a) The Child Abuse, Identification, and Reporting Seminar, (b) The Drug and Alcohol Abuse Seminar, and (c) Violence Prevention Seminar, (d) School Safety

Upon completion of the Initial Certificate program (outlined above in 1, 2, and 3), students will have satisfied the academic requirements for initial 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 initial certification: Liberal Arts and Sciences Test (LAST), the Secondary version of the Assessment of Teaching Skills-Written (ATS-W), and the Content Specialty Exam. LAST and the content area specialty exam may be taken prior to the beginning of the Initial 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 these requirements they will apply through the Office of Teacher Certification for New York State initial certification.

Following fulfillment of the Initial 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 professional certification.

SEYS 536. Educational Foundations. 3 hr. plus 25 hr. field experience; 3 cr. Prereq.: Permission of the department. Overview of theory and research on key sociological, philosophical, historical, and political foundations of education. Consideration will be given to how these foundational issues are evident in classroom situations and practice. Attention will also be given to multilingual, multicultural, and biliteracy issues in education as well as how the growth in technology has influenced the educational environment. Includes field experience component for students not currently teaching.

SEYS 552. Educational Psychology. 3 hr. plus 25 hr. field experience; 3 cr. Prereq.: Permission of the department. Overview of developmental and instructional issues in teaching middle childhood and adolescents. The role of technology in cognition and instruction for diverse learners including those within the full range of disabilities and exceptionalities will be

examined. Second language development and issues related to language acquisition and English language proficiency will also be explored.

SEYS 560-564. Methods of Teaching _____ in Middle and High School.

3 hr. plus 25 hr. field experience; 3 cr. Prereq.: Permission of the department; coreq.: SEYS 570a-574a. Students' pedagogical content knowledge in their specific subject areas is developed in this course. Research-based learning, instructional and assessment strategies, as well as the secondary school curriculum will be examined. The course also examines issues of language, literacy, and culture and how they impact the learning and teaching of the specific content. As well, emphasis is placed on the use of technology in instruction. Fall

560. Methods of Teaching English in Middle and High School.

561. Methods of Teaching Mathematics in Middle and High School.

562. Methods of Teaching Science in Middle and High School.

563. Methods of Teaching Social Studies in Middle and High School.

564. Methods of Teaching Foreign Language in Middle and High School.

SEYS 570a-574a. Practicum in _____ for Middle/Junior High School. 50 hr. at a middle/junior high school; 2 cr. Prereq.: SEYS 536, 700; prereq. or coreq.: SEYS 552; coreq.: SEYS 560-564. Open only to students who are matriculated in the secondary education program. This practicum is designed to provide students with school-based teaching experiences that prepare them to effectively teach small groups of students at the middle/junior high school level. Students are placed at a middle/junior high school setting under the guidance of a school-based teacher and a college-based supervisor. Fall

570a. Practicum in English for Middle/Junior High School.

571a. Practicum in Mathematics for Middle/Junior High School.

572a. Practicum in Science for Middle/Junior High School.

573a. Practicum in Social Studies for Middle/Junior High School.

574a. Practicum in Foreign Language for Middle/Junior High School.

SEYS 570b-574b. Student Teaching in _____ for Secondary School. 280 hr. of daily participation for 15 weeks at a secondary school; 4 cr. Prereq.: Permission of the department; coreq.: SEYS 580-584. School-based teaching experiences are provided that prepare student

teachers to effectively teach students at the secondary school levels. Under the guidance of a cooperating teacher and a college-based supervisor, students are expected to teach at least one 9th-grade class and one higher grade class. Spring

570b. Student Teaching in English for Secondary School.

571b. Student Teaching in Mathematics for Secondary School.

572b. Student Teaching in Science for Secondary School.

573b. Student Teaching in Social Studies for Secondary School.

574b. Student Teaching in Foreign Language for Secondary School.

SEYS 580-584. Standards-Based Curriculum and Assessment in Teaching _____. 3 hr.; 3 cr. Coreq.: SEYS 570b-574b. An examination of current standards-based curriculum and assessment strategies and how they can be transformed into effective classroom practice. This class is corequisite with SEYS 570b-574b so as to enrich the student teacher's understanding of curriculum and assessment issues within an actual classroom. Special topics include strategies for preparing students for Standardized Examinations, ways of integrating innovative curricula and technology in instruction, and assessment strategies for diverse student populations, including those with special needs. Spring

580. Standards-Based Curriculum and Assessment in Teaching English.

581. Standards-Based Curriculum and Assessment in Teaching Mathematics.

582. Standards-Based Curriculum and Assessment in Teaching Science.

583. Standards-Based Curriculum and Assessment in Teaching Social Studies.

584. Standards-Based Curriculum and Assessment in Teaching Foreign Language.

SEYS 700. Language, Literacy, and Culture in Education. 3 hr. plus 25 field hr. experience; 3 cr. Prereq. or coreq.: SEYS 536. Intended to deepen and broaden students' understanding of language development in adolescence, and multilingual, multicultural, and biliteracy issues in education. Particular emphasis will be given to the role of language and culture in a pluralistic and democratic society. Students will learn about the nature of language acquisition, English language proficiency for academic purposes, cross-cultural understanding, second language development, and strategies for teaching subject matter knowledge to English Language Learners (ELL). Course content will focus on the characteristics and needs of ELL populations. Students will

examine the instructional strategies of the teachers in relation to the unique needs of these populations. The literacy demands of content curricula in secondary schools will also be critically examined.

LITERACY TEACHER GRADES 5-12

Coordinator: Carole Rhodes

The Literacy Program reflects the teacher certification regulations for literacy specialist Grades 5-12 and the diversity of literacy learners. The 36-credit program provides courses in all areas of literacy and prepare individuals for leadership in literacy program development as well as compensatory programs. Program courses focus on diverse literacy learners, particularly English language learners and children with language learning disabilities.

Requirements

Admission is limited and competitive and open to individuals who hold a provisional or initial certificate in middle school or secondary education (grades 7-12). Applicants must complete the graduate application and may be required to be interviewed. The applicant's entire record is considered, including undergraduate and graduate GPA, teaching and other experiences with children and adolescents, and demonstration of leadership and scholarship.

For those who have completed a degree and hold initial teacher certification, an overall GPA of 3.0 is required. Individuals who have completed a master's degree program leading to teacher certification may apply for advanced standing of up to 12 credits of appropriate study in literacy and research.

Graduation requirements include completion of 36 credits of required coursework in the areas of diversity, literature, literacy pedagogy, and content area literacy, a GPA of 3.0, and successful completion of a professional portfolio and research project. For more information, contact the Coordinator.

SEYS 733. Foundations of Literacy Development and Instruction. 3 hr.; 3 cr. Coreq.: SEYS 788. An introductory course in literacy development and instruction of students in grades 5-12. The major area of inquiry is the psychological, sociological, cognitive, and linguistic bases of literacy. Specific topics include the role of literacy in society, history of literacy instruction, current schoolwide early childhood, childhood, middle education, and adolescent literacy instructional programs, differentiation of instruction for students with diverse

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

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needs, family literacy partnerships, children and adolescent literature, classroom organization, classroom and schoolwide assessment programs, literacy in a technological age, and processes of developing literacy proficiency. Special emphasis is placed on factors underlying development of print awareness and usage at all levels, including word identification and spelling strategies, vocabulary skills, comprehension strategies, composing skills, and the supporting roles of speaking and listening to the development of reading and writing strategies.

SEYS 734. Literacy Instruction for Students with Disabilities. 3 hr.; 3 cr. Prereq.: SEYS 733 and 788; coreq.: SEYS 745. This course familiarizes teacher candidates about the historical, sociological, and psychological issues related to literacy education of students with disabilities (i.e., learning disabilities, emotional disorders, physical disabilities, sensory impairments, and others) in secondary education. Disability issues highlighted within this course include laws and legal mandates, assessment for instruction, full inclusion movement, Individualized Education Program, instructional and assistive technology, and teaching literacy strategies and skills. Teacher candidates will develop an understanding of the linguistic and cognitive capabilities of students with disabilities and an ability to plan lessons for advancing academic skills of students with disabilities. Twenty-five hours of fieldwork focused on students with disabilities are required.

SEYS 735. Disciplinary and Cross-Disciplinary Literacy Instruction. 3 hr.; 3 cr. Prereq.: SEYS 733, 734, 745, and 788; coreq.: SEYS 746. This course examines principles of literacy teaching and learning within and across content areas. Major areas of inquiry include knowledge about the nature of literacy and literacy development, developmental literacy programs, major issues in literacy instruction in the content areas, integrating technology with literacy development in content areas, and differentiating English language arts and content-area literacy instruction for diverse students. Design and application of research-based literacy activities and materials in the content areas is emphasized. Twenty-five hours of fieldwork in content-area literacy are required.

SEYS 736. Assessment and Instruction for Students with Literacy Learning Differences I. 3 hr.; 3 cr. Prereq.: SEYS 733, 734, 735, 745, 746, and 788; coreq.: SEYS 748. This course requires teacher candidates to examine causes of reading difficulty, elements of skilled reading, and systematic models for analyzing and remediating literacy problems for students in middle and adolescent educa-

tion. Topics include the function of standardized assessment devices in instructional decision-making, development and administration of informal assessment devices and inventories of reading and writing performance, evaluation and modification of environmental and instructional variables contributing to literacy achievement in content areas, student motivation, and strategies for determining appropriate procedures to assess students with diverse abilities and cultural and linguistic backgrounds. Candidates demonstrate ability to systematically identify critical variables that contribute to literacy success and failure and to develop and apply various procedures for assessing literacy difficulties of students with diverse backgrounds.

SEYS 737. Assessment and Instruction for Students with Literacy Learning Differences II. 3 hr.; 3 cr. Prereq.: SEYS 733, 734, 735, 736, 745, 746, 748, and 788; coreq.: SEYS 749. In this course emphasis is placed on application of systematic models for analyzing and developing instructional programs for students in middle and adolescent education who show severe literacy learning problems in English language arts and content areas. Topics include interpreting informal and formal assessments, interactive decision-making, and specific strategies for addressing problems of word recognition, word analysis, spelling, fluency, vocabulary development, comprehension, composing, and studying. The administration and interpretation of informal and formal assessments and application of specific intervention strategies for students with diverse cultural and linguistic backgrounds who are experiencing difficulty acquiring literacy proficiency is studied throughout the course. Candidates apply literacy assessment knowledge and competence in a case study.

SEYS 742. Consultation Strategies for the Literacy Specialist. 3 hr.; 3 cr. Prereq.: SEYS 733, 734, 735, 736, 737, 745, 746, 748, 749, and 788; coreq.: SEYS 789. This course assists literacy personnel to use their knowledge of literacy and literacy problems to help general classroom teachers, special education teachers, parents, Individualized Education Program (IEP) Teams, administrators, and other relevant personnel to develop literacy programs for individual students and to improve literacy across the curriculum. It focuses on definitions of consultation, effective models of consultation, consultation strategies, IEP development, federal and state special education laws, and instructional practice.

SEYS 748. Supervised Practicum with Middle/Junior High School Students.

3 hr.; 3 cr. Prereq.: SEYS 733, 734, 735, 745, 746, and 788; coreq.: SEYS 736. This course provides 25 hours of supervised practicum and seminar to develop teacher candidates' competence in planning and implementing instruction in middle/junior high school education, grades 5–8, for diverse students experiencing moderate and severe difficulties in literacy development. Content deals with the skills and strategies needed to assess students' literacy strategies, plan and implement appropriate instructional procedures, and report progress to students, parents, and school officials. Supervised practicum is required for New York State Certification as literacy teacher, grades 5–12.

SEYS 749. Supervised Practicum with High School Students. 3 hr.; 3 cr. Prereq.: SEYS 733, 734, 735, 736, 745, 746, 748, and 788; coreq.: SEYS 737. This course provides 25 hours of supervised practicum and seminar to develop teacher candidates' competence in planning and implementing instruction in high school education, grades 9–12, for diverse students experiencing moderate and severe difficulties in literacy development. Content deals with the skills and strategies needed to assess students' literacy strategies, plan and implement appropriate instructional procedures, and report progress to students, parents, and school officials. Supervised practicum is required for New York State Certification as literacy teacher, Grades 5–12.

SEYS 788. Research Investigation for Literacy Instruction I. 3 hr.; 3 cr. Coreq.: SEYS 733. The first of two courses in the study, understanding, and evaluation of basic research designs and methodology used in literacy education, birth through grade 12, and the interpretation of literacy research. Teacher candidates study the scope of research in the area of literacy, the nature of being a teacher-researcher, and research processes and designs. Teacher candidates demonstrate ability to read and evaluate primary research reports, interpret research syntheses, locate information about literacy research, and determine appropriateness of literacy research findings for instruction by conducting an in-depth investigation of a specific topic in the area of literacy development and instruction.

SEYS 789. Research Investigation for Literacy Instruction II. 3 hr.; 3 cr. Prereq.: SEYS 733, 734, 735, 736, 737, 745, 746, 748, 749, and 788; coreq.: SEYS 742. The second of two research courses about the study, understanding, and evaluation of basic research designs and methodology in literacy education and the interpretation of literacy research, grades 5–12. Major emphasis is on the design, implementation, and re-

porting of a qualitative or quantitative research project on a topic of concern in middle or adolescent education.

**MSED IN ART EDUCATION
(Visual Arts)**

The program for the Master of Science degree in Art Education has two tiers. For students who have obtained the initial certificate in art education Pre-K–12, the Master’s Degree Program of 30 credits leads to a professional certificate. For students who have completed a bachelor’s degree in art, the Master’s Degree Program of 51 credits leads to an initial certificate after completing 24 credits in education, and a professional certificate upon completion of the entire 51 credits. Part-time enrollment is possible, meeting the needs of the full-time teacher. All courses are scheduled in the late afternoon or evening. A thesis is required.

The Professional Certificate program, Master’s Degree Program in Art Education, meets the needs of the individual art student. Students may choose from a group of Education courses from either SEYS or EECE for three credits of elective work. Those courses fall under the categories of Historical, Philosophical, Social, and Psychological Foundations of Education. In addition, students complete 6 credits in art education workshop courses, 6 credits in research; of the 15 Art credits required at least 3 but no more than half must be in Art History.

Program for Professional Certification in Visual Arts Education (30 credits)

- Foundations or Psychology of Education: select one course from among SEYS 701–708, 710, 717, 720, 738 (3 cr.) or EECE 710, 711, 712, 713, 714 3 cr.
- Workshop in Art Education: select two courses from among SEYS 712, 724, 725, 727, 732 6 cr.
- Research Seminar in Art Education SEYS 773, 774 6 cr.

Fifteen credits of this Master’s Degree Program are taken in the Art Department distributed across Studio and Art History (Studio Art at 600 level and Art History at 500 level). At least 3 credits and no more than half must be in Art History.

Program Requirements

The applicant must possess a baccalaureate degree in art from an accredited institution and a minimum GPA of 3.0 (on a 4-point system) or B, both in art and education courses at the undergraduate level. Students applying for the Profes-

sional Certificate Master’s Degree Program must have a New York State Teacher’s Certificate in Art, either Provisional or Initial, or the equivalent from another state. Students must submit a portfolio of 15 slides of their artwork, three letters of reference, and an essay describing interest in further study. Admission is based on a combination of transcript review, portfolio, and letters reviewed by art and art education faculty.

Master’s Degree Requirements

Students must complete 3 credits in foundations or psychology of education from among the following: SEYS 701–708, 710, 717, 720, 738; EECE 710, 711, 712, 713, 714.

Six credits in art education from among: SEYS 712 (Visual Thinking), SEYS 724 (Classroom Methods in Crafts), SEYS 725, (Classroom Methods in Printmaking), SEYS 727 (Classroom Methods in Computer Art), SEYS 732 (Seminar in Art Education); these courses are open as electives to other matriculated students with departmental permission.

Six credits in research in art education: SEYS 773 and 774. The required thesis is completed as part of these courses. A minimum of 15 credits in Studio Art (at the 600 level) and Art History (at the 500 level), at least 3 credits but no more than half of the art courses must be taken in art history.

A B (3.0) average is required throughout the program of 30 credits and for graduation. Students will successfully complete a thesis.

Initial Certificate Requirements

Complete the following courses: SEYS 536, 552, 565, 575; EECE 533, 711 and either SEYS 700 or EECE 525.

After completing the requirements for the initial certificate in art education, students may matriculate into the Master’s Degree Program in Art Education.

Program for Initial Certification in Visual Arts Education (24 credits)

- SEYS 536 Educational Foundations, 3 cr.
- SEYS 552 Educational Psychology, 3 cr.
- SEYS 700 Language, Literacy, and Culture in Education, 3 cr.
- or
- EECE 525 Language & Literacy Learning in the Elementary Years, 3 cr.
- EECE 711 Ecological Perspectives on Development: The Childhood Years, 3 cr.

- EECE 533 Advanced Methods in Teaching Elementary Art, Pre-K–6, 3 cr.
- SEYS 565 Seminar in Teaching Art in the Secondary Schools, 3 cr.
- SEYS 575 Student Teaching in Art for Pre-K–12, 6 cr.

Courses in Art Education

EECE 533. **Advanced Methods in Teaching Elementary Art, Pre-K–6.** 1 sem., 4 lab. (leave free the afternoon of the day on which class meets for fieldwork); 3 cr. Prereq.: SEYS 536, SEYS 552; coreq.: EECE 711. Advanced methods in teaching art, Pre-K–6 with hands-on experiences in various media.

SEYS 565. **Seminar in Teaching Art in the Secondary Schools.** 4 hr. (participation and observation one morning or afternoon per week – min. 45 clock hours); 3 cr. Prereq.: SEYS 536, SEYS 552. The class will focus on secondary level curriculum and instruction, students with disabilities, and assessment.

SEYS 575. **Student Teaching in Art for Pre-K–12.** 3 hr. plus participation; 6 cr. Prereq.: Permission of the department. Supervised observation and student teaching at the elementary and secondary levels, plus a weekly seminar at the college. Students will be assigned the equivalent of 20 six-hour days (120 hours) at the elementary (Pre-K–6) level, and 50 three-hour days (150 hours) at the secondary level (7–12) under the guidance of a cooperating teacher and a college-based supervisor. Students are expected to prepare daily lesson plans and will develop and maintain student teaching portfolios.

**Courses in Secondary Education
Historical, Philosophical, and Social
Foundations of Education**

SEYS 500.1, 500.2, 500.3. **Non-degree Workshop Secondary Education.** 15 hr.; 1 cr., 30 hr.; 2 cr., 45 hr.; 3 cr. Pre- or co-req.: Instructor’s permission. A special topics SEYS course offering at the graduate level that does not count towards the MS degree and is pass/fail.

SEYS 701. **A History of Ideas in Education.** 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational 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).

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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 Society. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in Educational Foundations to be certified by the department. This course will focus on the study of the institution of education, and on the structure, processes, and interaction patterns within it. It includes the subtle ways in which internal as well as wider social structural forces impinge upon or influence the pedagogy and the social processes in the classroom and in the school. Special attention is given to cultural diversity and alienation, poverty and inequality issues.

SEYS 706. Introduction to Comparative Education. 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in educational foundations to be certified by the department. In this course we will discuss responses of different governments around the world to common educational problems such as governance, financing, and provisions of mass education. We will also consider the equality of educational opportunity and outcome for differently situated social groups, especially those traditionally marginalized: women, ethnic minorities, rural populations, and working class.

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 a historical perspective, including the development of United States immigration policies and their impact on the sociocultural 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.

SEYS 722. Oral History in the Secondary Classroom. 3 hr.; 3 cr. Prereq.: Completion of 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. An introduction to the field of oral history, including techniques and philosophies behind using oral history and using historical recordings in the classroom. Students will collect life histories (and transcribe and present them), design assignments involving historical recordings, review and prepare an oral history project proposal that will include a plan for the management and presentation of the collected histories. Also suitable for history graduate students (see History department graduate advisor).

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 Strate-

gies 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 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 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. Required of all candidates for the MS in Education (art education) degree. Selection and numbers of workshops taken by candidates to be determined in consultation with art education Advisor. 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. Curriculum and Instruction in Foreign Language Education.** 2 hr. plus conf.; 3 cr. Prereq.: Basic undergraduate or graduate course in curriculum and methods of teaching foreign languages in the secondary schools. The course examines advanced elements and/or issues of foreign language pedagogy.
- 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 745. Reading and Writing for Diverse Students in Content Areas.** 3 hr.; 3 cr. Designed for implementing effective instructional strategies for teaching linguistically and culturally diverse students. The course focuses on these students' difficulties with reading and writing in English in content areas and how to structure an integrated content and language and literacy instruction which addresses these students' needs and prepares them for challenging academic work across disciplines.
- SEYS 746. Multicultural Literature.** 3 hr.; 3 cr. A survey of literature works from/about African, Asian, Caribbean, Hispanic cultures, etc. for use in middle and high school English language arts classes. The course focuses on a critical examination of curricular and pedagogical issues salient to teaching multicultural literature and developing ways of promoting cross-cultural understanding and approaches for including multicultural literature in the school curriculum.
- 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 753. Computer Applications in Science Education.** 3 hr.; 3 cr. Prereq.: Matriculation into the MS in secondary science education, an introductory course in computers, and/or permission of instructor. Science teacher candidates enrolled in this course will examine the fundamental issues, concepts, and best practices surrounding the use of multimedia computer systems in science education. They will learn how to use a multimedia computer system, courseware and Internet resources to support science instruction at the secondary level. Some of the teaching and learning activities will take place on-line.
- SEYS 754. Curriculum Innovations in Science Education.** 3 hr.; 3 cr. Prereq.: Matriculation into the MS in secondary science education program, 36 credits in an approved science discipline, an introductory course in curriculum development or methods of teaching science at the secondary level and/or permission of instructor. Students enrolled in this course will learn how to design innovative science curriculum products that are project-based, student-centered and address the needs of diverse learners at the secondary level. Candidates will be assigned a series of curriculum development tasks, which will require individual and collaborative effort. All tasks will be compiled into a comprehensive curriculum product and presented at the end of the course for peer review.
- 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 school; coreq.: Secondary school teaching. May be repeated for credit if topic is changed.
- SEYS 767.1 1 hr.; 1 cr.
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

Educational & Community Programs

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 Advisor.

SEYS 769, 770. Scientific Approach to Educational Problems. 2 hr.; 3 cr. each course. Prereq.: For SEYS 769, matriculation in the MS 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 MS in Education program, and completion of two appropriate graduate courses in philosophical, historical, or comparative education; for SEYS 772, SEYS 771 during the 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 MS in Education (art education) program, completion of 20 graduate credits. SEYS 773 prepares students for research projects. It is a prerequisite to SEYS 774 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 MS 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 during 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 MS in Education (science) program, completion of 20 graduate credits, and 30 credits (undergraduate and graduate) in general science; for SEYS 778, SEYS 777 during the 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 MS 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 MS in Education (English) program, completion of 20 graduate credits, and 30 credits in English (undergraduate and graduate); for SEYS 782, SEYS 781 during 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 MS 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 MS in Education and completion of 20 graduate credits. Completion of SEYS 743 or its equivalent is a degree requirement and prerequisite or corequisite for this course. SEYS 785 is a prerequisite for SEYS 786.

SEYS 786. Advanced Seminar in Research in Foreign Language Education. 2 hr. plus conf.; 3 cr. Prereq.: Matriculation in foreign language education, SEYS 743, and SEYS 785. Students will conduct a research project in foreign language that will expand on the literature review begun in SEYS 785. Students will write a detailed plan for the research project including research design, data sources, and participants. They will act on that plan by data collection and analysis, and write a teacher research report.

* Note the student has three options for the advanced research requirement in the program and should confer with advisors from both SEYS and the language department. Students may take a) SEYS 786, b) an independent study, 790.3 with a foreign language education professor, or c) take an advanced research course in the language specialization area, 781 or 791.

Research Project

When the research project has been approved by the Research Advisor, the stu-

dent 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.

Educational & Community Programs

Chair: Jesse M. Vázquez

Graduate Program Coordinators: Educational Leadership, K. Dunn; Counselor Education, J. Pellitteri; Special Education, H. Margolis; School Psychology, M. Fish.

Dept. Office: Powdermaker Hall 033, 997-5240, 5250

The Department of Educational & Community Programs prepares students for leadership, instructional, and support positions in counseling, school administration, school psychology, and special education. The four distinct graduate programs in the department lead to New York State-approved certifications and specializations. Three of the four also lead to a Master of Science in Education degree. The programs in Counselor Education, Educational Leadership, School Psychology, and Special Education prepare graduates to take positions in schools and community agencies, industry, and other institutions, which provide educational and human services.

All students must meet appropriate standards in scholarship, communication skills, character, interpersonal relations, and social judgment to continue in any program. And, students are obliged to meet the college standards as well as the academic standards established by their particular program.

Responsible preparation for work in school and community settings requires that in addition to meeting the academic standards established by each program, students demonstrate appropriate per-

sonal characteristics, which would include professional judgment, ethical conduct, and academic integrity. In addition, students are expected to demonstrate sensitivity to client issues and effective management of personal stress or adjustment difficulties. Students who fail to meet these personal and professional standards will be subject to review by their program faculty, and sanctions, such as dismissal, may result. Students naturally have the right of appeal, and should familiarize themselves with guidelines set forth in program handbooks and this *Bulletin*.

Registration

Registration or pre-registration procedures vary among Programs. Students should check with their Program to learn about the Program's procedures. They should also check the Queens College Web site for registration and pre-registration dates and course schedules. Program schedules are also posted in the department office. Students must consult with advisors and check program sequences before registering.

Department-wide Courses

ECP 749. Independent Study in Education. Prereq.: Matriculation in MS in Ed Program or in an ECP Advanced Certificate Program in Education 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.

School Psychology

Coordinator: Marian C. Fish

CERTIFICATE AND MASTER'S DEGREE PROGRAMS IN SCHOOL PSYCHOLOGY

The Graduate Program in School Psychology at Queens College is cast in the scientist-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.

This 60-credit specialist level program 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, consultation, cultural and linguistic diversity, 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 general education as well as special education students, teachers, administrators, parents, and with others in the commu-

nity 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 general and special education, at different ages (preschool and 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 legal mandates, 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. This 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 qualified

Educational & Community Programs

School Psychology Degree Requirements (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	4
ECPSP 863 Exceptionality of Human Development	3
ECPSP 779 Multicultural Issues in School Psychology	3
<i>Spring – first year</i>	
ECPSP 862 Developmental Psychopathology	3
ECPSP 773 Theory and Practice in Assessment of Intelligence & Cognitive Functioning II	4
ECPSP 865 Learning & Instructional Strategies	3
ECPSP 774 Theory and Practice of Personality Evaluation I	3
<i>Fall – second year</i>	
ECPSP 770 Behavioral Assessment and Intervention	3
ECPSP 775 Theory and Practice of Personality Evaluation II	3
ECPSP 778 Counseling Techniques for School Psychologists	3
ECPSP 861 Assessment of Linguistically and Culturally Diverse Students	3*
<i>Spring – second year</i>	
ECPSP 777 Practicum in School Psychology	4
ECPSP 867 Practicum in School Psychology Consultation	4
ECPSP 868 Advanced Counseling Practicum	2
ECPSP 866 Multicultural Interventions	3*
<i>Fall – third year</i>	
ECPSP 771 Professional Issues in School Psychology	3
ECPSP 768 Internship in School Psychology I	3**
ECPSP 764 Introduction to Research in School Psychology	3
<i>Spring – third year</i>	
ECPSP 864 Research Design and Data Analysis in School Psychology	3
ECPSP 769 Internship in School Psychology II	3**

supervisors. Students in the Bilingual Specialization will need to demonstrate proficiency in a second language through an oral interview and a written essay.

Graduate Center – Queens College School Psychology Doctoral Specialization

Students may apply to the Graduate Center – Queens College School Psychology Doctoral Specialization leading to a PhD in Educational Psychology: School Psychology, and to New York State Certification in School Psychology. Application is made through the Graduate Center PhD Program in Educational Psychology (212-817-8285).

Faculty

Fish, Marian C., Coordinator, *Professor*, PhD 1974, Teachers College, Columbia University: family systems theory, family-school relations, interventions
Goh, David S., *Professor*, PhD 1973, University of Wisconsin at Madison: school psychology, measurement, and research design
Lopez, Emilia, *Associate Professor*, PhD 1989, Fordham University: school

psychology, consultation, linguistically and culturally diverse students
Ross, Roslyn P., *Associate Professor*, PhD 1966, New York University: assessment, counseling, supervision, personality theory, child development
Theodore, Lea, *Assistant Professor*, PhD 2002, University of Connecticut: interventions for children with behavior, academic, communication, and health-related issues
Angrilli, Albert, *Professor Emeritus* and *Adjunct Professor*, PhD 1958, New York University: Diplomate in School Psychology ABPP: clinical and school psychology, psychotherapy, hypnotherapy

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 Division 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 & Community Programs
Queens College, CUNY
Flushing, NY 11367-1597
718-997-5230
www.qc.edu/ecp/schpsych/index.htm

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
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 3.0 and an average of 3.0 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.

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

School Psychology Degree Requirements (Three- and Four-Year Programs)**continued**

The content and sequence of the four-year part-time program are as follows:

<i>Fall – first year</i>	<i>credits</i>
ECPSP 860 Human Development	3
ECPSP 772 Theory and Practice in Assessment of Intelligence & Cognitive Functioning I	4
ECPSP 779 Multicultural Issues in School Psychology	3
<i>Spring – first year</i>	
ECPSP 862 Developmental Psychopathology	3
ECPSP 773 Theory and Practice in Assessment of Intelligence & Cognitive Functioning II	4
<i>Fall – second year</i>	
ECPSP 770 Behavioral Assessment and Intervention	3
ECPSP 863 Exceptionality of Human Development	3
ECPSP 861 Assessment of Linguistically and Culturally Diverse Students	3*
<i>Spring – second year</i>	
ECPSP 865 Learning & Instructional Strategies	3
ECPSP 774 Theory and Practice of Personality Evaluation I	3
ECPSP 866 Multicultural Interventions	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	4
ECPSP 867 Practicum in School Psychology Consultation	4
ECPSP 868 Advanced Counseling Practicum	2
<i>Fall – fourth year</i>	
ECPSP 771 Professional Issues in School Psychology	3
ECPSP 768 Internship in School Psychology I	3**
ECPSP 764 Introduction to Research in School Psychology	3
<i>Spring – fourth year</i>	
ECPSP 864 Research Design and Data Analysis in School Psychology	3
ECPSP 769 Internship in School Psychology II	3**

*Bilingual and Multicultural specializations only.

**ECPSP 768.1, 769.1 Internship in Bilingual/Multicultural School Psychology I, II.

Content and Sequence of the Program

The program will consist of the courses listed in the chart on this page, which are to be taken in the order shown for the three- and four-year sequences. 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 (ECPSP 772, 773, 774, 775, 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. Responsible training for work in school and mental health settings requires that in addition to meeting academic requirements, students have appropriate personal characteristics. These include but are not limited to communication skills, interpersonal skills, professional judgment, and ethical conduct. In addition, students are expected to demonstrate sensitivity to client issues and effective management of personal stress or adjustment difficulties.

At the end of each semester, the faculty of the School Psychology Program will evaluate each student's suitability for continuation in the program, considering information from all sources in the program and related settings. The decision that a student must leave the program on personal grounds will be made by the program faculty and may be appealed, should the student wish, to a special Ad Hoc Appeals Committee of the department, which will include no one who participated in the initial evaluation. The student shall be informed of his/her right of appeal to the Ad Hoc Committee and beyond, to the Graduate Scholastic Standards Committee.

Queens College, CUNY
Flushing, New York 11367-1597
718-997-5234

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. In the Spring semester before internship, students must spend one day a week in a school setting. 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, before receiving certification, provide documentation that they have completed seminars in: a) Child Abuse Identification and Reporting; b) Alcohol and Drug Abuse; and c) School Violence and Intervention.

School psychology students are expected to observe the ethical principles of the profession as described in the National Association of School Psychologists' Principles for Professional Ethics and the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct. Students engage in behaviors and actions that follow these ethical and professional standards. Failure to comply with ethical and professional standards may be grounds for dismissal from the School Psychology Program.

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. Fieldwork 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. Fieldwork in School Psychology II. 3 cr. Prereq.: ECPSP 766 or 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. 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. 3 hr.; 3 cr. Prereq.: Permission of department and ECPSP 768. 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. 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 777. Practicum in School Psychology. 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 used in the schools. Practical workshop and par-

ticipation 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. Seminar in Special Issues. 3 hr.; 3 cr. This course 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, assessment and intervention with linguistically and culturally diverse students, cognitive theory and research, consultation models, legal and ethical issues, etc. Fall

ECPSP 862. Developmental Psychopathology. 3 hr.; 3 cr. Prereq.: Matriculation in the Graduate Program in School Psychology or permission of the program. 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

ECPSP 863. Exceptionality of Human Development. 3 hr.; 3 cr. Prereq.: Matriculation in School Psychology Program or permission of the department; ECPSP 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

ECPSP 864. Research Design and Data Analysis in School Psychology. 3 hr.; 3 cr. Prereq.: ECPSP 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

ECPSP 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 general as well as special education students. Emphasis is placed on applying learning and instructional approaches to children of different ages and backgrounds. Spring

ECPSP 867. Practicum in School Psychology Consultation. 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. Specific assessment and intervention strategies are discussed as they relate to the consultation process. Students are placed in a school setting to practice consultation skills.

ECPSP 868. Advanced Counseling Practicum. 2 hr.; 2 cr. Prereq.: ECPSP 778; coreq.: ECPSP 777. This practicum provides students with practice in counseling with real clients in field settings. It gives them the opportunity to apply the-

oretical knowledge about counseling obtained from ECPSP 778, Counseling Techniques for School Psychologists, to real situations. Students spend time weekly 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 selected from the following:

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.)

ECPSP 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. May be repeated for credit for different course topics.

ECPSP 866. Seminar in Special Issues: Multicultural Interventions. 3 hr.; 3 cr. Students acquire knowledge related to classroom procedures, curriculum programs, teaching techniques, and system interventions that are effective with culturally and linguistically diverse students.

In addition, students in the Specialization in Bilingual School Psychology will enroll in special sections of the internship:

ECPSP 768.1. Internship in Bilingual/Multicultural School Psychology I. 3 hr.;

3 cr. Prereq.: Permission of the 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. The placements are in settings with a bilingual population, and students are under the supervision of qualified 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.

ECPSP 769.1. Internship in Bilingual/Multicultural School Psychology II. 3 hr.; 3 cr. Prereq.: Permission of the department and ECPSP 768.1. 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.

Educational Leadership

Coordinator: Kenneth J. Dunn

ADVANCED CERTIFICATE PROGRAM FOR SCHOOL BUILDING LEADER

The college will admit to the program in Educational Leadership 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 a School Building Leader. Students enrolled in the program should

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

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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*, EdD 1967, Teachers College, Columbia University: administration, learning and teaching styles, administrative style, curriculum and in-service training

Brady, Kevin P., *Assistant Professor*, PhD 2000, University of Illinois at Urbana-Champaign: computers and technology, legal problems and cases, school finance

Quinn, Terrence, *Associate Professor*, EdD 1995, St. John's University: administrator training programs, organizational behavior, leadership styles

Tobias, Randolph A., *Associate Professor*, EdD 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 ten courses (30 credits) as outlined below. Students who complete the 30 credits (maintaining an average of B [3.0] or better) are eligible to receive New York State Building Leader certification.

The ten required courses for completion of the program include:

	<i>credits</i>
ECPEL 880 Leadership Theory and Practice	3
ECPEL 881 Curriculum and Supervision	3
ECPEL 882 School Finance	3
ECPEL 883 Human Relations for the Educational Leader	3
ECPEL 885 Legal Problems in Public Education: Political and Economic Implications	3
ECPEL 886 Management of Teaching and Learning for Administrators	3
ECPEL 887 Technology for School Leaders	3
ECPEL 888 Critical Issues and Guidelines	3
ECPEL 890 Guided Field Experience in Administration and Supervision	3
ECPEL 894 Supervisory Practicum	3
<i>Total</i>	<u>30</u>

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 strongly urged to follow the course sequence listed below:

<i>First Year</i>	<i>credits</i>
880 Leadership Theory and Practice	3
881 Curriculum & Supervision	3
883 Human Relations for the Educational Leader	3
886 Management of Teaching and Learning for Administrators	3

Second or Third Year

882 School Finance	3
885 Legal Problems in Public Education: Political and Economic Implications	3
887 Technology for School Leaders	3
888 Critical Issues and Guidelines	3
890 Guided Field Experience in Administration and Supervision	3
894 Supervisory Practicum	3

Courses in Instructional Administration

ECPEL 880. Leadership Theory and Practice. 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.

ECPEL 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.

ECPEL 882. School Finance. 3 hr.; 3 cr. An examination of school finance and budgeting practices in public elementary and secondary schools in New York state. Current practices of data-driven decision-making by school leaders will be discussed.

ECPEL 883. Human Relations for the Educational Leader. 3 hr.; 3 cr. 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.

ECPEL 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.

ECPEL 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.

ECPEL 887. Technology for School Leaders. 3 hr.; 3 cr. An introduction to basic programming plus applications of computers to instruction and in school management.

ECPEL 888. Critical Issues and Guidelines. 3 hr.; 3 cr. 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 level.

ECPEL 890. Guided Field Experience in Administration and Supervision. 3 hr.; 3 cr. Seminar and fieldwork requirement. Both fieldwork placement and hours must be approved by the coordinator.

ECPEL 894. Supervisory Practicum. 3 hr.; 3 cr. 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.

Special Education

Coordinator: Howard Margolis

There are three distinct 36-credit Master's Degree Programs in Special Education. Each focuses on a different age and grade range. The Early Childhood Program focuses on children, Birth–Grade 2; the Childhood Program on Grades 1–6; and the Adolescent Program on Grade 7 through age 21.

Each program prepares candidates to work with children or youths whose disabilities range from mild to severe. Upon completion of their Graduate Program, graduates are eligible for initial/professional or permanent New York State Certification in Special Education, in their age/grade level.

All programs are part-time and take 3 years to complete. Candidates are required to take internship courses during the summer. They must also follow a

prescribed course of study.

The faculty is committed to preparing teachers who have the knowledge, skills, and disposition to help children and youths with disabilities become independent, productive, fully included members of their schools and society. The purpose of the programs in Special Education is to help candidates develop the competencies needed to teach children and youths with disabilities, including severe disabilities, in a variety of settings, including age-appropriate general education environments. To this end, the New York State Pedagogical Core requirements for teachers of special education and related competencies have been embedded throughout the curriculum and programs.

Faculty

Margolis, Howard, Coordinator, *Professor*, EdD 1974, Hofstra University:

diagnosis and remediation of learning difficulties, parent involvement in program planning, motivation theory

Brown, Fredda A., *Professor*, PhD 1981, University of Kansas: individuals with severe disabilities

Erwin, Elizabeth J., *Associate Professor*, EdD 1992, Teachers College, Columbia University: early childhood special education

Michaels, Craig, *Associate Professor*, PhD 1993, New York University: special education, educational psychology

Truesdell, Lee Ann, *Associate Professor*, PhD 1978, Florida State University: special education, curriculum, instruction, supervision

Matriculation Requirements for MSEd in Special Education

Applicants to the Graduate Programs in Special Education must:

■ Hold an initial/provisional certificate in general education in the age/school range of the special education program to which they apply (Birth–Grade 2; Grades 1–6; Grade 7 through Age 21).

■ Have a 3.0 GPA. In rare cases, the program might accept, as a probationary candidate, an applicant with a slightly lower GPA; such candidates must earn a B or better in each of their first four 3-credit special education courses.

■ Write a well-organized, well-conceptualized essay that clearly communicates their reasons for pursuing a degree in special education.

■ Provide three letters of recommendation from professional sources. The letters must demonstrate the applicant's

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superior abilities, qualities, and potential as a graduate candidate in special education.

■ Indicate the nature of their current and past experiences with people with disabilities.

Maintenance Requirements

All matriculated candidates in the Graduate Programs in Special Education must maintain a 3.0 GPA. Candidates who achieve a course grade of less than B– must meet with their Advisor.

Candidates must have a 3.0 GPA to register for internship courses (ECPSE 715, 725, 735, 745) and for research courses (ECPSE 746, 748). Candidates who achieve less than a B– in an internship course must meet with their Advisor to determine if they should continue in the Program and, if so, the conditions for continuing. If the candidate and Advisor deem that the deficiencies can be rectified, an individualized plan, including a guided internship experience, may be written and the candidate will be required to register for the Supervised Internship in Special Education (ECPSE 754).

Graduation Requirements

To qualify to graduate, candidates must achieve a 3.0 GPA, complete their prescribed 36-credit course sequence, and complete a culminating research project (activity). The culminating research project is completed under the supervision of a faculty member in ECPSE 746 and ECPSE 748.

Special Notes

Due to changing State certification requirements and ongoing improvements to the Special Education Programs, some information in this *Bulletin* may be inaccurate. Please check with the department for updated information.

Questions about the Graduate Special Education Programs should be directed to the advisor for the age or specialty: Early Childhood (Birth–Grade 2), Childhood (Grades 1–6), Adolescent (Grade 7 through Age 21), or students with Severe Disabilities (all ages). You may contact the Advisor by phone or e-mail. A department secretary will direct you to the appropriate advisor.

Candidates who enter a Special Education Program, but lack provisional or initial certification in general education in the grade/age range of their Special Education Program may not be eligible for New York State certification. Such candidates are responsible for obtaining certification on their own and may have

COURSES IN THE GRADUATE PROGRAMS IN SPECIAL EDUCATION

Early Childhood Special Education

- ECPSE 700. Foundations of Special Education
- ECPSE 722. Applied Behavior Analysis & Positive Behavior Supports
- ECPSE 732. Building Partnerships with Families of Children with Disabilities
- ECPSE 720. Trends and Issues in the Education of Learners with Severe Disabilities
- ECPSE 721.3. Curriculum in Severe Disabilities: Early Childhood Special Education
- ECPSE 725.3. Internship in Severe Disabilities: Early Childhood Special Education
- ECPSE 708. Collaboration and Transdisciplinary Teaching
- ECPSE 730. Principles and Practices in Early Childhood Special Education
- ECPSE 731. Advanced Curriculum & Methods in Early Childhood Special Education
- ECPSE 735. Internship in Early Childhood Special Education
- ECPSE 746. Research in Special Education
- ECPSE 748. Advanced Research in Special Education

Childhood Special Education

- ECPSE 700. Foundations of Special Education
- ECPSE 722. Applied Behavior Analysis & Positive Behavior Supports
- ECPSE 732. Building Partnerships with Families of Children with Disabilities
- ECPSE 720. Trends and Issues in the Education of Learners with Severe Disabilities
- ECPSE 721.1. Curriculum in Severe Disabilities: Childhood Special Education
- ECPSE 725.1. Internship in Severe Disabilities: Childhood Special Education
- ECPSE 708. Collaboration and Transdisciplinary Teaching
- ECPSE 710. Instruction for Childhood Special Education
- ECPSE 711. Curriculum Adaptations and Teaching Strategies for Childhood Special Education
- ECPSE 715. Internship in Childhood Special Education
- ECPSE 746. Research in Special Education
- ECPSE 748. Advanced Research in Special Education

Adolescent Special Education

- ECPSE 700. Foundations of Special Education
- ECPSE 722. Applied Behavior Analysis & Positive Behavior Supports
- ECPSE 732. Building Partnerships with Families of Children with Disabilities
- ECPSE 720. Trends and Issues in the Education of Learners with Severe Disabilities
- ECPSE 721.4. Curriculum in Severe Disabilities: Adolescent Special Education
- ECPSE 725.4. Internship in Severe Disabilities: Adolescent Special Education
- ECPSE 708. Collaboration and Transdisciplinary Teaching
- ECPSE 740. Instruction for Adolescent Special Education
- ECPSE 741. Curriculum Adaptations, Teaching Strategies & Transition Preparation for Adolescent Special Education
- ECPSE 745. Internship in Adolescent Special Education
- ECPSE 746. Research in Special Education
- ECPSE 748. Advanced Research in Special Education

to take additional courses at Queens College or another accredited graduate school. Similarly, candidates who have not passed required state tests may not be eligible for certification and will have to pass these tests.

Courses in Special Education

ECPSE 700. Foundations of Special Education. 3 hr. plus scheduled conf.; 3 cr. Education and psychology in Special Education are stressed with emphasis on developing a broad background of knowledge about students with various disabilities and strategies for creating access to the general education curriculum. The historical and sociological treatment of people with disabilities, special education law and programs, advocacy and collaboration, and building classroom communities that support the full diversity of learners are also addressed. Twenty hours of fieldwork focusing on special education are required.

ECPSE 708. Collaboration and Transdisciplinary Teaching. 3 hr.; 3 cr. Prereq.: ECPSE 700; coreq.: ECPSE 710, 730 or 740. Study in theory, research, and exemplary practice in collaborative and transdisciplinary teaching provide the foundation for creating effective learning environments for individuals with disabilities. This course will focus on effective collaborative practices within an inclusive setting which are cross-disciplinary and cross-cultural. At least 20 hours of field experience in collaborating with another teacher and/or related service professional is required.

ECPSE 710. Instruction for Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 700, 722; coreq.: ECPSE 708. Theory and research about children with learning and behavior disabilities and exemplary practices in informal assessment, curriculum design and adaptations, effective instruction, supportive learning environments, and instructional technology. Field experience

of at least 15 hours involves students in assessment, curriculum adaptations, and teaching a small group of children who exhibit learning problems. Reflection on practice involves an analysis of learning and behavior change.

ECPSE 711. Curriculum Adaptations and Teaching Strategies for Childhood Special Education. 3 hr.; plus scheduled conf.; 3 cr. Prereq.: ECPSE 710; coreq.: ECPSE 715. Teaching and learning strategies are taught within the context of the general education curriculum to individualize instruction and maximize grade-level content mastery for all learners. Students adapt and teach a curriculum unit grounded in the New York State Learning Standards designed to meet the individual needs of students with disabilities by modifying instruction, employing metacognitive, task-specific learning strategies, and utilizing instructional technology. Field experience of at least 15 hours involves students in adapting a thematic unit for

students with learning difficulties and embedding learning strategies within unit lessons.

ECPSE 715. Internship in Childhood Special Education. 3 hr. plus participation; 3 cr. Prereq.: ECPSE 700, 708, 722, 710; coreq.: ECPSE 711. Supervised teaching of children with disabilities within one of the following groups: (a) grades 1 through 3, or (b) grades 4 through 6. Students who have completed their first internship, ECPSE 725.1, with children in one of the above age groups, will teach children with disabilities within the other age group for this course. This internship, which involves observation and teaching of children with disabilities and their families on a full-time basis for one semester, can be completed at the student's place of employment upon approval of the faculty. Students will develop a collaborative partnership within the school to create innovative and inclusive ways of educating children with disabilities. Students will collaboratively plan, design, and implement IEPs and instructional programs and learning environments that use assistive technology. Students will demonstrate effective teaching of children with diverse abilities and cultures.

ECPSE 720. Trends and Issues in the Education of Learners with Severe Disabilities. 3 hr.; 3 cr. Prereq.: ECPSE 700. This course is designed to acquaint students with the characteristics, assessment strategies, methods of teaching, team approaches, and current research and life span issues related to the education of learners with severe and multiple disabilities. Emphasis is placed on research-based methodology, language development, and teaching skills that increase self-determination and quality of life for students and their families.

ECPSE 721.1. Curriculum in Severe Disabilities: Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 700, 720; coreq.: ECPSE 725.1. This course is designed to offer an advanced study of curriculum development for children with severe disabilities, Grades 1–6. The course explores the curriculum development process, including IEP and program development and evaluation. Field-based assignments are implemented within the context of the summer internship (ECPSE 725.1).

ECPSE 721.3. Curriculum in Severe Disabilities: Early Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 700, 720; coreq.: ECPSE 725.3. This course is designed to offer an advanced study of curriculum development for young children with severe disabilities. The course

explores the curriculum development process, including IEP/IFSP and program development and evaluation. Field-based assignments are implemented within the context of the summer internship (ECPSE 725.3).

ECPSE 721.4. Curriculum in Severe Disabilities: Adolescent Special Education. 3 hr. plus participation in field experiences; 3 cr. Prereq.: ECPSE 700, 720; coreq.: ECPSE 725.4. This course is designed to offer an advanced study of curriculum development for adolescents with severe disabilities, grade 8 through age 21. The course explores the curriculum development process, including IEP, transition goal-setting, person-centered planning, quality of life issues/community participation, program development and evaluation. Field-based assignments are implemented with the context of the summer internship (ECPSE 725.4).

ECPSE 722. Applied Behavior Analysis and Positive Behavior Supports. 3 hr.; 3 cr. Prereq.: ECPSE 700. Students will learn and examine environmental influences on student behavior. Additionally, students will learn about assessment of behavior problems, various educative and positive behavioral strategies, and the use of single subject designs to evaluate behavior change in applied settings. Field experiences of about 5 hours involve students in measurement and analysis of student behavior.

ECPSE 725.1. Internship in Severe Disabilities: Childhood Special Education. 3 hr. plus participation; 3 cr. Prereq.: ECPSE 700, 722, 720; coreq.: ECPSE 721.1. Supervised teaching of children with severe disabilities in an intensive six-week summer session with placement in a childhood setting. Placement will focus on an age group different from the children in ECPSE 715. Focus will be on exemplary practices, with an emphasis on language and communication, increasing independence, and promoting positive interaction skills.

ECPSE 725.3. Internship in Severe Disabilities: Early Childhood Special Education. 3 hr., plus participation; 3 cr. Prereq.: ECPSE 700, 722, 720; coreq.: ECPSE 721.3. Supervised teaching of young children with severe disabilities in an intensive six-week summer session placement in an early childhood setting. Placement will focus on an age-group different from the children in ECPSE 735. Focus will be on exemplary instructional practices, with an emphasis on language and communication, increasing independence, and promoting positive interaction skills.

ECPSE 725.4. Internship in Severe Disabilities: Adolescent Special Education. 3 hr. plus participation in internship; 3 cr. Prereq.: ECPSE 700, 722, 740; coreq.: ECPSE 721.4. Supervised teaching of adolescents with disabilities within one of the following groups: (a) grades 7 through 12, or (b) ages 18–21 in an intensive six-week summer session placement in an adolescent/young adult educational setting. Focus will be on exemplary instructional practices, with an emphasis on self-determination, transition planning and support, person-centered planning, and full community participation in age-appropriate ways.

ECPSE 730. Principles and Practices in Early Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 700 and 722. This course, which is grounded in a social justice and human rights framework, will explore the education of young children with disabilities and their families. Students will be introduced to knowledge and skills needed to teach in early childhood inclusive environments. Emphasis will be on creating democratic classrooms and school communities for diverse learners. Fifteen hours of field experience will include observation and analysis of young children and school environments.

ECPSE 731. Advanced Curriculum and Methods in Early Childhood Special Education. 3 hr.; 3 cr. Prereq.: ECPSE 730, 708; coreq.: ECPSE 735. This course is designed to provide students with research-based and innovative methods for educating young learners with diverse abilities and backgrounds within inclusive environments. Using family-centered principles, students will learn how to collaboratively plan, implement, and evaluate individualized educational plans and how to adapt instruction, materials, environments, and curricula for diverse learners. Twenty hours of fieldwork is required that includes observation and evaluation of a classroom environment.

ECPSE 732. Building Partnerships with Families of Children with Disabilities. 3 hr.; 3 cr. Prereq.: ECPSE 700. This course is designed to enhance students' skills, experience, and knowledge in understanding the rationale for and practices in promoting meaningful family-professional partnerships. Social, cultural, and community influences are deeply embedded in the course content. Field experience involves spending 10 hours with a family who has a child with a disability.

ECPSE 735. Internship in Early Childhood Special Education. 3 hr. plus participation; 3 cr. Prereq.: ECPSE 700,

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730, 732, 720, 721.3, 725.5; coreq.: ECPSE 731. Supervised teaching of young children with disabilities within one of the following groups:

(a) infant/toddler, (b) preschool, or (c) kindergarten or early elementary age. Students who have completed their first internship, ECPSE 725.3, with children in one of the above age ranges, will teach children with disabilities within a different age group for this course. This internship, which involves observation and teaching of young children with disabilities and their families on a full-time basis for one semester, may be completed in a student's place of employment upon approval of the faculty. Students will initiate and develop a collaborative partnership with the school to create innovative and inclusive ways of educating young children with disabilities. Students will collaboratively plan, design, and implement IEPs or IFSPs and instructional programs and learning environments using assistive technology. Students will demonstrate effective teaching of young children with diverse abilities and cultures.

ECPSE 740. Instruction for Adolescent Special Education. 3 hr. plus fieldwork; 3 cr. Prereq.: ECPSE 700, 722; coreq.: ECPSE 708. Theory and research about young adults with disabilities and exemplary practices in informal assessment, curriculum design and adaptation, effective instruction, person-centered planning, self-determination, supportive learning environments, and instructional technology. Field experiences of at least 15 hours involve students in assessment, curriculum adaptation, planning, and implementing an intervention to assist a young adult to achieve his/her goals. Reflection on practice involves an analysis of self-determination, empowerment, learning, community participation, and behavior change.

ECPSE 741. Curriculum Adaptations, Teaching Strategies and Transition Preparation for Adolescent Special Education. 3 hr. with field experiences, plus scheduled conf.; 3 cr. Prereq.: ECPSE 740; coreq.: ECPSE 715. Teaching and learning strategies are taught within the context of the general education curriculum and age-appropriate community environments to individualize instruction, prepare students for the transition from school to adult life and maximize grade-level content mastery for all learners. Students plan and teach a curriculum unit grounded in the New York State Learning Standards designed to meet the individual needs of students with disabilities by modifying and adapting instruction, employing metacognitive,

task-specific learning strategies, and utilizing instructional technology. Field experiences of at least 15 hours involve students in adapting a thematic unit and exploring participation in age-appropriate community environments for students with disabilities.

ECPSE 745. Internship in Adolescent Special Education. 3 hr. plus participation; 3 cr. Prereq.: ECPSE 700, 708, 722, 730; coreq.: 731. Supervised teaching of adolescents with disabilities within one of the following groups: (a) grades 7 through 12, or (b) ages 18–21. Students who have completed their first internship, ECPSE 725.4 with adolescents/young adults in one of the above age groups, will teach adolescents with disabilities within the other age group for this course. This internship is a full-time commitment for one semester and may be completed at the student's place of employment upon approval by the faculty. Students will develop a collaborative partnership within the school, the community, and/or adult service agencies to plan, design, and implement IEPs, transition plans, and content area strategic instructional programs that use assistive technology. Students will demonstrate effective teaching, planning, and supporting the self-determination of adolescents/young adults with diverse abilities and cultures.

ECPSE 746. Research in Special Education. 3 hr. plus scheduled conf.; 3 cr. With permission of Advisor. Study, understanding, and evaluation of basic research design and methodology in special education and interpreting research results for classroom instruction. Students will prepare a literature review and design research methodology that will be implemented in a research study in ECPSE 748. Research topics will be referenced to classroom needs as individually determined by each student's educational placement and their area of interest.

ECPSE 748. Advanced Research in Special Education. 3 hr. plus conf.; 3 cr. Prereq.: ECPSE 746. The continued study, understanding, and evaluation of research design and methodology in special education. Each student will implement an independent field-based project based on the literature reviewed and methodology developed in ECPSE 746. Research topics are based on needs of students' classrooms and their research interests. A research paper is required. This paper serves as the thesis.

ECPSE 754. Supervised Internship in Special Education. 3 hr. plus participation, 1 seminar hr.; 3 cr. Prereq.: 715,

725, 735, or 745. Students who receive a grade of B– or lower in ECPSE 715, 725, 735, or 745 are required to register for this course. Additional supervised experience in teaching individuals with disabilities in the same age/grade level as the prior internship will be provided. Seminars will supplement the internship, as well as individual meetings with the instructor. Course assignments will be determined by the individual needs and experiences of the student.

Counselor Education

Coordinator: John Pellitteri

The Master of Science in Education degree in Counseling is a 60-credit program that prepares students to serve as professional psychological counselors in schools and agencies. The program offers a School Counseling Track (which can include specializations in bilingual/multicultural counseling and/or college counseling) or the Mental Health Counseling Track (which can include a specialization in substance abuse counseling). The School Counseling Track leads to permanent New York State Certification in School Counseling. The multicultural specialization leads to the Bilingual Extension of the state certification in School Counseling. The alcohol/substance specialization leads to New York State certification as a Credentialed Alcoholism & Substance Abuse Counselor (CASAC).

The state education department is currently developing requirements for the newly approved licensing in Mental Health Counseling. It is anticipated that the MSED program will meet these requirements when they become implemented by the state.

The program can be completed in 2 years full-time, which requires that students attend daytime classes or in 3 to 4 years part-time, which allows for evening classes. All candidates for the master's degree must take the 24-credit sequence of core counseling courses, 18 credits of required advanced counseling courses, 9–12 credits of supervised fieldwork, and 6–9 credits of electives. Full-time students take 12 credits (600 hours) of fieldwork and 2 elective courses. Part-time students take 9 credits (450 hours) of fieldwork and 3 elective courses. Up to 12 credits of prior graduate work in relevant areas may be accepted toward electives.

The core and advanced courses must be taken in sequential order. Lecture

Program Sequence**School Counseling Full-Time Two-Year Sequence
(requires attendance at daytime classes at 1:00 pm)**

<i>Fall – first year</i>	<i>credits</i>
ECPE 700 Theory, Philosophy, and History of Counseling	3
ECPE 701 Practicum in Self-Awareness Training	3
ECPE 703 Seminar Practicum in Interview Techniques and Human Service Systems	3
ECPE 704 Theories and Techniques of Psychological Counseling	3
<i>Spring – first year</i>	
ECPCE 702 Psychosocial Development and Personality Theory	3
ECPCE 705 Seminar Practicum in Psychological Counseling with Individuals: Applications	3
ECPCE 706 Study of Group Dynamics, Leadership, and Social Systems	3
ECPCE 729.4 Fieldwork in a School	4
ECPCE 804 Techniques of Educational and Psychological Evaluation	3
<i>Fall – second year</i>	
ECPCE 707 Seminar Practicum in Psychological Counseling in Groups	3
ECPCE 800 Vocational Psychology & Career Education	3
ECPCE 806 Organization, Administration, and Evaluation of Counseling Services	3
ECPCE 821.4 Fieldwork	4
Elective	3
<i>Spring – second year</i>	
ECPCE 802 Special Problems in Psychological Counseling	3
ECPCE 803 Seminar in Multicultural Issues in Psychological Counseling	3
ECPCE 807 Seminar Practicum in Research in Psychological Counseling	3
ECPCE 821.4 Fieldwork	4
Elective	3

The 6 credits of electives can be taken during the summer or in the third and fourth semesters. Students taking the mental health track substance abuse specialization must complete the four-course sequence: ECPCE 730, 731, 732, and 733, which is offered on a rotating two-year basis. The schedule is modified to replace ECPCE 802 and 806 and use both electives to allow one substance abuse course to be taken in each of the four semesters. ECPCE 802 and 806 are required for the school counseling track but not the substance abuse specialization. Full-time students wishing to take both the school counseling track and the substance abuse specialization can do so with the addition of these two courses for a total of 66 credits.

courses and the related experiential lab courses are offered in modules and must be taken concurrently. This allows for the development of knowledge and skills in a logical progression from basic competencies to more complex applications. It is necessary for the student to not only learn psychological concepts but to be able to apply such knowledge in various contexts. Students must be able to demonstrate the effective application of individual and group counseling skills, as well as assessment, research, and evaluation skills. Students are expected to develop critical thinking and insight, to take multiple perspectives, and to synthesize knowledge from various learning experiences in the program. Both personal maturity and academic sophistication are required.

Responsible training for work in school and mental health settings requires that students have professionalism in both appearance and demeanor, as

well as appropriate personal characteristics. These personal characteristics include but are not limited to: communication skills, interpersonal skills, professional judgment, insight, and ethical conduct. In addition, students are expected to demonstrate sensitivity to client issues and effective management of personal stress or adjustment difficulties. If there are questions regarding academic performance or personal/ interpersonal capacities, students are reviewed by the program faculty to determine their continuation in the program. *In order to maintain matriculation, students must receive a favorable review with regards to:*

- 1) Grades (a minimum GPA of 3.0).
- 2) Attendance, punctuality, and participation in classes.
- 3) The personal and interpersonal abilities relevant to professional counseling.

Faculty

- Pellitteri, John, Coordinator, *Assistant Professor*, PhD 1999, New York University: counseling psychology, emotional intelligence, school counseling, music therapy
- Howell, Lynn C., *Assistant Professor*, PhD 1999, Idaho State University: mental health counseling, group counseling, human growth and development
- Rivera, Lourdes, M., *Assistant Professor*, PhD 2002, Fordham, University: career counseling, multicultural issues
- Schwartz, Lester J., School Counseling advisor, *Professor Emeritus*, PhD 1959, Teachers College, Columbia University: counseling psychology, career development
- Vázquez, Jesse M., Bilingual Counseling advisor, *Professor*, PhD 1975, New York University: cross-cultural counseling, individual and group psychotherapy
- Woods, Patricia, *Adjunct Associate Professor*, EdD 1990, Teachers College, Columbia University: coordinator for alcohol and substance abuse specialization

**PROGRAM FOR THE DEGREE OF
MASTER OF SCIENCE IN EDUCATION
IN COUNSELOR EDUCATION****Requirements for Admission**

1. Completion of a bachelor's degree with an overall GPA of 3.0.
2. Satisfactory completion of the following 5 prerequisite course areas:
 - Introductory psychology
 - Developmental psychology (child, adolescent, or life-span)
 - Abnormal psychology (or Psychopathology)
 - Statistics
 - Social basis of behavior (sociology, anthropology, or social psychology).
3. Three letters of reference.
4. Satisfactory standards in speech, written English, health, character, and personality.
5. Satisfactory rating on admissions tests, interviews, and references.

In the 500-word essay on the admissions application, please describe your motivations for entering the counseling profession and your expectations of graduate level study.

**Requirements for Completion of the
Master's Degree**

1. Satisfactory completion of the 60-credit sequence.

Educational & Community Programs

Program Sequence (continued)

School Counseling Part-Time Three-Year Sequence

	<i>credits</i>
<i>Fall – first year</i>	
ECPCE 700 Theory, Philosophy, and History of Counseling	3
ECPCE 701 Practicum in Self-Awareness Training	3
<i>Spring – first year</i>	
ECPCE 702 Psychosocial Development and Personality Theory	3
ECPCE 703 Seminar Practicum in Interview Techniques and Human Service Systems	3
ECPCE 704 Theories and Techniques of Psychological Counseling	3
<i>Fall – second year</i>	
ECPCE 705 Seminar Practicum in Psychological Counseling with Individuals: Applications	3
ECPCE 706 Study of Group Dynamics, Leadership, and Social Systems	3
ECPCE 729.2/3 Fieldwork in a School	2/3
ECPCE 804 Techniques of Educational and Psychological Evaluation	3
<i>Spring – second year</i>	
ECPCE 707 Seminar Practicum in Psychological Counseling in Groups	3
ECPCE 803 Seminar in Multicultural Issues in Psychological Counseling	3
ECPCE 821.2/3 Fieldwork	2/3
Elective	3
<i>Fall – third year</i>	
ECPCE 800 Vocational Psychology & Career Education	3
ECPCE 806 Organization, Administration, and Evaluation of Counseling Services	3
ECPCE 821.2/3 Fieldwork	2/3
Elective	3
<i>Spring – third year</i>	
ECPCE 802 Special Problems in Psychological Counseling	3
ECPCE 807 Seminar Practicum in Research in Psychological Counseling	3
ECPCE 821.2/3 Fieldwork	2/3
Elective	3

The three elective courses (9 credits) can be taken in either of the summer sessions and/or in semesters 4, 5, and 6. Students taking the mental health track substance abuse specialization must complete the four-course sequence ECPCE 730, 731, 732, and 733, which is offered on a rotating two-year basis. The schedule is modified to replace ECPCE 802 and 806 and to use two electives to allow the substance abuse sequence to be started in the first semester and completed in Spring semester – second year. ECPCE 802 and 806 are only required for the school counseling track but may be taken as an elective. Part-time students wishing to take both the school counseling track and the substance abuse specialization can do so with the addition of one course for a total of 63 credits. Students who wish to complete the program in four years instead of three years can develop an adjusted sequence with their advisor.

2. Demonstration of the professional knowledge and competencies associated with professional counseling.

3. Satisfactory completion of at least 450-600 hours of supervised fieldwork in approved settings.

4. Satisfactory completion of a final research project.

PROGRAM TRACKS & SPECIALIZATION

School Counseling Track

The graduate program is approved by the New York State Education Department and leads to *permanent* certification as a school counselor upon completion of the 60-credit MEd degree

and 2 years of post-master's employment in a school setting. Students may obtain a *provisional* state certification after the completion of 30 credits. The provisional certification application must be handled by the student directly with the state. The basic program requirements for all students in the school counseling track are:

- ECPCE 729. Fieldwork in a School, for at least 2 credits (100 hours) in a K-12 school setting.
- ECPCE 806. Organization, Administration, and Evaluation of School Counseling Services.
- ECPCE 802. Special Problems in Psychological Counseling
- Completion of three workshops:

child abuse reporting, substance abuse issues, and school violence. The workshop sessions usually last 2-3 hours and are offered periodically throughout the year by the college. Contact the Office of Continuing Education for information about the workshops. One of the ECPCE 730-733 electives can substitute for the substance abuse workshop requirement.

Additional requirements for the Bilingual Extension Specialization include:

- ECPCE 803 Multicultural Issues (part of required courses sequence)
- Completion of 300 fieldwork hours (6 credits) with a bilingual population
- One elective course in an area of multicultural issues
- Final research project in ECPCE 807 on a topic in bilingual/multicultural issues.

For the *Counseling in a College Setting Specialization*, students may design a concentration in counseling college students. Fieldwork placement must be in a college setting, elective courses must be designed to address related issues in college counseling, and the final research project in ECPCE 807 must be in a topic related to counseling in a college setting. Dr. Vázquez is the Advisor of the specialization and should be consulted regarding the concentration. Due to the difficult job market for master's-level counselors in this area, it is recommended that students also complete the requirements for state certification in K-12 guidance counseling or in Mental Health/Substance Abuse Counseling.

Mental Health Counseling Track

The course sequence for the *Specialization in Substance Abuse Counseling* is approved by the New York State Education Department and fulfills the *educational requirements* leading to a Credentialed Alcoholism and Substance Abuse Counselor (CASAC). After completion of the courses and MEd degree, students must obtain additional hours of work experience in the substance abuse field in order to get the state certification. Due to the two-year rotation of the four substance abuse courses, students may need to alter some of their advanced required courses to accommodate the specialization's requirements. Requirements for Alcohol and Substance Abuse Specialization are:

- Completion of the course sequence: ECPCE 730, 731, 732, 733, 800 & 807.
- Final research project must be in a

related area of substance abuse counseling. Approval of the final project is in conjunction with Dr. Woods and the instructor of the ECPCE 807 course.

As stated above, the New York State Education Department has recently created a license in Mental Health Counseling. As the specific requirements for this license have not yet been determined by the state, students who wish to emphasize mental health counseling without the specialization in substance abuse counseling may design a course of study with Dr. Howell. Such a specialization must include at least one course in mental health counseling (ECPCE 818), one in family counseling (ECPCE 834 or 731), and one in psychopathology (ECPSP 862, PSY 755, or equivalent). [Note: ECPCE 818 may be taken in place of ECPCE 806 in the course sequence]. It is important to emphasize that when the requirements for state licensing in Mental Health Counseling are implemented, they may include additional coursework or field experience beyond the current 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. Introductory Fieldwork. 2 hr. plus fieldwork; variable 1 to 6 credits. May be repeated for credit. Prereq.: Permission of Advisor and completion of 12 credits in the program including ECPCE 703. Students will be placed for 50 to 300 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 721.1.	1 credit (50 hours)
ECPCE 721.2.	2 credit (100 hours)
ECPCE 721.3.	3 credit (150 hours)
ECPCE 721.4.	4 credit (200 hours)
ECPCE 721.5.	5 credit (250 hours)
ECPCE 721.6.	6 credit (300 hours)

ECPCE 729. Fieldwork in a School. 2 hr. plus fieldwork; variable 1 to 6 credits. May be repeated for credit. Prereq.: Permission of School Counseling Advisor and completion of 12 credits in the program including ECPCE 703. Students will be placed for 50 to 300 hours per semester in a school covering any of grades 1 through 12 under supervision of a field clinician and Queens College faculty. Graded on a Pass/Fail basis only.

ECPCE 729.1.	1 credit (50 hours)
ECPCE 729.2.	2 credit (100 hours)
ECPCE 729.3.	3 credit (150 hours)
ECPCE 729.4.	4 credit (200 hours)
ECPCE 729.5.	5 credit (250 hours)
ECPCE 729.6.	6 credit (300 hours)

SUBSTANCE ABUSE SPECIALIZATION

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.

*Conference hour relates to field work associated with practica.

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.

ADVANCED COURSES

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. 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.

English

3 hr.; 3 cr. Graded on a Pass/Fail basis only.

ECPCE 821. Fieldwork. 2 hr. plus fieldwork; variable 1 to 6 credits. May be repeated for credit. Prereq.: Permission of advisor and completion of 30 credits in the program including at least one introductory level fieldwork course (721 and/or 729). Students will be placed for 50 to 300 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 821.1.	1 credit (50 hours)
ECPCE 821.2.	2 credit (100 hours)
ECPCE 821.3.	3 credit (150 hours)
ECPCE 821.4.	4 credit (200 hours)
ECPCE 821.5.	5 credit (250 hours)
ECPCE 821.6.	6 credit (300 hours)

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 834. 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.

English

Chair: Nancy R. Comley

Director of Graduate Studies: Talia Schaffer

Dept. Office: Klapper Hall 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 *Mosquito and Ant*, Steven Kruger's

AIDS Narratives, 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 MA degree in English. The first 30 units of coursework may be counted toward the PhD in the City University. Such courses must be taken while enrolled in the MA program.

The Queens College 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 MA 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

Comley, Nancy R., Chair, *Professor*, PhD 1977, Brown University: theory of rhetoric and composition, semiotics, modernism, American literature
Richter, David H., Director of Graduate Studies, *Professor*, PhD 1971, University of Chicago: eighteenth-century studies, theory of fiction, literary criticism
Allen, Jeffery R., *Associate Professor*, PhD 1992, University of Illinois at Chicago: creative writing
Bobb, June D., *Associate Professor*, PhD 1992, CUNY Graduate Center:

Caribbean literature, women writers of the black diaspora
Buell, Frederick H., *Professor*, PhD 1970, Cornell University: twentieth-century literature, creative writing (poetry)
Burger, Glenn D., *Associate Professor*, DPhil 1981, Oxford University: Medieval Literature and culture, gender theory
Cooley, Nicole R., *Associate Professor*, PhD 1996, Emory University: fiction writing, poetry writing, 20th-century American literature
D'Avanzo, Mario L., *Professor*, PhD 1963, Brown University: English romanticism, American transcendentalism, American Renaissance
English, Hugh A., *Assistant Professor*, PhD 1996, Rutgers University: rhetoric and composition, American literature, modernisms, gender studies
Epstein, Edmund L., *Professor*, PhD 1967, Columbia University: modern British literature, linguistics, and stylistics
Faherty, Duncan, Director of Composition, *Assistant Professor*, PhD 2003, CUNY Graduate Center: American literature 1700–1900, American cultural materialism, theory of rhetoric and composition
Frosch, Thomas R., *Professor*, PhD 1968, Yale University: Romanticism
Green, William, *Professor*, PhD 1959, Columbia University: Shakespeare, Renaissance drama, modern British and American drama
Gross, Beverly, *Associate Professor*, PhD 1966, University of Chicago: twentieth-century novel, theory of fiction
Hahn, Kimiko, *Professor*, MA 1984, Columbia University: poetry, Asian writing
Hintz, Carrie, *Associate Professor*, PhD 1998, University of Toronto: British literature 1600–1800, utopian studies, literary theory
Kaplan, Fred, *Distinguished Professor*, PhD 1966, Columbia University: Victorian literature, Romantic literature, Dickens, Carlyle, Henry James
Kazanjan, David, *Associate Professor*, PhD 1997, University of California at Berkeley: American literature 1700–1900, postcolonial theory, critical theory
Kier, Kathleen E., *Associate Professor*, PhD 1980, Columbia University: American literature
Kruger, Steven F., *Professor*, PhD 1988, Stanford University: late Medieval poetry and culture
McCoy, Richard C., *Professor*, PhD 1975, University of California at Berkeley: Renaissance literature, literature and society, origins of the novel

- McKenna, Catherine, *Professor*, PhD 1976, Harvard University: Celtic languages and literature
- Molesworth, Charles H., *Professor*, PhD 1968, State University of New York at Buffalo: modern and contemporary poetry, Milton, seventeenth-century English poetry
- Pandya, Sameer P., *Assistant Professor*, PhD 2001, Stanford University: Modern South Asian literature, postcolonial literatures and theory, autobiography, modernity/modernism
- Peritz, Janice, *Associate Professor*, PhD 1978, Stanford University: writing theory and practice, contemporary critical theory, English literature 1750–1850
- Sargent, Michael G., *Professor*, PhD 1979, University of Toronto: Medieval studies
- Schaffer, Talia C., *Associate Professor*, PhD 1996, Cornell University: 19th-century British literature, British modernism, cultural studies
- Schechter, Harold G., *Professor*, PhD 1975, State University of New York at Buffalo: American literature, popular culture
- Schotter, Richard D., *Professor*, PhD 1970, Columbia University: playwriting, modern British, American, and Continental drama
- Stone, Donald D., *Professor*, PhD 1968, Harvard University: Victorian literature, history of the novel
- Tucker, Amy E., *Associate Professor*, PhD 1979, New York University: American literature
- Tytell, John, *Professor*, PhD 1968, New York University: modern literature
- Weidman, Bette S., *Associate Professor*, PhD 1968, Columbia University: nineteenth-century American literature, American studies
- Weir, John P., *Assistant Professor*, MFA 1988, Columbia University: twentieth-century fiction, creative writing
- Whatley, E. Gordon, *Professor*, PhD 1973, Harvard University: Old and Middle English literature, Medieval hagiography
- Zimmerman, Susan, *Associate Professor*, PhD 1975, University of Maryland at College Park: Renaissance drama
- Zimroth, Evan, *Professor*, PhD 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 MA 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 literature before 1800, exclusive of Shakespeare; 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 MA degree, and the CUNY Doctoral Program in English will not accept more than two.
2. 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.

3. Following the acceptance of the thesis (or the three essays submitted in place of the thesis), the candidate will meet with the three readers for a one-hour examination that will combine a defense of the thesis (or essays) with an opportunity for assessment of the educational outcome of the student within the MA program.

The Creative Writing Sequence

Candidates must meet the requirements of the regular MA 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 PhD Program

1. The first 30 graduate credits in English at Queens College may be counted toward the PhD in English literature in the City University, except that no more than six credits in courses on

English

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 PhD in the City University should apply for admission directly to the PhD program instead of to Queens. Inquiries should be addressed to the Executive Officer of the PhD Program, 365 Fifth Avenue, New York, NY 10016-4309.

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 coursework have been completed with a minimum average of *B*.

Requirements for the Degree

1. Candidates in this program have two advisors, one in the Division of Education and one in the Department of English; both advisors must be consulted before registering in the program, and both must sign the approved program of studies. The Education advisor should be consulted *first*.

2. Course requirements for students specializing in English include the following: 15 credits in English, including English 702 (Methodology for English/Education Students), English 703 (Composition Theory and Literacy Studies) and English 662 (The English Language). Students who have taken the undergraduate equivalent of English 662 (e.g., English 290 at Queens) should substitute a literature course.

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 critics 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. The English Language. 2 hr. plus conf.; 3 cr. Structure and development of modern English including the historical evolution of the English language, current ideas on language acquisition, geographical and cultural diversity in language use (dialects, pidgins, and creolization), standard English phonology, morphology, syntax, and semantics.

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, and 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 li-

brary assignments. Normally to be taken in the first semester of graduate work, and certainly before the writing of the thesis.†

702. Graduate Methodology for English/Education Students. 2 hr. plus conf.; 3 cr. Training in current research methods on literature combined with an understanding of contemporary literary and cultural criticism, along with the elements of literary and cultural theory needed to understand such criticism. In addition to frequent library assignments, a major research paper will be required.

703. Composition Theory and Literacy Studies. 3 hr.; 3 cr. A study of literacy practices, the many varied forms of reading and writing, and of writing pedagogy in relation to texts that put literacy into wide historical and theoretical contexts. Recommended for M.S.Ed. in place of 701.†

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 Writ-

†—Offered both Fall and Spring; see Class Schedule.

††—May be offered; see Class Schedule.

ing 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.††

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 coursework. 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 advisor. 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 coursework. Students should not register for this course until they have consulted the Graduate Advisor, 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.†

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 MA in English.†

European Languages & Literatures

Chair: Royal S. Brown

Dept. Office: King Hall 207, 997-5980; Fax 997-5072

The Department of European Languages and Literatures offers the Master of Arts degree in French and in 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 in Italian.

Faculty

Brown, Royal S., Chair and French Advisor, *Professor*, PhD 1975, Columbia University: twentieth-century French literature, music, and cinema

Carravetta, Peter, Italian Advisor, *Professor*, PhD 1983, New York University: modern Italian culture, history of criticism, theory of literature, post-modernism

Haller, Hermann W., *Professor*, PhD 1971, University of Bern: romance philology, Italian dialect literatures

Jones, David Andrew, *Assistant Professor*, PhD 2001, University of Wisconsin at Madison: twentieth-century French novel and theater, literary theory, gender studies

Paulicelli, Eugenia, *Associate Professor*, PhD 1991, University of Wisconsin at Madison: Italian Renaissance literature, cultural studies, women writers, literature and the visual arts

Sullivan, Karen A., *Assistant Professor*, PhD 2002, Columbia University: eighteenth-century French literature, literature and the arts

MASTER OF ARTS PROGRAM

Graduate Advisors: Peter Carravetta (Italian), Royal S. Brown (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 Advisor 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. A minimum of 24

European Languages & Literatures

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

Graduate Advisors: Royal Brown (French) and Peter Carravetta (Italian)

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 coursework 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 Division of Education.

For admission requirements to Secondary Education programs, see page 77.

Requirements for Matriculation

In addition to the general admission requirements stated on page 18, 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 Initial Certificate (see page 77):

	<i>credits</i>
SEYS 536. Educational Foundations	3
SEYS 552. Educational Psychology	3
SEYS 564. Seminar in Teaching Foreign Languages	3
SEYS 574. Student Teaching	3
SEYS 584. Standards-Based Curriculum & Assessment in Teaching Foreign Languages	3 cr.
SEYS 700. Language, Literacy & Culture in Education	3 cr.

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 advisor in the major language; 3 cr.

C. Students should meet with the Graduate Advisor 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: Molière.

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 se-

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

mester. 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, Firenzuola; 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: Elizabeth D. Lowe

Deputy Chair: Susan P. Braverman

Graduate Advisors: Susan P. Braverman (Nutrition), Andrea Mosenson (Family and Consumer Sciences and Education), and Michael M. Toner (Exercise Science, Nutrition & Exercise Sciences, and Physical Education)

Dept. Offices: Nutrition, and Family and Consumer Sciences, Remsen 306, 997-4475; Fax 997-4163; Exercise Science and Physical Education, FitzGerald 203, 997-2710; Fax 997-2749

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 and exercise sciences designed for those preparing for careers in fitness and health-promotion settings incorporating nutritional aspects; nutrition education

Family, Nutrition & Exercise Sciences

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 offers a Dietetic Internship Program which is accredited by the American Dietetic Association (ADA) Commission on Accreditation. For further information, contact a Graduate Advisor.

Faculty

- Lowe, Elizabeth D., Chair, *Associate Professor*, PhD 1979, University of Illinois: textiles and apparel, fashion theory, sociocultural aspects of fashion
- Braverman, Susan P., Deputy Chair of Family and Consumer Sciences, and Director, Dietetic Internship Program, *Lecturer*, MS 1967, Hunter College: medical and community nutrition and dietetics
- Fardy, Paul S., *Professor*, PhD 1967, University of Illinois: physical activity and cardiovascular health, cardiac rehabilitation, and health promotion
- Herman, Ariela, *Assistant Professor*, EdD, 1999, Teachers College, Columbia University: pedagogical aspects of physical education, curriculum and instruction
- Huang, Yiqun, *Assistant Professor*, PhD 2001, Washington State University: food science, non-invasive methods in food quality
- Jasti, Sunitha, *Assistant Professor*, PhD 2003, University of North Carolina at Chapel Hill: nutrition, nutritional epidemiology, prenatal nutrition
- Kant, Ashima K., *Professor*, PhD 1987, University of Maryland at College Park: food and nutrition, nutritional epidemiology
- Magel, John R., *Professor*, PhD 1966, University of Michigan: exercise physiology, metabolic and cardiovascular response to acute and chronic physical training, especially swimming physiology
- Robila, Mihaela, *Assistant Professor*, PhD 2002, Syracuse University: child and family development, cross-cultural aspects of the family
- Suh, Sang-Hoon, *Assistant Professor*, PhD 2002, University of California, Berkeley: exercise physiology and biochemistry, hormonal aspects of glucose flux during exercise
- Toner, Michael M., *Associate Professor*, PhD 1979, Ohio State University: exercise physiology, temperature regulation during exercise

Wang, Henry, *Assistant Professor*, PhD 2002, University of Georgia at Athens: clinical biomechanics, movement analysis

PROGRAM FOR THE MASTER OF SCIENCE DEGREE IN NUTRITION AND EXERCISE SCIENCES

The Master of Science Program in Nutrition and Exercise Sciences offers students the opportunity for advanced study in three areas of specialization including nutrition, exercise science, or nutrition and exercise sciences. Requirements for matriculation for students with backgrounds in nutrition, exercise science or allied discipline, general requirements for the degree, and descriptions of individual areas of specialization with required courses are listed below:

Requirements for Matriculation

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

Nutrition

1. An undergraduate degree in nutrition or dietetics (ADA verification equivalent program) with a minimum GPA of 3.0.
2. Approval of the graduate nutrition advisor.
3. An interview may be required.

Exercise Science

1. An undergraduate degree in physical education, exercise science, or an equivalent area with a minimum GPA of 3.0.
2. Students without an undergraduate degree in one of the above areas must satisfy the following:
 - a) An undergraduate degree with a minimum GPA of 3.0.
 - b) Make up deficiencies as specified by the department.
3. Approval of the graduate exercise science advisor.
4. An interview may be required.

Nutrition and Exercise Sciences

1. An undergraduate degree in nutrition and exercise sciences or an equivalent area with a minimum GPA of 3.0.
2. Students without an undergraduate degree in one of the above areas must satisfy the following:
 - a) An undergraduate degree with a minimum GPA of 3.0.
 - b) A course in anatomy and physiology (BIO 43* or the equivalent).
 - c) Two courses in nutrition (FNES 263* and 264* or the equivalent).
 - d) A course in exercise physiology (FNES 342* or the equivalent).

3. Approval of the graduate nutrition and exercise sciences advisor.
4. An interview may be required.

**Note:* These courses have specific prerequisites that must be satisfied. BIO 43 (prereq.: BIO 11); FNES 263 (prereq.: CHEM 19 and 159); FNES 264 (prereq.: FNES 263); and FNES 342 (prereq.: BIO 43 and CHEM 19).

General Requirements for the Master of Science Degree in Nutrition and Exercise Sciences

These requirements are in addition to the general requirements for the Master of Science Degree

1. Students must complete 36 graduate credits with a minimum average of B (GPA of 3.0)
2. Students must complete a research project as described under FNES 705/791 or FNES 796/797.
3. All elective courses must be approved by the appropriate graduate advisor.

Areas of Specialization with Required Courses

Nutrition

The MS degree program with specialization in nutrition offers a sequence of courses that enhance the clinical background of dietitians and nutritionists who work with clients in hospitals, nursing homes, outpatient clinics, community programs, schools, wellness programs, and governmental and privately funded programs. The program offers opportunities for in-depth study through didactic learning, hands-on clinical and field experience, and the development and completion of individual research projects. Students are prepared for careers in nutrition in a wide variety of corporate, hospital, media, and community centers, as well as in other clinical and public health agencies. In addition, the program will prepare students for more advanced study in nutrition.

Required courses in the nutrition specialization include FNES 636, 702, 711, 722, 762, 767, 768, 770, 796, 797 and two courses (6 credits) approved by the graduate nutrition advisor from the following: FNES 707, 723, 773, and 774. Students interested in this program should consult with the graduate nutrition advisor, Prof. Susan Braverman.

Exercise Science

The MS degree program with specialization in exercise science offers a sequence of courses that prepare students for careers in adult fitness and wellness, corpo-

rate and executive fitness, general health promotion, and cardiac rehabilitation. Students are exposed to cardiovascular fitness programs in commercial and clinical settings where their primary responsibility is initiating, directing, and evaluating programs that promote enhanced health and fitness.

Coursework is blended with clinical experience, and students are mentored in the development and completion of individual research projects. The human performance laboratory provides for measurement of muscular strength and endurance, body composition analysis, and metabolic, cardiovascular, and respiratory function during exercise. Clinical research experiences that focus on the health implication of regular exercise as well as in-depth supervised field experiences are provided through a wide variety of corporate and clinical internships. In addition, the program prepares students for more advanced study in exercise science.

Required courses in the exercise science specialization include FNES 702, 705, 719, 720, 721, 722, 723, 724, 725, 726, 791 and one elective course (3 credits) approved by the graduate exercise science advisor. Students interested in this program should consult with the graduate exercise science advisor, Dr. Michael Toner.

Nutrition and Exercise Sciences

The MS degree program with specialization in nutrition and exercise sciences provides for advanced study in the combined disciplines of nutrition and exercise science. The program offers opportunity for in-depth study through didactic learning, hands-on field experience, and the development and completion of individual research projects. The program will develop highly competent professionals in the field of nutrition and exercise sciences who will be prepared to provide the general public with legitimate, prudent, and effective ways to improve health, wellness, and fitness in the global marketplace.

Students are prepared to direct and administer programs in nutrition, cardiovascular fitness and wellness in a wide variety of corporate, hospital, community, sports medicine, physical and cardiac rehabilitation centers, and other clinical and preventive health agencies. In addition, the program will prepare students to enter doctoral programs in nutrition and exercise sciences, and conduct research that will contribute to the body of knowledge in this new and growing discipline.

Required courses in the nutrition and exercise sciences specialization include

FNES 705 or 796 and FNES 720 or 707 (these selections are based on previous background and recommendation of the graduate nutrition and exercise advisor), 702, 721, 722, 724, 725, 726, 762, 767, 768, and 791 or 797 (797 may be substituted for 791 depending on the nature of the research project and permission of the graduate nutrition and exercise sciences advisor). Students interested in this specialization should consult with the graduate nutrition and exercise sciences advisor, Dr. Michael Toner.

PROGRAM OF FAMILY AND CONSUMER SCIENCES TEACHER EDUCATION K-12

Post-Baccalaureate Initial Certificate

This is a sequence of courses for those planning to teach Family and Consumer Sciences/Home Economics who wish to fulfill Initial Teacher Certification in Family and Consumer Sciences. The program does not fulfill requirements of the Master of Science in Education degree.

Requirements for Admission

1. A bachelor's degree with a general education core in the liberal arts and sciences.
2. An average of *B* (GPA of 3.0) or better in the undergraduate major.
3. A letter of intent.
4. Two letters of recommendation.
5. An interview may be required.
6. Applicants who majored in Family and Consumer Sciences but do not hold an Initial Certificate, or applicants who come from disciplines other than Family and Consumer Sciences, will be required to satisfy deficiencies by taking courses which constitute as a minimum the following: FNES 101, 104 or 707, 121, 126, 140 or 745, 147, 153 or 751, 156, 163, 203, or their equivalents.

Requirements for Maintenance

1. Students must maintain a *B* (GPA of 3.0) or better average in the program.
2. Course sequence must be approved by an education graduate advisor in the Family and Consumer Sciences unit.

Requirements for Initial Certificate

1. An overall average of *B* (GPA of 3.0) or better.
2. Completion of the following content core courses or their equivalent: SEYS 536, 552, 700 and FNES 563, 574, 634, 636, 637.
3. At least 6 semester hours, or its equivalent, of a language other than English.

Professional Certificate

A sequence of courses for those, with either provisional or initial certification in Family and Consumer Sciences/Home Economics, who wish to fulfill the master's degree requirement for permanent or professional teacher certification.

Requirements for Matriculation

1. An average of *B* (GPA of 3.0) or better in the undergraduate major.
2. Initial certificate in Family and Consumer Sciences Teacher Education.
3. Approval of the department.
4. An interview is required.

Requirements for Maintenance

1. Students must maintain a *B* (GPA of 3.0) or better average in the program.
2. Course sequence must be approved by a graduate advisor.

Requirements for Graduation

1. Students must complete a minimum of 30 credits with an academic average of *B* (GPA of 3.0) or better.
2. The following courses are required: FNES 634, 636, 711, 747, 748, 796, and 797; one 700-level course from SEYS Foundations of Education or Psychological Foundations; and two courses from two of the following three groups:
 - FNES 707 or 765
 - FNES 741 or 745
 - FNES 749 or 751

PROGRAMS OF PHYSICAL EDUCATION TEACHER EDUCATION (PRE-K-12)

Post-Baccalaureate Initial Certificate

This sequence of courses prepares students for the New York State Initial Certificate to teach Physical Education Pre-K-12. It is designed for individuals who have completed an undergraduate major other than in teacher preparation in physical education, want to teach physical education. This program does *not* fulfill the requirements of the Master of Science in Education degree in physical education.

Requirements for Admission and Maintenance

Admission to the program begins with submission of an application for matriculation. In addition to the application, a student must submit a letter of intent, which includes the student's background in sport and physical education, experiences working in sport, recreation, or physical education settings with children and young adults, any teaching experience, a philosophical statement on the

role of physical education in society, and future plans upon completion of the program. The applications are reviewed by an Admissions Committee, which considers, among other factors, the letter of intent, the graduate application with particular attention to performance in undergraduate work and in writing courses, and letters of reference.

The applicant must hold a bachelor's degree with a general education core in the liberal arts and sciences. Applicants who majored in physical education but do not hold an initial certificate, or applicants who come from disciplines other than physical education, will be required to satisfy deficiencies by taking courses which constitute as a minimum the following: FNES 11, 12 (3 courses), 13, 14 (2 courses), 30, 143, 253, 266, 342, and SEYS 350 or their equivalents. (See the *Undergraduate Bulletin* for descriptions of these courses.)

Applicants are also required to have at least 6 semester hours, 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 a *B* (3.0 GPA). Students must maintain a *B* average to remain in the program.

Requirements for Initial Certificate

To complete the Initial Certificate the student must satisfy the following requirements:

1. Completion of the following courses, or their equivalents: FNES 562, 573, 722, 730, and 740, SEYS 536, 552, and 700, or EECE 525 and 711.
2. Students may enter FNES 573, Student Teaching in Physical Education, following the completion of FNES 562, 730, and 740, SEYS 536, 552, and 700, or EECE 525 and 711.
3. Students are required to complete training in safety education, and prevention of child and substance abuse, and school violence prevention. In addition, students must hold a current certification in First Aid and Cardiopulmonary Resuscitation (CPR).

Requirements for the MS in Ed Degree

To complete the MS in Education degree in Physical Education, the student must satisfy the following requirements:

1. FNES 702, 705, 713, 714, 715, 722, 723, 730, 740; one elective from SEYS or EECE 700-level offerings. The elective course must be approved in advance by the graduate advisor.
2. Students must complete a minimum of 30 graduate credits with an academic average of at least *B* (3.0 GPA).

Requirements for Professional Certificate

A sequence of courses on the theoretical study of curriculum and teaching integrated with the substantive study of human movement and its professional application to educational and clinical practice.

Requirements for Admission and Maintenance

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

1. A baccalaureate degree with a provisional or initial certificate in Physical Education K–12.
2. An undergraduate average of *B* (3.0 GPA) or better in the undergraduate major. Students with grade-point averages less than 3.0 may be admitted to the program, but are placed on academic probation. Students on academic probation must maintain a *B* average during the first 12 graduate credits.
3. Applicants who hold provisional certification and complete the Master of Science in Education degree will have met all the education requirements for permanent certification. Students who do not hold provisional certification will not be eligible for permanent certification. Students who hold an initial certificate and complete the M.S.Ed. degree program, will have met the degree requirement for the professional certificate. See the graduate advisor regarding the additional requirements for the professional certificate.
4. An interview may be required.
5. Applicants, whose backgrounds are deemed deficient or not current, may be required to make up deficiencies as specified by the department.
6. Applicants must maintain a grade-point average of at least *B* (3.0). Students admitted to the program who have been placed on academic probation must maintain a *B* or better grade-point average for the first twelve graduate credits to remain in the program.

Requirements for Graduation

1. Students must complete a minimum of 30 credits with an academic average of *B* (3.0) or better.
2. Required courses include FNES 702, 705, 713, 714, 715, 722, 723, 730, 740; one elective course from SEYS or EECE 700-level offerings; and must be approved in advance by the graduate advisor.
3. Students must pass a comprehensive examination in the major field of study.

Courses

***562. Seminar in the Teaching of Physical Education.** 3 hr. plus fieldwork; 3 cr. Prereq.: Course in adolescent development. Examines relevant methods and materials for teaching students at the middle and high school levels. Includes methods of integrating State and National standards into the curriculum, specific to these age levels. Students must complete 36 fieldwork hours.

***563. Seminar in the Teaching of Family and Consumer Sciences.** 4 hr.; 3 cr. Prereq. or coreq.: SEYS 552. This course focuses on preparing students for the student teaching experience emphasizing teaching models, learning styles, State learning standards, curriculum, unit/weekly and daily lesson planning, classroom management, working with students with special needs, assessment and professional development. Fieldwork required.

***573. Student Teaching in Physical Education.** 2 hr. plus participation, 25–30 hr. per week for a minimum of 14 weeks; 6 cr. Prereq.: A grade of 2.75 in the major and a 3.0 average in foundations of education, child development, adolescent development, literacy and technology; a grade of *B* or better in SEYS 562. Supervised teaching and observation in elementary and secondary schools. Students are required to spend a minimum of 7 weeks at each level.

***574. Student Teaching in Family and Consumer Sciences.** 3 hr. sem. 25–30 hr. per week for 14 weeks; 6 cr. Prereq. or coreq.: SEYS 536, 552, FNES 563, 637; an overall GPA of 3.0; a grade of *C* or better in all Family and Consumer Sciences content courses; an average of 3.0 or better in the pedagogy core; a grade of *B* or better in FNES 563; and no open grades in required content courses. This course is the student teaching experience which involves spending 25–30 hours a week teaching Family and Consumer Sciences classes at two different school levels. The course also includes attending a three-hour on-campus seminar.

634. Teaching Diverse Student Populations Family and Consumer Sciences. 3 hr.; 3 cr. Examination of the subject areas that constitute the discipline of Family and Consumer Sciences and analysis of how to adapt teaching techniques to meet the abilities, backgrounds, and interests of diverse student populations. Attention given to the process of nondiscriminatory authentic assessment.†

†These graduate courses may *not* be used toward the Master's degree.

636. Writing and Technology for the Professional. 3 hr.; 3 cr. Learning how to evaluate and enhance materials from ideas to print and other media including computer technologies using current professional information sources. The course provides advanced individual and team-based experiences in preparation and evaluation of instructional and other materials for use at all grade levels. Fall

637. Contemporary Educational Trends and the Effect on Family and Consumer Sciences Curricula. 3 hr.; 3 cr. Prereq. or coreq.: SEYS 552. This course is part of the pedagogy core for preparing students for the student teaching experience. As part of the process, contemporary educational trends and their effect on teacher implementation of curricula will be examined.

702. Statistical Methods in FNES. 2 rec., 1 lab. hr.; 3 cr. Prereq.: A course in elementary statistics. Application of descriptive, correlational and inferential statistical methods in one-, two- and multi-group comparisons in parametric and non-parametric independent and correlated sample distributions. Fall, Spring

705. Research Methods in FNES. 2 hr. plus conf.; 3 cr. Prereq.: FNES 702. Methods and techniques used in designing analytical, historical, descriptive correlational, methodological, epidemiological, experimental, qualitative, and evaluative research in FNES. Fall, Spring

707. Cultural and Ethnic Foods. 2 lec., 2 lab. hr.; 3 cr. Prereq.: Undergraduate coursework 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

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

713. Curriculum Development in Physical Education. 2 hr. plus conf.; 3 cr. Prereq.: FNES 266 or a methods course in physical education. The study of curriculum design in physical education. Students will study the methods and procedures for curriculum development, as well as, the implementation of curriculum models in school settings.

Course includes 4-6 site visits. Fall

714. Analysis of Teaching Physical Education. 2 hr. plus conf.; 3 cr. Prereq.: FNES 266 or a methods course in physical education. The study of the processes involved in teaching physical education. Students will study traditional and new styles of teaching physical education to all grade levels, as well as, ways of analyzing student and teacher behavior in physical education classes. Course includes 4-6 site visits. Spring

715. Movement Experiences for Atypical Populations. 2 hr. plus conf.; 3 cr. Programmatic approaches to perceptual-motor skill development of individuals with learning handicaps and disabilities, emotional disturbances and physical handicaps. The course provides methods of teaching, assessment strategies, and team approaches. Summer

719. Cardiac Rehabilitation and Prevention. 2 hr. plus conf.; 3 cr. Overview of cardiac rehabilitation and prevention of coronary artery disease. Topics studied include the cardiovascular disease process, risk factors, stress testing and exercise prescription, lifestyle evaluation, and program description and administration. Fall

720. Physiological Principles of Fitness and Training. 2 rec., 1 lab. hr.; 3 cr. Principles underlying specific fitness programs are examined within the framework of physiological adaptations to exercise and training. Fall, Spring

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

727. Clothing and Social Science Theory. 3 hr.; 3 cr. Survey of theoretical and research-based readings in the study of clothing from sociological, psychological, economic, and anthropological perspectives.

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. Motor Learning and Performance. 2 rec., 1 lab. hr.; 3 cr. Psychological, physiological, and neurological principles that facilitate learning and performance of motor skills. Fall, Spring

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.††

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

Family, Nutrition & Exercise Sciences

745. The Child in the Family. 3 hr.; 3 cr. Prereq.: FNES 147, Family Relations. The role of the child in the family from preschool through adolescence. Familial practices evaluated in terms of their effect on the child's development.††

747. An Analysis of Teaching Family and Consumer Sciences. 3 hr.; 3 cr. Focuses on examining models of teaching and developing reflective planning, teaching, and evaluation strategies for enhancing professional performance. Provides an opportunity for Family and Consumer Sciences teachers to explore their current ideas and teaching practices for addressing the needs, interests, abilities, and learning styles of diverse student populations. Professional self-awareness will be developed using a variety of approaches including videotape analysis, peer review, and case studies.†

748. Curriculum Development: Theories and Challenges for Family and Consumer Sciences. 3 hr.; 3 cr. An in-depth study of the conceptual framework and philosophy of Family and Consumer Sciences education and the challenges and opportunities the discipline presents for developing curriculum. Teachers will examine various approaches to curriculum development as well as National and NYS Learning Standards and plan curriculum that links them with practices that actively engage students.†

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 persons 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.

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 manage-

ment/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 advisor. 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. Independent Study in FNES. Prereq.: Permission of department. Under the guidance of a FNES faculty member, students pursue advanced clinical work, undertake critical examination of original research, or carry out a clinical or laboratory research project, all of which culminate in a comprehensive written report. No more than 6 credits may be taken in independent study in FNES. Fall, Spring.

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.

796. Research in Family and Consumer Sciences I. 3 hr.; 3 cr. Prereq.: FNES 636, Writing and Technology for the

Professional, a graduate or undergraduate course in statistics, and permission of department. Theories, methods, and tools applied to research and proposal writing in Family and Consumer Sciences. Development of a research proposal. Spring

797. **Research in Family and Consumer Sciences II.** 3 hr.; 3 cr. Prereq.: FNES 796, Research in Family and Consumer Sciences I. Using the proposal developed in FNES 796, the research is implemented. This course includes computer use, analysis of data, and the writing of a research article. Fall

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.**

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.**

Hispanic Languages & Literatures

Chair: Emilio E. De Torre-Gracia

Graduate Advisor: José Miguel Martínez-Torrejón

Dept. Office: Kiely 243, 997-5660;
Fax 997-5669

The Department of Hispanic Languages & 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 Division of Education, also offers the Master of Science in Education degree in Spanish.

Faculty

De Torre-Gracia, Emilio E., Chair, Associate Professor, PhD 1979, City University of New York: twentieth-century Spanish literature

Martínez-Torrejón, José Miguel, Graduate Advisor, Professor, PhD 1989, University of California at Santa Barbara: Medieval and Golden Age Spanish literature

Caamaño, Juan, Assistant Professor, PhD 2004, SUNY at Stony Brook: Golden Age literature, nineteenth- and twentieth-century Spanish literature, contemporary critical theory, cultural history of Spain

Casco, Monica, Lecturer, MA 2001, CUNY Graduate Center: foreign language education, Spanish linguistics, foreign language technology

Glickman, Nora, Professor, PhD 1978, New York University: twentieth-century Spanish-American literature, Spanish and Latin American cinema

Green, Jerald R., Professor Emeritus, EdD 1967, Teachers College, Columbia University: foreign language education, Spanish phonology, twentieth-century Spanish cultural history

Llorens, Irma, Associate Professor, PhD

1992, Princeton University: Spanish-American literature, women writers, literature of the Hispanic Caribbean
Rabassa, Gregory L., Distinguished Professor, PhD 1954, Columbia University: Brazilian and Spanish-American literature, translation
Simerka, Barbara, Assistant Professor, PhD 1992, University of Southern California: Golden Age literature, gender studies

MASTER OF ARTS PROGRAM

Graduate Advisor: José Miguel Martínez-Torrejón

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 Advisor for assistance and guidance in working out an approved program of study.

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 any other language pertinent to the study of Hispanic literature may be substituted by special permission.

5. After completing all formal coursework, 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

Hispanic Languages & Literatures

student may not attempt this examination more than twice.

6. A thesis based on original research (Spanish 791, 792, Special Problems) may be substituted for two of the courses. The thesis may be written in English or in Spanish but must follow the norms of The MLA Style Manual. Prior approval of the thesis topic must be obtained by the student from the Graduate Advisor who will guide the student to an appropriate thesis director. The thesis will be supervised by a committee composed of the thesis director, a second reader, and the Graduate Advisor. Upon completion of the thesis, it must receive signatures of approval of all three committee members.

MASTER OF SCIENCE IN EDUCATION PROGRAM

Graduate Advisor: José Miguel Martínez-Torrejón

The Master of Science in Education Program (Spanish) responds to the needs of teachers and prospective teachers of foreign languages. The degree program combines coursework 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 77.

Requirements for Matriculation

In addition to the general admission requirements stated on page 18 of this *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 Initial Certificate (see page 77):

	<i>credits</i>
SEYS 536. Educational Foundations	3
SEYS 552. Educational Psychology	3
SEYS 564. Seminar in Teaching Foreign Languages	3
SEYS 574. Student Teaching	3
SEYS 584. Standards-Based Curriculum & Assessment in Teaching Foreign Languages	3 cr.
SEYS 700. Language, Literacy & Culture in Education	3 cr.

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 advisor in Spanish (3 credits).

C. Students should meet with the Graduate Advisor 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. Intensive study of problems in Spanish syntax, grammar, and other aspects of the language. The particular area of examination will vary according to the needs of the students. This course may be repeated for credit, provided the topic is different.

707. Medieval Spanish Literature. 2 hr. plus conf.; 3 cr. May be repeated for credit with permission of the graduate advisor if the topic is different.

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. Spanish 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. 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. Modernismo. 2 hr. plus conf.; 3 cr.

728. Studies in Spanish-American Literature from the End of Modernismo to the 1940s. 2 hr. plus conf.; 3 cr. Study of the main trends in Spanish-American literature during the title period. May be repeated for credit with permission of the graduate advisor if the topic is different.

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 sociocultural phenomenon; 5) Cinematic stylists. Films will be shown in the original language. Stu-

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

††—May be offered; see Class Schedule.

dents will be expected to produce substantial works of film analysis.

780. Seminar in Hispanic Culture and 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 anthropology, archaeology, economics, and political history, and on 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 Advisor 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 Advisor: Morris Rossabi

Dept. Office: Powdermaker Hall 352, 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.

Faculty

Warren, Frank A., *Chair, Professor*, PhD 1961, Brown University: twentieth-century American history

Rossabi, Morris, *Graduate Advisor, Professor*, PhD 1970, Columbia University: Chinese history, Central Asian and Mongol history

Allen, Joel, *Assistant Professor*, PhD 1999, Yale University: Ancient history

Alteras, Isaac, *Professor*, PhD 1971, City University of New York: Jewish history

Cannistraro, Philip V. *Distinguished Professor*, PhD, New York University: Italian history

Carlebach, Elisheva, *Professor*, PhD 1986, Columbia University: Jewish history

Chazkel, Amy, *Assistant Professor*, PhD 2002, Yale University: Latin American History

Covington, Sarah, *Assistant Professor*, PhD 2000, CUNY Graduate Center: British history

Frangakis-Syrett, Elena, *Professor*, PhD 1985, King's College, University of London: modern Greek history

Freeman, Joshua B., *Professor*, PhD 1983, Rutgers University: American labor history

Hershkovitz, Leo, *Professor*, PhD 1960, New York University: New York City history, legal history

Kraut, Benny, *Professor*, PhD 1975, Brandeis University: Jewish history

McManus, Edgar J., *Professor*, PhD 1959, Columbia University: American colonial and constitutional history

Nadasen, Premilla, *Associate Professor*, PhD 1999, Columbia University: African-American history, African history

O'Brien, John M., *Professor*, PhD 1964,

University of Southern California: Medieval, church, Alexander the Great

Pine, Martin L., *Professor*, PhD 1965, Columbia University: Italian Renaissance

Roth-Ey, Kristin, *Assistant Professor*, PhD 2003, Princeton University: Russian history

Scott, Donald, *Professor*, PhD 1968, University of Wisconsin: American cultural history

Sneeringer, Julia, *Associate Professor*, PhD 1995, University of Pennsylvania: German history

Uppal, Jyotsna, *Assistant Professor*, PhD 1998, Columbia University: south Asian 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 department Graduate Advisor). 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 department's 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 department's 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 MA degree. Graduate courses, provided they are approved by the Graduate Advisor, may be counted toward the MA degree. In some instances, students whose undergraduate

History

preparation in history is judged inadequate may be required to take additional hours in graduate history to remove those deficiencies.

3. 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 MA 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 Advisor.

2. Each student is assigned a Graduate Advisor with whom he or she plans the course of study.

3. A student must complete 30 hours of graduate history courses, which must include a seminar. The department recommends that the required courses be completed as early as possible to avoid scheduling difficulties.

4. Each student must pass a comprehensive examination in the major field of study, and in such other fields as the department requires.

5. A thesis is required.

Courses for Master of Science in Education Degree

1. Candidates in this program should confer with a Division of Education advisor as to which history courses best meet the requirements of this program.

2. The Department of History offers two courses especially designed to strengthen the history background of MS in Ed students specializing in secondary social studies: History 795 and 797 (see course descriptions).

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.

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 de-

velopments 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. May be repeated when offered with a different topic.

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 Advisor, 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

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.

778. The United States Bill of Rights, 1789 to the Present. 2 hr. plus conf.; 3 cr. This course traces the historical origins of the United States Constitution. The main focus will be on the United States Supreme Court decisions that extend the provisions of the Bill of Rights, originally applicable only to the federal government, to the states as well.

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.

795. Studies 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 MS in Education program in Secondary Social Studies Education. The course may not be repeated for credit.

796. Seminar in 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.

797. Studies in American History: Special Problems. 2 hr. plus conf.; 3 cr. Studies of selected key issues and topics 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 MS in Education program in Secondary Social Studies

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

Education. The course may not be repeated for credit.

798.1–798.3. **Individual Readings for Graduate Credit.** Hr. to be arranged; 1–3 cr. With permission of the individual instructor concerned, the student's advisor, and the departmental Graduate Advisor, a student may enroll for 1–3 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. 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.

Courses in Reserve

708. The Ancient Near East

709. The Classical World

711. Social and Economic History of the High Middle Ages

731. Studies in Modern European Intellectual History

740. Chinese Historiography

741. Studies in Modern Chinese History

743. Modern Mexico

754. The Caribbean World in the Twentieth Century

760. Studies in the History of Modern Science

765. Jacksonian Democracy

770. Main Currents in Modern American Thought

781. Studies in American Social, Intellectual, and Cultural History to 1870

782. Studies in American Social, Intellectual, and Cultural History since 1870

791. Introduction to Latin American Research and Historiography

792. Seminar in Latin American History

Graduate School of Library & Information Studies

Chair and Director of the School:
Virgil L.P. Blake

Graduate Advisor: Roberta Brody

Dept. Office: Rosenthal Library 254,
997-3790; fax 997-3797;
e-mail: gslis@qcunix1.qc.edu;
Web site: qc.cuny.edu/GSLIS

Faculty

Blake, Virgil L.P., Chair and Director, Professor, PhD, 1988, Rutgers University: organization of information; technical services; school library media centers

Brody, Roberta, Graduate Advisor, Associate Professor, PhD 1996, Rutgers University: business information sources; geographic information systems; reference services

Chelton, Mary K., Professor, PhD 1997, Rutgers University: adult reader advisory services; public libraries; young adult services

Chen, Shu-Hsien, Assistant Professor, EdD 1991, University of Georgia: instructional technology; school library media centers; services for children and young adults

Cool, Colleen, Associate Professor, PhD 1997, Rutgers University: digital libraries; information science; research methods

Cooper, Marianne A., Associate Professor, DLS 1980, Columbia University: education for library and information science; management: special libraries and information centers

Kibirige, Harry M., Professor, PhD 1979, University of Pittsburgh: information retrieval; information science; systems analysis

Ng, Kwong Bor, Assistant Professor, PhD 1998, Rutgers University: information retrieval algorithms; knowledge organization and representation; text encoding standards and metadata schemes

Perry, Claudia, Associate Professor, PhD 1996, Rutgers University: information science; new media; scientific and technical information sources

Santon, Judit, Assistant Professor, PhD, 2003, Rutgers University: archives,

records management; indexing
Smith, Karen P., Professor, EdD 1982, Teachers College, Columbia University: literature for children and young adults; school library media centers; multicultural librarianship
Surprenant, Thomas T., Professor, PhD 1979, University of Wisconsin at Madison: administration; distance learning; instructional technology
Warwick, Shelly, Assistant Professor, PhD 1999, Rutgers University: information technology; intellectual property and privacy; multimedia information resources

Academic Librarianship Advisor

Bonk, Sharon, Professor and Chief Librarian, MA 1969, University of Minnesota: American studies; library science

Adjunct Faculty

Bright, Sandra K., Adjunct Lecturer, MLS 1972, Rutgers University: organization and management; school library media centers

Constantinou, Constantia, Adjunct Lecturer, MLS 1995, Queens College: information sources and services

Faris, Crystal, Adjunct Lecturer, MLS, Indiana University: literature and services for children

Friedman, Arthur, Adjunct Assistant Professor, MLS 1978, Queens College; MEd 1970, Indiana University: organization and management; media centers

Holden, Susan, Adjunct Lecturer, MLS 1986, Long Island University: literature for children and young adults; public libraries

Kestenbaum, Joy, Adjunct Lecturer, MS and Certificate in Advanced Studies in Archival Management 1997, Long Island University: art librarianship

Killoren, Katherine, Adjunct Assistant Professor, MLS 1990, Queens College: information technology

Levy, Anna, Adjunct Instructor, MLS 1993, Pratt Institute: government information sources; social science information sources

Myroie, Roslyn, Adjunct Lecturer, MLS 1992, Queens College: cataloging and classification

Rasmussen, Rosemary, Adjunct Lecturer, MLS 1974, Pratt Institute: information services for children and young adults; public libraries

Watson, Duane, Adjunct Professor, Certificate in Preservation Administration 1985, Columbia University; MLS 1981, SUNY Albany: preservation and conservation of materials

Yockey, Philip, *Adjunct Assistant Professor, MLS*. 1986, Columbia University: reference sources and services in the humanities

Introduction

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 electronically, 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 profession 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. Their focus today is on user and community needs, including reference, information, instructional, referral, and advisory services. Improved access to both intellectual resources, through more refined methods of index-

ing, subject analysis, and retrieval, and physical resources, through more efficient storage and distribution, are equally important.

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, ideas, and information 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 what was then the Department of Education, that program offered a one-year curriculum for the preparation of school librarians. Graduates received an MS 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 American Library Association first accredited the Queens College MLS program 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 Department of Education.

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 (GSLIS).

As the profession continued to move into the electronic age, the School has steadily expanded its curricular offerings to reflect the changing academic, professional, and technological environments. In 2002 and 2003 respectively, two New York State Department of Education-registered certificates were introduced: Children's and Young Adult Services in the Public Library and Archives Records Management and Preservation.

The School is well equipped with modern technological facilities. Computer laboratories, and faculty and administrative offices are part of the campus and the City University of New York (CUNY) infrastructure that provides the latest software and access to the Internet. Thus instructional, learning, and administrative needs of faculty, students, and staff are well met. Additional technological facilities are available on campus.

CUNY, Queens College, and the Graduate School of Library and Information Studies have vigorously pursued the recruitment of a culturally and ethnically diverse student body and faculty. Presently, there are approximately 67 languages spoken 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 is equally appropriate for its Graduate School of Library and Information Studies, the only American Library Association accredited program for library and information studies within the City University of New York. The school prepares library/information service professionals to meet the information and literacy needs of the New York metropolitan region and beyond. It provides a quality education, in accordance with the prevailing state and national standards for the discipline. The school prepares graduates to serve a broad segment of the Metropolitan area's multicultural, multiethnic, and multilingual population in a variety of institutional and informational settings. Through research, publication, and other forms of scholarly activity, the school contributes and transmits new knowledge to society and the profession.

Goals and Objectives

The School offers students an intellectual and professional environment that emphasizes the knowledge, skills, and attitudes requisite for learning to function as professionals in the various roles offered by the information age. More specifically:

1. The Faculty of the School Will: Provide opportunities for students to understand the theories and practices of the discipline, enabling them to meet society's changing information needs.

The Students Will Be Expected To:
a. Understand the principles of library/information services, with an em-

phasis on applying them to changing global political, social, cultural, economic, and technological environments.

b. Learn the basis and practices underlying the creation, collection, storage, organization, dissemination, analysis, interpretation, and uses of information in all formats.

c. Understand theoretical and practical aspects of management essential to the effective operation of libraries and information centers.

d. Recognize the importance of the right of access to information in order to maintain an open society and to accept the professional responsibilities involved in upholding that right.

e. Consider opportunities to participate in fieldwork experience under the supervision of faculty and the professional staff of cooperating libraries, information centers, and other information-based organizations.

f. Explore the wide range of career options available to library/information service professionals.

2. The Faculty of the School Will:

Provide opportunities for students to heighten their awareness of the importance of knowing and participating in the communities they serve, developing community-related programs and communicating effectively.

Students Will Be Expected To:

a. Recognize the need to establish working relationships with various community-based groups to help them improve services to their clientele.

b. Understand the necessity of conducting a community analysis in order to continuously monitor the information needs of their clientele.

c. Learn the role of formally constituted networks of information-based agencies in meeting the information needs of their clientele.

d. Know the importance of the communication process and develop the requisite skills for professional interactions with users, colleagues, administrators, and support personnel in a culturally diverse and dynamic society.

e. Communicate effectively orally and in writing.

3. The Faculty of the School Will:

Provide opportunities for students to attain the competencies needed to participate in the evolving electronic age by providing a technologically rich teaching/learning environment.

Students Will Be Expected To:

a. Assess, select, and use appropriate technologies for the effective delivery of

information services.

b. Be prepared to instruct their clientele in the use of information technologies.

4. The Faculty of the School Will:

Provide opportunities for students to participate in a climate that fosters a reflective, critical, and analytical approach to problem-solving while stressing innovative and ethical responses to society's changing information needs.

Students Will Be Expected To:

a. Develop an open-minded attitude towards the change process and exercise professional judgment as to its feasibility and desirability.

b. Understand the ethical issues related to the provision of information.

c. Apply ethical standards in their interactions with clients, colleagues, administrators, and support personnel within the library/information center.

d. Select appropriate strategies to fulfill the needs of their clientele, and to evaluate the outcomes.

5. The Faculty of the School Will:

Provide opportunities for students to facilitate recognition of the increasingly multicultural, multilingual, multiethnic, interdisciplinary, and global nature of the discipline.

Students Will Be Expected To:

a. Recognize their professional responsibilities toward their diverse clientele.

b. Be able to respond to the unique information needs of special users (e.g., the economically disadvantaged and physically challenged).

c. Recognize developments in disciplines related to, and having an influence on, library/information services.

6. The Faculty of the School Will:

Provide opportunities for students to promote and further the goals of the discipline of library/information studies through teaching, faculty research, and publishing, and participation in the activities of professional associations locally, regionally, nationally, and internationally.

Students Will Be Expected To:

Understand the importance of contributing to the global advancement of the profession through participation in the research process, oral presentations, publications, and professional activities.

7. The Faculty of the School Will:

Provide opportunities for students to familiarize themselves with the concepts and skills associated with print, com-

puter, visual and information literacy, and the importance of these in society and library and information environments, as well as the means by which these concepts and associated skills can be used to communicate with library users in a variety of settings.

Students Will Be Expected To:

a. Be able to teach information literacy concepts and skills at the appropriate level to their clientele.

b. Understand the importance of literacy in today's society.

c. Be able to develop and/or locate support materials and resources for teaching information literacy.

d. Exhibit appropriate literacy skills in their research and coursework.

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. Student chapters of the American Library Association, the Special Libraries Association and the Society of American Archivists, sponsor programs of professional and social interest, and the Alumni Association supports the school through fund-raising and by informing graduates of new developments and career opportunities.

At its graduation ceremony, outstanding students are honored with the following awards: the Lori Fischer Award for the student with the highest grade-point average; the Linda Richardson Award in recognition of the student emulating the personal and intellectual qualities of Linda Richardson; the David Cohen Multicultural Award honoring the student or alumnus who has exhibited a firm commitment to serving multicultural, multiethnic, and multilingual minorities; and the Betsy Movchine Award for the student who has contributed most to the betterment of student life in the past year. The Distinguished Alumnus/Alumna Award recognizes a graduate's significant contribution to the discipline and the profession.

Admissions Policies and Procedures

Students may be admitted to the Graduate School of Library and Information Studies on a matriculated or a non-matriculated basis. The School admits students for both the Fall and Spring terms. Since deadlines for applications for each semester may vary, please visit the School's Web site or telephone the GSLIS office for current information. Applications may be obtained from the Web site, the School, and the Graduate Admissions Office.

Admissions Requirements for Matriculation

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. A typed essay of at least 500 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 whose first language is not English, and 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. 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 (CESL) course, which does not count for graduate work.

6. Applicants whose undergraduate cumulative grade-point average is below 3.0, but who otherwise merit consideration for admission, may be required to take the Graduate Record Examination (GRE.)

7. Applicants with undergraduate GPAs below 3.0 who hold advanced degrees are not required to take the GRE.

8. Admission to the school media specialist (library) program (604) requires that the applicant has either a permanent, provisional, or initial, professional New York State Teaching Certificate.

9. A meeting with the Director of the School, the Graduate Advisor, or a member of the School's Admissions 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 must acquire it before the end of their first semester. Faculty will accept only word-processed papers.

The Committee on Admissions of the Graduate School of Library and Information Studies reviews the qualifications of all candidates for admission. 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

Applicants who meet all requirements may be allowed to fully matriculate. This, however, as noted above, cannot be guaranteed.

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 coursework in a given semester should notify the school in writing as soon as possible.

There is no official "leave of absence" classification for graduate students at Queens College. 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 Reentry Application with the Office of Graduate Admissions at least six weeks before the semester of return. A reentry fee is required.

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-point average. Such courses must be taken at

Queens College. A student will lose matriculated status when it becomes mathematically impossible to achieve a *B* average in the allotted 36 credits.

A student must be registered for the semester in which the degree is awarded.

Non-Matriculated Status

With the school's permission, 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 Advisor of the GSLIS, register for individual graduate library science courses, when space is available.

Applicants who do not qualify for matriculated status may be admitted as non-matriculants with the approval of the Graduate Advisor. Courses taken as a non-matriculated student may be credited toward the MLS degree if a grade of *B* (3.0) or better is attained. A non-matriculant wishing to matriculate may have a maximum of 12 credits accepted towards the degree by the School.

A student who has been awarded the MLS 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.

Registration

Students may register only after their program has been approved by a faculty member. Registration takes place in person at the Graduate School of Library and Information Studies office. Approved matriculated and non-matriculated students will receive instructions from the Graduate Admissions Office and the Graduate School of Library and Information Studies regarding dates and times.

SUNY-Stony Brook-GSLIS Partnership

The Graduate School of Library and Information Studies has a co-operative agreement with SUNY-Stony Brook that allows students WHO ARE NOT YET matriculated at the GSLIS to complete up to four of the core courses at SUNY-Stony Brook. Upon admission and matriculation at the GSLIS, these credits (up to the limit of 12) can be transferred and credited toward the 36-credit requirement of the MLS degree.

Students who are matriculated at the GSLIS may take these courses at SUNY at Stony Brook as well. However, these students must receive permission from

the Graduate Advisor and complete a permit form (available through the Registrar's Office) prior to enrolling in a course(s) at a non-CUNY institution. If this is not done, credits earned for courses completed at SUNY at Stony Brook will NOT be accepted by Queens College and applied to a student's degree program.

Academic Requirements

The 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 a generalist program 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 College 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 MLS 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 complete the following four core courses at the start of their studies:

- 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

In addition to the four courses listed above, all students must complete this fifth required course, which includes a research project, only after completion of at least 21 credits. The student's project report must give evidence of ability to integrate knowledge obtained from the individual courses constituting the MLS program. Satisfactory completion of a research project is mandated by the New York State Department of Education for receipt of the MLS degree.

Research Project

GLIS 709 Research and Bibliographic Methods

Students who have previously completed a master's thesis may apply to fulfill this requirement by completing GLIS 791: Independent Study. Students who believe they are eligible to take GLIS 791 should consult the Graduate Advisor to obtain approval at the outset of their program.

Programs for Specialization

Beyond the five required courses in the basic sequence, varied courses reflecting special areas of interest in library and information studies are offered. New courses are continuously added to further enrich the curriculum. Students should consult faculty advisors on the choice and scheduling of such courses.

Except for specialization in the School Media Specialist (Library) Program, the MLS degree program does not require particular specialized offerings. The School Media Specialist (Library) Program (program code 604), leading to New York State certification, has previous professional education requirements as noted above.

For all other students in the MLS program (program code 602), specialized courses are available for professional interests including, but not limited to, types of libraries and information-related agencies, functions within them, types of users and media. Types of libraries may include public, academic, research, and special libraries, as well as information-based agencies such as archives and media centers. Functions may include administration, reference/information services, as well as web-based and other technical services. The types of user category may include children and young adults, and those in the corporate and the not-for-profit environments.

Queens College permits up to twelve graduate credits to be taken outside of the School. Such courses must have the prior approval of the Graduate Advisor as well as of the other department or institution and must be appropriate to the

student's program for the MLS degree.

School Media Specialist (Library) Program Requirements

Students who choose this specialization must have, prior to admission, either a permanent, provisional, or initial professional New York State Teaching Certificate.

The program emphasizes the development knowledge and skills needed to teach information literacy to the K–12 school community, to foster collaborative partnerships with the school's faculty and administration, to motivate and guide students in these settings in the use of information and materials, and to evaluate and select materials that promote and support the information needs of this specialized clientele.

Of the 36 credits needed for the MLS degree, 33 are required, thus leaving only three credits (one course) as elective. 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) and parents for informational, educational, and recreational materials as well as the needs of teachers, administrators, and other personnel seeking information and materials related to their professional responsibilities. By definition, School Media Specialists (Library) must be competent in matching the most appropriate communication media to instructional, developmental, and recreational needs.

Following completion of all courses for graduation, Queens College through its Office of Certification will, if the student wishes, forward all required materials to the New York State Department of Education for securing the individual's certification.

Required Courses for School Media Specialist (Library)

In addition to the basic core requirements described above, the following courses are required:

- GLIS 737 Literature for Children and Adolescents
- GLIS 761 Organization and Management: Media Centers (25 hours of fieldwork)
- GLIS 763 Nonbook Materials: Sources and Service (25 hours of fieldwork)
- GLIS 765 Resources for the School Curriculum (25 hours of fieldwork)
- GLIS 767 Reading Motivation Techniques for Children and

Adolescents (25 hours of fieldwork)
GLIS 795 Internship (150 hours of practicum)

CERTIFICATE PROGRAMS

Two certificate programs of 12 credits each are currently available: Children and Young Adult Services in the Public Library and Archives, and Records Management and Preservation. Both of these are designed for multiple audiences, including paraprofessionals working in these areas, current MLS students who wish to make explicit their specialty, and working library/information service professionals who desire a further credential demarking their expertise. All students in these two certificate programs must meet the college's admissions standards; paraprofessionals may be required to enroll in core courses to provide the appropriate foundation for coursework in the two certificate programs.

The certificates are built around a similar structure. Within each, a core sequence of four courses (12 credits) must have been completed. Library/information service professionals who already hold the MLS degree and may have already taken one or more of these core courses can fulfill their requirements by selecting from a menu of four elective courses.

Certificate in Children and Young Adults Services in the Public Library Certificate Program

Core (required) courses:

- GLIS 737 Literature for Children and Adolescents
- GLIS 739 Literature for the Young Adult
- GLIS 773 Public Library Services for Children
- GLIS 777 Planning and Delivering Young Adult Services in the Public Library

Elective courses:

- GLIS 738 Mythology and Folklore for Children and Adolescents
- GLIS 767 Reading Motivation Techniques for Children and Adolescents
- GLIS 771 Organization and Management: Public Libraries
- GLIS 775 Librarianship in a Multicultural Society: Materials and Services

Certificate in Archives, Records Management, and Preservation

Core (required) courses:

- GLIS 732 Archives and Manuscripts
- GLIS 733 Fundamentals of Library Conservation and Preservation

- GLIS 736 Records Management
- GLIS 795 Internship (in an archive or records center)

Elective courses:

- GLIS 705 Organization and Management
- GLIS 729 Introduction to Metadata for the Cataloging and Classification of Electronic Resources
- GLIS 731 Development of Books and Printing
- GLIS 753 Digital Libraries

To receive the certificate at the completion of the prescribed four-course sequence, paraprofessionals must have become matriculated students at Queens College. Current MLS students of the Graduate School of Library and Information Studies will obtain the certificate at the same time as the awarding of their degree. Library/information service professionals who complete a four-course sequence will be awarded the certificate by the college.

CERTIFICATE OF POST-MASTER'S STUDIES IN LIBRARIANSHIP

The program leading to the Certificate in Post-Master's Studies in Librarianship is designed for graduate library/information service professionals 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 designed by each student with a faculty member in accordance with the curriculum described in this *Bulletin*. An integral part of the program 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/Information Studies from an ALA-accredited program.
- 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 GSLIS representative.
- A 500-word statement of the candidate's professional objectives, specifying his/her special needs or interests.
- Three letters of reference from li-

brary/information service professionals and/or instructors in library/information studies.

General Requirements

The Certificate in Post-Master's Studies in Library/Information Services 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 the preparation of an independent research project or an independent special project. All requirements must be completed within a three-year period.

Specialization

An individually tailored program will be formulated by each student and his/her faculty advisor, in accordance with the curriculum. Areas of specialization may include:

- Academic and Research Librarianship
- Archives and Records Management
- Electronic Resources and Services
- Health Sciences Librarianship
- Information Systems Design and Management
- Literature for Children and Young Adults
- Multicultural Librarianship
- New Media
- Public Librarianship
- Reference/Information Services
- School Library Media Centers
- Technical Services
- Work with Children and Young Adults

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 coursework 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 coursework 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

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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 coursework 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 coursework 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 makeup examination. A graduate student receiving this grade is required, with the permission of the departmental chair, to take a makeup final examination by the end of the next two regular semesters in attendance. A fee of \$15 is charged when a special makeup 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.

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 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 college's *Bulletin*.)

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 reentry and pay a nonrefundable reentry fee by the appropriate deadline. The student must also petition the Office of Graduate Studies for permission to reenter. Requests for reentry 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 their 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 eligi-

bility for transfer credit rests with the Graduate Advisor in consultation with the appropriate specialization advisor(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 coursework 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 College 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 MLS 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.

TUITION AND FEES

New York State Residents: \$230 per cr.

Out-of-State Students: \$425 per cr.

All students, full-time and part-time, are required to pay an activity fee of \$66.10 each session of attendance (fee subject to change). In addition all full-time students are charged a technology fee of \$75.00 each semester (part-time students pay \$37.50). Graduate students who take undergraduate courses and receive undergraduate credit for them are charged undergraduate tuition for those courses plus the graduate activity fee. (Tuition and fees are as of Fall 2004)

COMPUTER USE

The Office of Information Technology has developed "Policies Governing Use of Queens College Information Technology." These regulations govern the actions of 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; anyone who uses the Queens College network; and all others permitted access to a computer.

Regulations Regarding the Use of the GSLIS Computing Facilities

1. Food and beverages are prohibited in the public access computing areas. This means that food and beverages can neither be brought into nor consumed in either of the labs.
2. Only GSLIS students, faculty, and staff are permitted in the laboratories. Children, friends, etc. are not to be admitted to the GSLIS computing labs.
3. The GSLIS labs are intended for quiet study. While it is understood that students will sometimes need to work together, it is requested that all conversations take place quietly so that others working in the labs are not disturbed.
4. Users are prohibited from installing or using unauthorized software (including games, screensavers, plug-ins, and communication software) or changing the default parameters on the installed software base of the labs' computers.
5. Users are prohibited from deleting icons or programs from the labs' computers.
6. Persons who deliberately attempt to make changes to render the labs' computers inoperable will lose their lab privileges.
7. Users are responsible for all usage of their accounts and ensuring the privacy of that account. To avoid liabilities that may ensue, users should not share their password with anyone or grant others access to their account.
8. Students may print single copies of course-related or professional materials. Multiple copies are to be generated using campus or other photocopying facilities. Students should realize that at the present time paper is supplied by the GSLIS. Abuse of the printing privilege may result in a change to this policy.
9. In using the GSLIS computer facilities (including web and email use), scholarly communication, research, and academic work have first priority. In those circumstances where all the workstations in the

labs are occupied, students engaged in non-class-related activities might be asked to surrender their place to students needing to do class-related work.

10. There are no filters in the GSLIS labs, and intellectual freedom is fully supported. However, students are asked to be thoughtful in accessing materials that others might find objectionable and to use computers in the back of the labs in these situations.

11. In accordance with the Queens College acceptable use policy, students who use Queens College computing facilities for hate speech will lose their lab privileges.

12. Individual users should take significant measures (e.g., regularly updated home anti-virus software) to ensure that personal disks do not infect institutional computers.

Although the GSLIS lab assistants take reasonable precautions to safeguard the Queens College (QC) network and maintain regular backup procedures, they cannot be held responsible for unauthorized access by other users, nor can they guarantee protection against media failure, fire, floods, hackers, viruses, etc.

Courses

700. The Technology of Information. 3 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 the place and role of 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.

701. Fundamentals of Library and Information Science. 3 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.

702. Information Sources and Service: General. 3 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 this service and for developing appropriate collections.

703. Introduction to Technical Services. 3 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 heading lists and classification systems. Study and practical exercises in all areas of technical services.

705. Organization and Management. 3 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. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703, and 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. Students enrolling must have completed at least 21 credits.

711. Collection Development. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Design of collection policy; criteria for selection and maintenance; evaluation techniques; resource sharing; organization and management of collection development, electronic and print.

713. Information Sources and Service: Science and Technology. 3 hr.; 3 cr. Prereq. or coreq.: 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 this service and for developing appropriate collections.

715. Information Sources and Service: Social Sciences. 3 hr.; 3 cr. Prereq. or coreq.: 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 this service and for developing appropriate collections.

717. Information Sources and Service: Humanities. 3 hr.; 3 cr. Prereq. or coreq.: 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

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

the needs of various clientele; criteria for evaluating these sources and this service and for developing appropriate collections.

719. Government Information Sources. 3 hr.; 3 cr. Prereq. or coreq.: 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 international and United Nations publications; print and electronic access.

721. Advanced Technical Services. 3 hr.; 3 cr. Prereq. or coreq.: 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 the Organization of Material. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Advanced problems in cataloging and subject access 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 Nonprint Material. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. This course will introduce the principles of bibliographic control as they are applied to nonprint materials in libraries and other information agencies. Topics include the background and development of current practices; bibliographic description of the range of nonprint materials; and subject access.

727. Serials Librarianship. 3 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.

729. Introduction to Metadata for Cataloging and Classification of Internet Resources. 3 hr.; 3 cr. Prereq.: GLIS 700, 702, 703; Prereq. or coreq.: GLIS 701. This is a course about applying various

metadata standards to catalog and classify information objects (e.g., World Wide Web pages) in a distributed network environment, e.g., the Internet. It will provide a comprehensive and practical understanding of cataloging Internet resources. The focus will be on current application in libraries and information centers.

731. Development of Books and Printing. 3 hr.; 3 cr. Prereq. or coreq.: 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.

732. Archives and Manuscripts. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. This course provides an introduction to the theory and practice of managing archives and manuscript collections. The course will cover the theoretical basis for preserving and using historical records; the role of the archivist; and the various types of archives and manuscript repositories as well as the techniques of acquisition; arrangement; description; preservation; reference; and the handling of special formats such as photographs, moving images, sound recordings, and electronic records.

733. Fundamentals of Library Conservation and Preservation. 3 hr.; 3 cr. Prereq. or coreq.: 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.

734. Art Librarianship. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Survey, evaluation and application of reference and bibliographic resources (print and electronic) in the visual arts; techniques and procedures for serving the needs of various clientele; special issues in art and museum libraries.

735. History of Children's Literature to the Twentieth Century. 3 hr.; 3 cr. Prereq. or coreq.: 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.

736. Records Management. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. This course will examine the history of record keeping; the records and infor-

mation needs of businesses, nonprofits and governments; records management theory and practice; and the challenge posed by electronic records.

737. Literature for Children and Adolescents. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Introduction to the forms and types of literature; criteria for excellence; techniques for analysis and evaluation; and identification of appeal and suitability for different types of readers.

738. Mythology and Folklore for Children and Adolescents. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. This course will introduce students to myths, folklore and fairy tales from a wide range of cultures. The major recorders and collectors of mythology, folklore, and fairy tales and the place of these stories in library/information center programs will be addressed. Finally the professional resources and the criteria for selection of these materials for the K-12 audience will be examined.

739. Literature for the Young Adult. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Survey of literature written for young people ages 12-17, includes historical development of specific genre, and consideration of the reading interests and needs of the young adult.

740. The Information Environment in Contemporary Society. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. This 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. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Introduction to some of the latest developments in information technology of immediate relevance to information professionals; hands-on laboratory experience of the systems selected. Units and contents may be changed from time to time to reflect new developments in the information arena.

749. Libraries and the Internet. 3 hr.; 3 cr. Prereq. or coreq.: 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 in 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.

751. The Design and Evaluation of Visual Information. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Introduction to the techniques and tools used in the planning, production, and evaluation of multimedia visual displays of information. Special attention will be devoted to Internet Web pages and ways of presenting statistical and qualitative information in multimedia.

753. Digital Libraries. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Introduction to the emerging concept of the digital library; historical developments; current digital library projects and initiatives; issues involving the building, preserving, and maintaining access to digital collections, educational, social, and economic issues. Student designed prototypes.

761. Organization and Management:

Media Centers. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Evaluation, selection, and utilization of nonbook materials and technology to serve the library/information needs of all students, including those with special needs, and faculty regardless of specialization; and to foster information literacy skills including cooperative programs with teachers, school library media centers, and other types of library and information agencies.

765. Resources for the School Curriculum. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Selection, evaluation, and utilization of instructional materials to support the curriculum on all grade levels. Special attention will be given to teacher-librarian collaboration and current educational developments in literacy and innovative programs for students with special needs.

767. Reading Motivation Techniques for Children and Adolescents. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Development of techniques and skills, to include collaboration with faculty in reading guidance; aspects covered include individual performance and group criticism of book talks, storytelling, and poetry reading. Strategies to work with faculty with responsibilities for literacy and students with special needs are components of the course.

771. Organization and Management: Public Libraries. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703, or permission of the instructor. Planning and applications of public library services for children. Topics include program planning, collection development, community networking, management issues, and training.

775. Librarianship in a Multicultural Society: Material and Services. 3 hr.; 3 cr. Prereq. or coreq.: 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.

777. Planning and Delivering Young Adult Services in the Public Library. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. An overview of contemporary public library services for adolescents, with an emphasis on how to conceptualize or customize services that meet the development trends of this age group, while flourishing within organizational, political, and community cultures.

779. Adult Reader's Advisory Services in the Public Library. 3 hr.; 3 cr. Prereq. or coreq.: GLIS 700, 701, 702, 703. Introduces students to: (1) major categories and subcategories of genre fiction popular among adult readers; (2) theories underpinning reader's advisory services, such as theories of readers and reading, popular culture, cultural stratification, reader response, and audience uses and gratifications; and (3) current library practices that serve the needs of adults interested in these materials.

780. Organization and Management: Academic and Research Libraries. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: 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. 3 hr.; 3 cr. Prereq. or coreq.: 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; current information retrieval systems; the selection and control of serial, monographic, and nonprint materials in biomedicine. Electronic searching and retrieval experience necessary.

786. Business Information Sources. 3 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. 3 hr.; 3 cr. Pre-

req.: 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 vary from semester to semester, according to trends and developments in the profession; announcements made to be in advance.

GLIS 790.2. *VT: Seminar. 2 hr.; 2 cr. Prereq: GLIS 700, 701, 702, 703, and permission of the school. Topics vary from semester to semester, according to trends and developments in the profession; announcements to be made in advance.

790.3. *VT: Seminar. 3 hr; 3 cr. Prereq.: GLIS 700, 701, 702, 703, and permission of the school. Topics vary from semester to semester, according to trends and developments in the profession; announcements to be made in advance.

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's faculty; admission by special application.

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. Students in the school library media specialist (library) program will complete 150 clock hours of experiences to be equally divided between elementary and secondary school library media centers as stipulated by the 2004 NYSED regulations for the certification of SLMC specialists. Students enrolling in this course must have completed at least 21 credit hours.

Linguistics & Communication Disorders

Chair and Director of Graduate Programs in Linguistics: Robert M. Vago

Associate Chair and Director of Graduate Program in Speech-Language Pathology: Arlene W. Kraat

Clinical Coordinator and Associate Director of Graduate Program in Speech-Language Pathology: Patricia McCaul

Admissions Coordinator of Graduate Program in Speech-Language Pathology: Sima Gerber

Dept. Office: Kissena Hall 349, 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 Applied Linguistics; and the Master of Science in Education in Teaching English to Speakers of Other Languages (TESOL), as described below.

FACULTY

Vago, Robert M., Chair and Director of Graduate Programs in Linguistics, *Professor*, PhD 1974, Harvard University: phonology and language attrition

Kraat, Arlene W., Associate Chair and Director of Graduate Program in Speech-Language Pathology, *Associate Professor*, MA 1970, Indiana University: augmentative communication

McCaul, Patricia, Clinical Coordinator and Associate Director of Graduate Program in Speech-Language Pathology, *Lecturer*, MA 1988, Hunter College: childhood speech, language and neuromotor disorders

Gerber, Sima, Admissions Coordinator of Graduate Programs in Speech-Language Pathology, *Associate Professor*, PhD 1987, CUNY Graduate Center: pragmatics and child language

Borgen, Karen, *Instructor*, MA 1999, Queens College: communication disorders

Cairns, Charles E., *Professor Emeritus*, PhD 1968, Columbia University: phonology, psycholinguistics, adult literacy

Cairns, Helen S., *Professor Emerita*, PhD 1970, University of Texas at Austin: adult psycholinguistics and language development in the child

Fernández, Eva M., *Assistant Professor*, PhD 2000, CUNY Graduate Center: bilingualism, psycholinguistics, and instructional technology

Fiengo, Robert W., *Professor*, PhD 1974, Massachusetts Institute of Technology: syntax and the acquisition of syntax

Gelfand, Stanley A., *Professor*, PhD 1973, CUNY Graduate Center: speech perception, acoustic immittance and reverberation

Halpern, Harvey, *Professor*, PhD 1962, New York University: speech and language problems of brain-injured adults

Kirchenberg, Randi, *Instructor*, MA 1988, Queens College: child speech and language disorders

Klein, Elaine C., *Associate Professor*, PhD 1990, CUNY Graduate Center: TESOL and applied linguistics

Martohardjono, Gita, *Associate Professor*, PhD 1993, Cornell University: TESOL and applied linguistics

Newman, Michael, *Associate Professor*, EdD 1993, Teachers College, Columbia University: TESOL and applied linguistics

Schneider, Phillip A., *Associate Professor*, EdD 1980, Teachers College, Columbia University: stuttering and voice articulation

Seliger, Herbert W., *Professor Emeritus*, EdD 1969, Teachers College, Columbia University: second language acquisition and applied linguistics

Stark, Joel, *Professor Emeritus*, PhD 1956, New York University: speech-language pathology and child language development disorders and disabilities

Stevens, Alan M., *Professor Emeritus*, PhD 1964, Yale University: phonology and Indonesian languages

Toueg, Renée, *Lecturer*, MS 1963, Pennsylvania State University: adult and child language disorders

Wankoff, Lorain Szabo, *Assistant Professor*, PhD 1983, CUNY Graduate Center: child language disorders, language-based learning disabilities, and literacy challenges

DOCTOR OF PHILOSOPHY PROGRAMS

Advisor: Robert M. Vago

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, 365 Fifth Avenue,

*Indicates a variable title.

New York, NY 10016-4309. Further information can also be obtained from the program offices.

PROGRAM FOR THE MASTER OF ARTS DEGREE IN SPEECH-LANGUAGE PATHOLOGY

Program Director: Arlene W. Kraat

Clinical Coordinator and Associate Director: Patricia McCaul

Admissions Coordinator: Sima Gerber

The program in speech-language pathology within the Department of Linguistics and Communication Disorders is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (ASHA). The program provides the academic and practicum requirements for clinical certification by the American Speech-Language-Hearing Association and for professional licensure by the New York State Department of Education. It also provides the necessary academic and pedagogical preparation for certification by New York State as a Teacher of Students with Speech-Language Disabilities – SED Program (IRP Code: 02710).

Admissions Requirements

Students are accepted into the program in the Fall semester. The requirements noted here are in addition to the general requirements for admission to graduate programs at Queens College.

1. A grade-point average of *B* (3.0) or better.

2. Applicants coming from other undergraduate programs must satisfy minimum requirements for admission as well as those required by the American Speech-Language-Hearing Association for admission to graduate study in Speech-Language Pathology. By meeting the equivalent of the Queens College Primary College Competencies and Liberal Arts and Sciences Area Requirements (LASAR), applicants will have had at least 3 semester credit hours in the biological sciences, 3 semester credit hours in the physical sciences, 3 semester credit hours in mathematics, and 6 semester credit hours in the behavioral or social sciences. They must also have the following courses (or their equivalent) in basic science, communication processes, education, and child development:

3 semester credit hours in Child Development (Psychology 224)

3 semester credit hours in Introduction to Communication Disorders (LCD 106)

3 semester credit hours in Audiology (LCD 330)

15 semester credit hours in anatomical/physiological bases (LCD 207, Anatomy & Physiology for Speech and Language); physical/psychophysical bases (e.g., LCD 110, Phonetics; LCD 208, Hearing Science; LCD 309, Speech Science); and linguistic bases (LCD 216, Language Acquisition)

3. At least three letters of recommendation from undergraduate instructors, normally two from faculty in communication science 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.

4. Results of the Graduate Record Examination.

5. Applicants who present international credentials or whose native language was not English must receive a minimum score of 650 on the TOEFL.

6. A personal essay.

7. The credentials of each applicant will be examined by the Graduate Admissions Committee, which accepts, accepts with conditions, or rejects candidates.

8. 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 be admitted.

The application deadline is February 1 for the year in which the prospective candidates apply. As a limited number of candidates are admitted each year, the process is competitive. *Permission of the Program Director is required for enrollment in any of the courses in the program.*

Graduation Requirements

These requirements are in addition to the general Queens 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 consecutive semesters. In addition, students must take a course in Foundations of Education (SEYS 536), or its equivalent. Attendance during the summer semester of the year following their admission to the program may also be required.

2. In addition to coursework, candidates must *complete* at least 12–14 hours a week of supervised clinical practicum each semester.

Linguistics & Communication Disorders

3. Candidates must complete a minimum of 400 clock hours of supervised clinical experience. One of those placements must be in an elementary or secondary school setting.

4. Candidates must maintain a *B* (3.0) or better grade-point average.

5. Students must consult with the Program Director for additional requirements (e.g., tests, seminars) to obtain certification from the New York State Department of Education to teach children with speech and language disabilities.

PROGRAM FOR THE MASTER OF ARTS DEGREE IN APPLIED LINGUISTICS

Program Director: Robert M. 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.

Admissions Requirements

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

1. Completion of a bachelor's degree with a 3.0 GPA minimum.

2. Applicants whose first language is not English and who do not hold an undergraduate or graduate degree from an accredited American institution of higher education must submit proof of having achieved a score of 650 or higher on the Test of English as a Foreign Language (TOEFL).

3. Three letters of recommendation.

4. A personal essay of approximately 500 words.

5. The credentials of each applicant will be examined by the Linguistics Graduate Admissions Committee. An interview may be requested.

6. The number of applicants approved for matriculation is limited by available resources; therefore, applicants who otherwise meet minimum requirements for matriculation may not necessarily be admitted.

Maintenance Requirements

1. Minimum overall grade-point average of *B* (3.0).

2. All students must file a Program of Study form with the Program Director.

Degree Requirements

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

1. Satisfactory completion of the following 36 credits: LCD 701, 702, 703,

Linguistics & Communication Disorders

705, 706, 707, 720, 740.3, 741.3, 742, 750, 790.

2. Completion of course requirements with a minimum overall grade-point average of *B* (3.0).

PROGRAM FOR THE MASTER OF SCIENCE IN EDUCATION DEGREE: TESOL

Program Director: Robert M. Vago

This graduate program prepares students for New York State certification to teach English to speakers of other languages (TESOL) in school settings (all grades). The curriculum is grounded in the study of the structure of human language in general and English in particular, and addresses issues of language acquisition, literacy, educational technology, sociolinguistics, and psycholinguistics. The program emphasizes involvement with both elementary and secondary schools: it provides a student teaching course and field experiences in two methods courses at both levels.

Admissions Requirements

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

1. Completion of a bachelor's degree with a 3.0 GPA minimum.

2. Applicants whose first language is not English and who do not hold an undergraduate or graduate degree from an accredited American institution of higher education must submit proof of having achieved a score of 650 or higher on the Test of English as a Foreign Language (TOEFL).

3. Three letters of recommendation.

4. A personal essay of approximately 500 words.

5. The credentials of each applicant will be examined by the Linguistics Graduate Admissions Committee. An interview may be requested.

6. The number of applicants approved for matriculation is limited by available resources; therefore, applicants who otherwise meet minimum requirements for matriculation may not necessarily be admitted.

Maintenance Requirements

1. Minimum overall grade-point average of *B* (3.0).

2. All students must file a Program of Study form with the Program Director.

Degree Requirements

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

1. For students who possess a New York State teaching certificate, satisfactory completion of the following 39 credits: LCD 701, 702, 703, 705, 706, 707, 712, 720, 740.3, 741.3, 742, 790, 796.

2. For students who do not possess a New York State teaching certificate, satisfactory completion of the following 44 credits: LCD 701, 702, 703, 705, 706, 707, 712, 720, 740.4, 741.4, 742, 790, 794, 795.

3. Completion of course requirements with a minimum overall grade-point average of *B* (3.0).

Certification Requirements

1. Students who do not possess a New York State teaching certificate will be required to undertake additional coursework in pedagogy: Foundations of Education (SEYS 536), Child Development (EECE 710, 711, or 712), and Educational Psychology (SEYS 552).

2. Students must complete a general education core in liberal arts and sciences: (a) two courses in English, Comparative Literature, or Literary Criticism; (b) two courses in American History; (c) two courses in World History, Geography, Economics, or Political Science; (d) one course in the Biological Sciences; (e) one course in the Physical Sciences; (f) one course in Information Technology; (g) two courses in Mathematics, Scientific Methodology, or Quantitative Reasoning; (h) 12 semester hours or equivalent of study of a language other than English. Students may satisfy the general education core in liberal arts and sciences requirement as part of their previous programs of study (undergraduate or graduate). In case of deficiencies, appropriate coursework may be taken in conjunction with and in addition to the course requirements for the master's degree.

3. Students must consult with the Program Director for additional requirements (tests, seminars, etc.) for New York State certification.

Courses in Communication Disorders

700. Research Methodology in Communication Sciences and Disorders. 2 hr. plus conf.; 3 cr. Methods of experimental and statistical control in the design of research for the speech, hearing, and language sciences. Issues addressed include research concerning developmental processes; speech and language acquisition and disabilities; diagnostic and intervention strategies in clinical and school environments, instructional and assistive technology; validation of instructional strategies; and program evaluation.

717. The Acquisition of Language. 2 hr. plus conf.; 3 cr. Development of language in the normal child; theoretical and empirical issues. The course involves the study of the processes and variations of speech, language, communication and preliteracy skills in typically developing mono- and bilingual children. Objectives include an exploration of the impact of cultural, ethnic, gender, socioeconomic, and individual variations on the child's acquisition of language; an understanding of the processes involved in language learning, language use, and the foundations of literacy from prelinguistic stages to complex language development.

721. Language and Learning Disorders of Children I. 2 hr. plus conf.; 3 cr. Application of studies in normal language acquisition to the study of pre-school language and learning disorders; emphasis on the assessment of, and intervention with pre-school children with language and learning disorders. Units include interdisciplinary views of the child with speech, language, and communication challenges; issues in speech, language, communication, social-emotional and cognitive development related to specific language impairment, pervasive developmental delay, autism, mental retardation, and developmental apraxia; challenges in learning and in the classroom for children with developmental language disorders.

722. Speech Disorders: Stuttering. 2 hr. plus conf.; 3 cr. Theoretical and empirical approaches to the symptoms, etiology, and management of fluency disorders from childhood to adolescence to adulthood. Topics include working with children as members of families and school environments; special considerations for pre-school and school-aged children; and interactions with children, parents, and teachers.

723. Alternative and Augmentative Communication Systems and Use for the Persons with Severe Communication Impairments. 2 hr. plus conf.; 3 cr. Nature of alternative and augmentative communication (AAC) technologies, sign systems, and strategies used with children and adults across a range of impairments; individualized assessment and assignment of assistive technologies; teaching language and communication skills to persons using AAC in home, school, and, workplace settings; and the use of technology to communicate.

724. Neuromotor Communication Disorders. 2 hr. plus conf.; 3 cr. Emphasis on problems of children with various neuromuscular disorders. Topics include speech, oral motor, and respiratory/phonatory issues in normal

and abnormal neuromotor development from 1–12 months; development of feeding skills, oral motor assessment of infants and young children, multidisciplinary assessment and treatment.

725. Diagnostic Methods in Speech-Language Pathology. 2 hr. plus conf.; 3 cr. Theoretical principles underlying the assessment of communication disorders; includes procedures for formal test selection and use, interviewing, and report writing. Units include assessment of language interactions in home, clinic, and school settings.

726. Language Disorders: Adolescents and Adults I. 2 hr. plus conf.; 3 cr. Symptoms, etiology, and management of adolescents and adults with language difficulties related to acquired aphasia.

727. Speech Disorders: Voice. 2 hr. plus conf.; 3 cr. Vocal pathologies in children and adults: etiology, symptoms, and treatment approaches. Topics include laryngeal histopathology, neurological vocal disorders; laryngectomy; and the impact and management of a variety of pediatric vocal disorders including working with children as members of family and school environments.

728. Speech-Language Pathology Services in the Schools. 2 hr. plus conf.; 3 cr. A study of the research findings and professional practices basic to decision-making. Units include models of service delivery; individualized educational programming; rights and responsibilities of teachers and other staff; instructional design and planning including case selection; collaborative assessment and teaching; computerized teaching programs, national and state legislation and regulations; multicultural differences and bilingual considerations.

729. Clinical and Classroom Practicum in Speech-Language Pathology. 1, 2, or 3 cr. The course requires 12–14 hours per week of supervised clinical and classroom practicum. It includes staffings; instructional planning; case conferences; analysis of clinical and classroom management and instruction; the critical appraisal of behavioral teaching objectives; outcomes assessment; and professional practice issues. The course is taken during each semester of matriculation. It is repeatable for one, two, or three credits. The course is graded on a Pass/Fail basis only.

730. Speech Disorders: Articulation and Phonology. 2 hr. plus conf.; 3 cr. Review of current literature on phonological disorders with a view toward assessment and management in the clinic and the classroom. Topics include theories of phonological development; various forms of

phonological and articulatory assessment; development of phonological awareness and impact on speech, spelling, and reading; impact of culture and heritage on phonological patterns; and remedial techniques.

731. Language Disorders: Adolescents and Adults II. 2 hr. plus conf.; 3 cr. This course examines the language of dementia, traumatic brain injury, and right hemisphere brain damage, along with motor speech disorders. Each disorder, especially as it relates to the adult and adolescent population, is discussed according to its symptoms, etiology, diagnosis, and treatment.

732. Language and Learning Disorders of Children II. 2 hr. plus conf.; 3 cr. Application of research in normal oral and written language acquisition to the study of language and learning disorders in school-aged children and adolescents; emphasis on the assessment of, and intervention with school-age children with language and learning disorders in the clinic and the classroom. Units include the history of special education; perceptual disorders, linguistic diversity; narrative and discourse development; reading acquisition; medication, drug abuse, and language issues related to dyslexia, attention deficit disorder, oppositional behavior, and central auditory processing disorder.

733. Dysphagia. 2 hr. plus conf.; 3 cr. The anatomy and physiology of normal and disordered glutton. Emphasis is on medical issues related to the etiology, symptomatology, diagnosis, and treatment of swallowing disorders. Topics include various technological methods of assessment including modified barium swallow and fiberoptic endoscopic evaluation of swallowing; interdisciplinary concerns; and impact of ethical and cognitive issues.

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. Topics include language, cognitive, educational, and psychosocial issues; hearing aids; classroom acoustics and group amplification systems; assistive technology; cochlear implants and tactile aids.

759. Studies in Communication Disorders. 3 hr.; 3 cr. May be repeated for credit if topic changes.

797. Special Problems. Prereq.: Approval of program director 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

708. Speech Science

710. Physiological Acoustics

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

701. Introduction to Linguistics. 3 hr.; 3 cr. Structural aspects of language most relevant to the ESL and/or literacy teacher.

702. Teaching English Sentence Structure I. 3 hr.; 3 cr. Prereq. or coreq.: LCD 701. Introduction to the grammar of English and applications to teaching ESL, Part I.

703. Teaching English Sentence Structure II. 3 hr.; 3 cr. Prereq.: LCD 702. Introduction to the grammar of English and applications to teaching ESL, Part II. Continuation of LCD 702.

705. Language and Cross-Cultural Communication. 3 hr.; 3 cr. Prereq. or coreq.: LCD 701. The acquisition and use of non-native languages from a cross-cultural perspective. Introduction to research on how non-native speakers learn the sociolinguistic and pragmatic rules of the target language and how inappropriate use of such rules often results in miscommunication between native and non-native speakers. Developing effective pedagogical techniques in teaching communicative competence to ESL learners.

706. Bilingualism. 3 hr.; 3 cr. Prereq. or coreq.: 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

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

††—May be offered; see Class Schedule.

Liberal Studies

implications of bilingualism for ESL and/or literacy teachers.

707. Evaluation and Measurement in TESOL. 3 hr.; 3 cr. Prereq. or coreq.: LCD 703 and 741. 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.

712. Multiple Literacies in TESOL. 3 hr.; 3 cr. Prereq. or coreq.: LCD 741. This course provides a strong background in the teaching of the multiple literacies that English language learners need to thrive in today's technologically changing society. The class explores the teaching of traditional alphabetic literacy skills involved in the English Language Arts. It also prepares students for instruction in emerging forms of communication, including media literacy, information literacy, and information technology. Components include assessment, methods, and materials development.

720. Teaching English Sound Structure. 3 hr.; 3 cr. Prereq. or coreq.: LCD 701. Introduction to the sound structure of English and applications to teaching ESL.

740. Second Language Acquisition and Teaching. Prereq. or coreq.: LCD 701. Introduction to the linguistic and pedagogical theories and methods of teaching ESL. There is a field experience requirement at various school settings in conformity with New York State certification requirements. Classes may sometimes be held at these off-campus locations.

740.3. 3 hr. plus 25 hr. fieldwork observation; 3 cr. (For students who possess a New York State teaching certificate.)

740.4. 3 hr. plus 50 hr. fieldwork observation; 4 cr. (For students who do not possess a New York State teaching certificate.)

741. Methods and Materials in TESOL: Listening, Speaking, Reading, Writing. Prereq.: LCD 702 and 740. This course is a comprehensive review of the methods and materials used in TESOL/ESL classes to teach the four language skills: listening, speaking, reading, and writing. The class covers how to adapt methods and materials to suit learner populations of different ages and at varying levels of English proficiency. The role of instructional technology (e.g., audiovisual, multimedia, computers in ESL instruction) will also be addressed. There is a field experience requirement at various school settings in conformity with New York State certification requirements. Classes

may sometimes be held at these off-campus locations.

741.3. 3 hr. plus 25 hr. fieldwork tutorial; 3 cr. (For students who possess a New York State teaching certificate.)

741.4. 3 hr. plus 50 hr. fieldwork tutorial; 4 cr. (For students who do not possess a New York State teaching certificate.)

742. Methods and Materials of TESOL: The Content Areas. 3 hr.; 3 cr. Prereq.: LCD 741. In this course students learn the principles and practices for TESOL/ESL through academic content areas such as mathematics, science, social studies, and language arts. Reading, model lessons, and authentic materials are used to examine the theoretical issues involved and to apply them to teaching practices for ESL learners at the elementary and secondary levels.

750. Practicum in Adult TESOL. 5 hr.; 3 cr. Prereq.: LCD 703, 705 or 706; coreq.: LCD 742. 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 707 and 742. Analysis of selected research studies related to TESOL.

794. Student Teaching Internship in TESOL I. 3 hr. plus 20 hr./wk. student teaching; 3 cr. Prereq. or coreq.: LCD 742. Supervised student teaching in ESL classes, plus a weekly seminar at the college. (For students who do not possess a New York State teaching certificate.)

795. Student Teaching Internship in TESOL II. 3 hr. plus 20 hr./wk. student teaching; 3 cr. Prereq.: LCD 794. Supervised student teaching in ESL classes at either the elementary or secondary level, complementing the level of student teaching in LCD 794, plus a weekly seminar at the college. (For students who do not possess a New York State teaching certificate.)

796. Student Teaching Internship in TESOL for Certified Teachers. 3 hr. plus 20 hr./wk. student teaching; 3 cr. Prereq.: LCD 742. Supervised student teaching in ESL classes, plus a weekly seminar at the college. (For students who possess a New York State teaching certificate.)

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

784. Practicum in Adult Literacy and Reading

791. Seminar in Research in Applied Linguistics

Master of Arts in Liberal Studies

Director: James N. Jordan

MALS Advisory Committee: Alberto Cordero, John M. O'Brien

Dept. Office: Powdermaker Hall 350E, 997-5280

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 advisor, 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 History and Philosophy. Recent participants include:

Jordan, James N., Director, *Professor of Philosophy*, PhD 1966, University of Texas at Austin; Kant studies, ethics

Cordero, Alberto, *Professor of Philosophy*, PhD, University of Maryland; philosophy of natural science; history of science

Hicks, Steven V., *Professor of Philoso-*

phy, PhD 1990, Columbia University: Kant and Post-Kantian continental philosophy

Pine, Martin L., *Professor Emeritus* of History, PhD 1965, Columbia University: ancient, Medieval, and Renaissance history

Purnell, Frederick, *Professor* of Philosophy, PhD 1971, Columbia University: ancient, Medieval, and Renaissance philosophy

Admissions

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.

1. Each student must complete the three core seminars.
2. The course of study must be approved by a faculty advisor.
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: Wallace Goldberg

Graduate Advisor: Nick Metas

Dept. Office: Kiely Hall 237, 997-5800

Students in the master's program can choose a program of study to prepare them for PhD 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

Goldberg, Wallace, *Chair, Professor*, PhD 1974, Polytechnic Institute of New York: applied mathematics, differential equations

Metas, Nick, *Graduate Advisor, Assistant Professor*, PhD 1966, Massachusetts Institute of Technology: functional analysis, injective Banach spaces

Braun, Martin, *Professor*, PhD 1968, New York University: qualitative theory of differential equations, mathematical models

Cowen, Robert H., *Professor*, PhD 1967, Yeshiva University: logic and set theory

Dodziuk, Jozef, *Professor*, PhD 1973, Columbia University: geometric analysis

Emerson, William R., *Professor*, PhD 1967, University of California at Berkeley: number theory, combinatorics, and topological group theory

Goodman, Arthur, *Lecturer*, PhD 1980, Yeshiva University: approximation theory

Itzkowitz, Gerald L., *Professor*, PhD 1965, University of Rochester: topology, topological groups, functional analysis, relativity

Jiang, Yunping, *Professor*, PhD 1990, City University of New York: dynamical systems

Kahane, Joseph, *Professor*, PhD 1963, Columbia University: combinatorics, applied mathematics

Kramer, Kenneth B., *Professor*, PhD 1973, Harvard University: algebraic number theory

Kulkarni, Ravi S., *Professor*, PhD 1967, Harvard University: differential geometry, Riemann surfaces

Maller, Michael J., *Professor*, PhD 1978, University of Warwick: dynamical

systems and analysis
Miller, Russell G., *Assistant Professor*, PhD 2000, University of Chicago: logic, computability theory
Mitra, Sudeb, *Assistant Professor*, PhD 1999, Cornell University: complex analysis, geometric function theory, Riemann surfaces, Teichmüller spaces
Ralescu, Stefan S., *Professor*, PhD 1981, Indiana University at Bloomington: statistics, non-parametric inference, probability theory
Roskes, Gerald J., *Associate Professor*, PhD 1969, Massachusetts Institute of Technology: numerical analysis, partial differential equations, singular perturbation theory
Rothenberg, Ronald I., *Associate Professor*, PhD 1964, University of California at Davis: operations research, probability and statistics, applied mathematics
Sisser, Fern S., *Associate Professor*, PhD 1977, Columbia University: optimization
Sultan, Alan, *Professor*, PhD 1974, Polytechnic Institute of New York: topological measure theory
Terilla, John, *Assistant Professor*, PhD 2001, University of North Carolina: deformation theory, mathematical physics
Weiss, Norman J., *Professor*, PhD 1966, Princeton University: harmonic analysis on Euclidean spaces and Lie groups
Zakeri, Saeed, *Assistant Professor*, PhD 1999, State University of New York at Stony Brook: dynamical systems

Requirements for Matriculation in the Master of Arts Programs

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 department's Committee of

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

Mathematics

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 Advisor. 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 mathematics by working for private businesses or governmental agencies participating in the Queens College Cooperative Education program.

PROGRAM FOR THE MASTER OF SCIENCE IN EDUCATION DEGREE

Requirements for Matriculation

These requirements are in addition to the general requirements for admission. To be admitted to the program a candidate must have:

1. A cumulative index and Mathematics 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 coursework have been completed with a minimum average of B .

2. At least 21 credits in college-level mathematics courses. These courses must include intermediate calculus and linear algebra, with an average of at least B . Note that before taking the mathematics courses that go toward the master's degree, students must have a total of 36 credits in college-level mathematics.

3. Two letters of recommendation.

Requirements for the Degree

1. Candidates in this program have two advisors, one in the Department of Secondary Education & Youth Services and one in the Department of Mathematics. The Education Advisor should be consulted first to plan out the required coursework.

2. Students must take 15 credits in mathematics and 15 credits in Secondary Education. Note that the coursework in mathematics usually includes study in the History of Mathematics, Probability and Statistics, and Geometry. Students must consult their advisor to plan an appropriate course of study.

3. Students are required to pass an oral examination in mathematics. This exam is given by two of the student's professors and is based on the content of the two courses. The student may decide on the professors and submits a request to the Mathematics Advisor who then schedules the oral examination.

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

505. Mathematical Problem-Solving. 3 hr.; 3 cr. Prereq. or coreq.: One year of college mathematics. This course presents techniques and develops skills for analyzing and solving problems mathematically and for proving mathematical theorems. Students will learn to organize, extend, and apply the mathematics they know and, as necessary, will be exposed to new ideas in areas such as geometry, number theory, algebra, combinatorics, and graph theory.

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. Fall

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.††

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.: Mathematics 231 or 237. Prime numbers, the unique factorization property of integers, linear and non-linear Diophantine equations, congruences, modular arithmetic, quadratic reciprocity, continued fractions, contemporary applications in computing and cryptography.

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.: A course in linear algebra (231 or 237) and either Mathematics 171 or knowledge of a programming language; coreq.: Mathematics 201 (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. Spring

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 analytic 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

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

Media Studies

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. Spring

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. Spring

703. Point Set Topology. 3 hr.; 4½ cr. Prereq.: Advanced calculus. Topological spaces, mappings, connectedness, compactness, separation axioms, product spaces, function spaces. Fall

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-star-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: Richard M. Maxwell

Master's Program Coordinator:
Jonathan Buchsbaum

Dept. Office: G Building 100, 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 developments.

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.

Please note: Applications are not currently being accepted for this program.

Faculty

Maxwell, Richard M., Chair, *Professor*, PhD 1990, University of Wisconsin at Madison: international media and marketing

Buchsbaum, Jonathan, Master's Program Coordinator, *Professor*, PhD 1983, New York University: film theory, film history, film and politics

Gates, Kelly, *Assistant Professor*, PhD 2004, University of Illinois: biometric surveillance technology, social identity

Hendershot, Heather J., *Associate Professor*, PhD 1995, University of Rochester: film and television analysis and criticism; children's television; feminism and media

Herzog, Amy, *Assistant Professor*, PhD 2004, University of Rochester: the role of sound and music in film and electronic media, the music industry, popular culture

Liebman, Stuart, *Professor*, PhD 1980, New York University: film theory and criticism, media theory

Macmillan, Susan M., *Lecturer*, MA 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 advisor 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 *B* (3.0) 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 *B* (3.0) 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 in Media Studies

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 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. Oppor-

tunities 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 advisor, and the Media Studies Coordinator. At the completion of the project, the student shall submit a written report of the experience to the faculty advisor 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-experience credit under the conditions specified by the department; consult the coordinator of the Media Studies Program for details.

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: Edward Smaldone

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 School of Music offers a music education program leading to the Master of Science degree in Music Education.

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

Music

In the MA 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, respectively, 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 MS in Education (Music) degree program includes methods, conducting, and rehearsal techniques, as well as 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 School of Music 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

Advisor: William N. Rothstein

Faculty for Classical Performance

Advisor: Drora B. Pershing

Violin: Daniel Phillips; Isaac Malkin, Todd Phillips, Burton Kaplan, Linda Sinanian

Baroque Violin: Nancy Wilson

Viola: Daniel Panner, Karen Dreyfus, Toby Appel

Cello: Marcy Rosen, Alexander Kouguell, David Geber

Double Bass: Homer Mensch

Flute: Trudy Kane, Robert Stallman, Keith Underwood, Judith Mendenhall, Tara Helen O'Connor, Robert

Dick, Laura Gilbert
Baroque Flute: Sandra Miller
Oboe: Randall Wolfgang, Bert Lucarelli, Diane Lesser
Clarinet: Charles Neidich, David Krakauer
Bassoon: Laura Koepke, Jean Gokowski, Jane Taylor
French Horn: David Jolley
Trumpet: Vincent Penzarella, Tom Smith, David Krauss
Trombone: David Findlayson
Tuba: Richard Schneider, Lewis Waldeck
Percussion: Michael Lipsey
Harp: Susan Jolles
Voice: Sherry Overholt, Anne Marie Guarilia, Marcy Lindheimer, Jan Olian, Robert C. White, Jr.
Piano: Morey Ritt; Donald Pirone, Gerald Robbins, Edna Golansky
Organ: Jan-Piet Knijff, Stephen Hamilton
Harpsichord: Raymond Erickson
Guitar (Classical): Ben Verdery, Fred Hand
Lute: Patrick O'Brien
Orchestral Conducting: Maurice Peress
Chamber Music and Ensembles: David Jolley, Charles Neidich, Marcy Rosen, Daniel Phillips, Morey Ritt, Drora Pershing, Alexander Kouguell
Opera Workshop: Doris Lang Kosloff
Graduate Wind Ensemble: Richard Sang

Faculty for Jazz Performance

Advisor: Michael P. Mossman

Trumpet and Jazz Composition: Michael P. Mossman
Saxophones and Flute: Antonio Hart
Piano: Bruce Barth
Bass: Leon Dorsey, Buster Williams
Percussion: Eugene Jackson
Voice: Sheila Jordan
Trombone: Conrad Herwig III, Steve Turre, Luis Bonilla
Guitar: Paul Bollenback

Faculty for Composition, Theory, and Music History

Advisor: William N. Rothstein

Anson-Cartwright, Mark, *Assistant Professor*, PhD 1998, CUNY Graduate Center: theorist, Schenkerian analysis
Burnett, Henry, *Professor*, PhD 1978, CUNY Graduate Center: musicologist, ethnomusicologist; seventeenth and eighteenth centuries, Japanese music
Erickson, Raymond, *Professor*, PhD 1970, Yale University: musicologist, harpsichordist; Medieval and Baroque periods, computer techniques for musicology
Gagné, David W., *Associate Professor*,

PhD 1988, CUNY Graduate Center: theorist, Schenkerian analysis
Hart, Antonio, *Assistant Professor*, MA 1993, Queens College: jazz performance, saxophone
Howe, Hubert S., Jr., *Professor*, PhD 1972, Princeton University: composer; computer synthesis of electronic music
Lipsey, Michael, *Assistant Professor*, MMus 1991, Manhattan School of Music: percussion performance, contemporary music
Nichols, Jeff W., *Associate Professor*, PhD 1990, Harvard University: composer
Orenstein, Arbie, *Professor*, PhD 1968, Columbia University: musicologist, pianist; French music, 1870–1940
Rosen, Marcy, *Assistant Professor*, BMus 1977, Curtis Institute of Music: cello performance
Rothstein, William N., *Professor*, PhD 1981, Yale University: theorist, Schenkerian analysis, analysis of rhythm
Saylor, Bruce S., *Professor*, PhD 1978, CUNY Graduate Center: composer, composers' workshop
Schober, David, *Assistant Professor*, PhD 2004, University of Michigan at Ann Arbor: music theory, composition
Smaldone, Edward, *Professor*, PhD 1986, CUNY Graduate Center: composer
Stone, Anne J., *Associate Professor*, PhD 1994, Harvard University: Medieval and Renaissance music

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 William Rothstein, Graduate Advisor, 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

4. International students are required to take the TOEFL examination, with a minimum score of 550 on the paper-based examination or the equivalent score on the computer-based examination.

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 area – Performance (classical or jazz), Composition (classical or jazz), Theory, or Music History – or in a combined Theory/History program.

2. *Composition majors* complete 30 credits of coursework and write a large composition. *Theory and Music History majors* complete 30 credits plus a thesis, or complete 36 credits of coursework. *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 advisor approved by the Graduate Advisor.

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. In classical programs, the following examinations are required during the course of study. Students will take each examination each semester until a passing grade is achieved in each area.

a) Students take a placement examination in *music theory and musicianship* before registering for their first semester. Those who need work will be assigned appropriate coursework or individual study.

b) Students are tested in the *history of music* before registering for their first semester. Those who need further work in this area will consult the Graduate Advisor for coursework or other recommended study.

c) A reading proficiency examination in French, German, or Italian is required of all students majoring in music history, music theory, and composition, and of classical performance majors who are either singers or pianists specializing in vocal accompanying. Other classical performance majors may substitute an examination in foreign musical terms for the language examination. For students in composition, a language other than French, German, or Italian may be permitted at the discretion of the head of the composition program. Students in composition must also pass the examination in foreign musical terms.

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), 778.1, 778.2, 778.3, 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 Advisor for performance. The preferred schedule of courses is:

Fall (Semester I)
Music 778.1
Music 775.1
One or two electives

Spring (Semester II)
Music 775.2
Music 777
Music 778.2
Music 779
One or two electives

Fall (Semester III)
Music 775.3
Music 777
Music 778.3
One or two electives

Course of Study for Jazz Performance Majors

Jazz performance majors are required to take Music 794.7 (Jazz Ensemble) for three semesters, Music 755 (Jazz Composition and Arranging), Music 756 (Jazz History), plus nine graduate elective credits. In addition, the Jazz faculty administers a comprehensive exit examination, including piano proficiency, aural skills, sight reading, and repertoire. Materials for this examination are distributed to all incoming students. This exit examination must be passed before a graduate recital is scheduled. The preferred schedule of courses is:

Fall (Semester I)
Music 778.1 (Private Lessons)
Music 754 (Jazz Improvisation)
Music 794.7 (Jazz Ensemble)
One or two electives

Spring (Semester II)
Music 778.2 (Private Lessons)
Music 755 (Jazz Composition and Arranging)
Music 794.7 (Jazz Ensemble)
One or two electives

Fall (Semester III)
Music 778.3 (Private Lessons)
Music 756 (Jazz History)
Music 794.7 (Jazz Ensemble)
One or two electives

Electives offered include Music 757, Advanced Jazz Composition, Music 786 Combo Workshop; Music 788, Jazz Piano Workshop; Music 750, Music Business; and Music 790.1, 790.2, 790.3 Special Problems. Jazz students are also encouraged to take advantage of courses in the classical division.

Jazz Composition Major

Interested students should contact Prof. Michael Mossman (997-3823).

Courses:

Music 714, 715, 716. Jazz Lessons in Composition 3 hr
Music 756. Problems in Jazz History & Analysis 3 hr
Music 755. Jazz Composition/Arranging (if needed) 3 hr
Music 757. Advanced Jazz Composition 3 hr
Music 720. Advanced Orchestration 3 hr
Music 742. Proseminar in Analysis & Style Criticism (recommended) 3 hr
Music 759. Studies in Tonal Harmony & Counterpoint (if needed) 3 hr
Music 726.1. Electronic Music Studio I (if needed) 3 hr
Elective Credits 3 hr
(unless student tests out of Jazz Comp./Arr. I)

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 Advisor. The preferred schedule of courses is:

Fall (Semester I)
Music 742
Music 729
Music 784
One elective

Spring (Semester II)
Music 730
Music 785
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 contents of their two required seminars, as well as in some specific course requirements (Schenkerian Analysis, Music 745.1, and post-tonal

Music

analysis, Music 746, for theory majors; early-music notation, Music 706, for history majors). 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 700, 742, 745.1, and 746, plus two theory seminars; seminars are normally chosen from courses numbered 762 or 763. Remaining credits will be chosen from electives in consultation with the Advisor. The preferred schedule of courses is:

Fall (Semester I)

Music 700

Music 742

One or two electives

Spring (Semester II)

Music 745.1 (when applicable)

Music 746

Music 762

Fall (Semester III)

Music 763

One or two electives

History majors are required to take Music 700, 706, and 742, plus two seminars in music history or ethnomusicology; seminars are normally chosen from courses numbered 710, 711, 760, or 761. Remaining credits will be chosen from electives in consultation with the Advisor. The preferred schedule of courses is:

Fall (Semester I)

Music 700

Music 742

One or two electives

Spring (Semester II)

Music 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.††

706. Renaissance Notation. 3 hr.; 3 cr.††

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, fieldwork, 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. Offerings have included Asian Music, Music of Japan, and Japanese Chamber Music. May be repeated for credit if the topic changes.††

714, 715, 716. Jazz Lessons in Composition. 1 hr., 4 cr. each. Prereq.: Admission to the jazz performance in composition major. Weekly lessons in jazz composition.

720. Advanced Orchestration. 3 hr.; 3 cr. Prereq.: Permission of the instructor. Late nineteenth- and twentieth-century orchestral techniques are studied through the works of Brahms and Wagner, Mahler and Strauss to Britten, Stravinsky, Boulez, and Lutoslawski. Students examine notation innovations, orchestrate twentieth-century piano music, and occasionally hear their exercises read by the School of Music orchestra.

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.

738. Musical Iconography. 3 hr.; 3 cr. Critical and historical interpretation of the representation of musical 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.)

746. Introduction to Post-Tonal Theory. 3 hr.; 3 cr. An introduction to current analytical approaches to 20th-century music. Required of theory majors.

750. Music Business. 3 hr. 3 cr., no prerequisites. This course is designed to

teach music students the economic basis of the music business; i.e. financial planning, contracts, dealing with managers and agents, etc. Students will be guided in assessing their own attitudes toward money and business and in creating compelling personal goals and planning the attainment of these goals. ††

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. May be repeated for credit if the topic changes. ††

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.

757. Advanced Jazz Composition. 3 hr.; 3 cr. Advanced students write for the jazz ensemble and have their works rehearsed and performed. Arranging for mixed woodwinds, strings, horn and tuba. Afro-Cuban and Brazilian styles explored.

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.; 3 cr. Prereq.: Music 700 and 742 or permission of instructor. Consideration of special historical problems in which techniques of research and independent evaluation are stressed. Recent offerings have included Josquin, The Early Symphony, Mozart Operas, Beethoven (the Origins of his Style), and Verdi. May be repeated for credit with permission of School. 760–Fall; 761–Spring

762, 763. Seminar in Music Theory. 3

hr.; 3 cr. Prereq.: Music 700 and 742 or permission of instructor. Consideration of special issues in theory or analysis, with emphasis on independent research and critical thinking. May be repeated with permission of School. 762–Fall; 763–Spring

764. Topical Course in Applied Music Theory. 3 hr.; 3 cr. Prereq.: Permission of instructor. Recent topics have included advanced orchestration, tonal composition and fugue, and advanced keyboard skills. May be repeated for credit if the topic changes.

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. May be repeated for credit if the topic changes.

767. Topical Course in Performance. 2 hr.; 2 cr. Prereq.: Permission of the instructor. This course will be offered on an occasional basis. Topics will vary, but may include conducting for composers, Baroque continuo realization, etc. May be repeated for credit if the topic changes. ††

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 MA in Music or the MS in Education (Music) degree, or permission of School. Lecture courses in the history of music. Recent topics have included Bach, Chopin, Debussy, and Ravel, Dvořák to Ellington, and twentieth-century opera. May be repeated for credit if the topic changes.

775.1. Chamber Music I. 1 hr.; 1 cr. The study of music literature through participation in a performance group. Fall, Spring

775.2. Chamber Music II. 1 hr.; 1 cr. Fall, Spring

775.3. Chamber Music III. 1 hr.; 1 cr. Fall, Spring

776. Performance Workshop for Conductors. 2 hr.; 2 cr. Prereq.: Permission

of instructor. This course consists of assistantships 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 three-semester series as follows:

777.2. Baroque

777.3. Classical and Romantic

777.4. Twentieth Century

[**777.1. Renaissance Performance Practice.** ††]

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. †

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 II. Fall

785. The Twentieth Century II. 3 hr.; 3 cr. A detailed study of music from World War II to the present. Spring

786 Combo Workshop. 3 hr. 3 cr.: Pre-req: permission of instructor. Jazz Stud-

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

Music

ies majors prepare and perform their own small-group arrangements.

788 Jazz Piano Workshop. 2 hr. 2 cr., Prereq.: permission of instructor. Keyboard skills and jazz harmony. Chords and chord orchestration, primary cadences, chord scales and other melodic/harmonic resources.

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. May be repeated for credit if the topic changes.

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. 5 hr.; 1 cr. Prereq.: Permission of instructor. May be repeated for credit.

793. Symphonic Wind Ensemble. 4 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 MA or MS students subject to the requirements of the various programs. May be repeated for credit.

794.1. Vocal Ensemble. 3 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). 3 hr.; 1 cr. Prereq.: Permission of instructor. May be repeated for credit. Group performs on modern copies of period instruments.

794.3. Baroque Ensemble. 3 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). 2 hr.; 1 cr. Prereq.: Permission of instructor. May be repeated for credit.

794.5. Brass Ensemble. 2 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. 2 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.; 2 cr. Fall
798.2. 2 hr.; 2 cr. Spring

Survey of Repertory for Major Instruments and Voice.

799.1. 1 hr.; 1 cr. String Repertory. Prereq.: Permission of instructor. A study of orchestral, chamber, and solo repertoire for string instruments. May be repeated for credit.

799.2. 1 hr.; 1 cr. Woodwind Repertory. Prereq.: Permission of instructor. A study of orchestral, chamber, and solo repertoire for woodwind instruments. May be repeated for credit.

799.3. 1 hr.; 1 cr. Brass Repertory. Prereq.: Permission of instructor. A study of orchestral, chamber, and solo repertoire for brass instruments. May be repeated for credit.

799.4. 1 hr.; 1 cr. Piano Repertory. Prereq.: Permission of instructor. A study of chamber and solo repertoire for piano. May be repeated for credit.

799.5. 1 hr.; 1 cr. Vocal Repertory. Prereq.: Permission of instructor. A study of aspects of vocal repertory including art song, aria, and other vocal forms. May be repeated for credit.

799.6. 1 hr.; 1 cr. Percussion Repertory. Prereq.: Permission of instructor. A study of orchestral, chamber, and solo repertoire for percussion. May be repeated for credit.

MASTER OF SCIENCE IN EDUCATION PROGRAM (MUSIC)

Advisor: Richard C. Sang, Music Bldg., Room 256; 997-3850

Faculty

Sang, Richard C., Advisor, *Associate Professor*, PhD 1982, University of Michigan: music educator and conductor; instrumental pedagogy; music education research

Bell, Cindy, *Assistant Professor*, Ed.D. 2000, Teachers College, Columbia University: choral conducting, classroom music, choral methods, vocal pedagogy

Eisman, Lawrence W., *Professor Emeritus*, Ed.D. 1968, New York University: music educator and conductor; music in the secondary school, choral and instrumental conducting

Smith, Janice P., *Assistant Professor*, PhD 2004, Northwestern University: elementary general music, treble choirs, music technology, teacher preparation

Admissions

The Aaron Copland School of Music, in cooperation with the Division of Education at Queens College offers the Master of Science in Education degree with a concentration in Music Education. The New York State Education Department-approved programs are designed to 1) increase the knowledge and skills of Provisionally/Initially certified teachers leading toward the new (formally "Permanent") Professional certification, and 2) to prepare candidates with degrees in music, but no teacher preparation, for the Initial Certificate. Most courses are late afternoon and evening.

There are two tracks to the Master of Science in Education degree in Music Education: Initial and Professional. Admission is open to applicants with a bachelor's degree in music or music education. Students already holding Provisional or Initial certificates are placed in the Professional track. Non-certified students are placed in the Initial track. A minimum *B* (3.0 of 4.0) cumulative undergraduate average, or a master's degree in another area of music, is required for admission. Students must maintain a *B* average throughout either program for completion/graduation. Students must meet with the Graduate Advisor for registration prior to each semester enrolled.

Program Requirements – Initial Certification Track

The Initial Certification Track is a strictly prescribed program which combines both the MS core with required pedagogical courses mandated by the New York State Education Department for Initial Certification. Students will be guided through the pedagogical course-

work and student teaching first – allowing them to begin teaching before completing the degree. The graduation requirement for this track is typically 40–42 credits plus a thesis, but may be lower depending on the courses the individual student may have had at the undergraduate level (or another graduate program).

Students who already possess a master's degree will only need to take the pedagogical coursework and student teaching totaling about 29–32 credits. These students will be qualified to apply for Initial Certification. The pedagogical coursework consists of requirements from the following list of courses:

Music 690. Foundations of Music Education, 3 cr.

or

SEYS 536. Educational Foundations, 3 cr
SEYS 552. Educational Psychology, 3 cr.
EECE 711. Ecological Perspectives on Development: The Childhood Years, 3 cr.

and either

EECE 525. Language and Literacy Learning in the Elementary Years, 3 cr.

or

SEYS 700. Language, Literacy, and Culture in Education, 3 cr.

Music 641. Teaching of Instrumental Music, 3 cr.

or

Music 642. Teaching of Choral Music, 3 cr.

Music 643. Seminar in the Teaching of Music, 4 cr.

Music 644. Student Teaching in Music, 6 cr.

Music 669. Conducting II, 2 cr.

and a choice of either

Music 666. Vocal Pedagogy, 2 cr.

or at least 3 credits from among the following:

Music 661. Group Instruction in Upper Strings, 1 cr.

Music 662. Group Instruction in Lower Strings, 1 cr.

Music 663. Group Instruction in Woodwinds, 1 cr.

Music 667. Group Instruction in Brass, 1 cr.

Music 668. Group Instruction in Percussion, 1 cr.

Students in the Initial Certificate option may apply for Initial Certification after completing the following courses:

Courses – Initial Track

641. Teaching of Instrumental Music. 3 hr.; 3 cr. Prereq.: Music 661, 662, 663, 667, and 668, or undergraduate equivalent.

An advanced course in current instrumental music pedagogy working from the philosophical to the practical, and touching base with rehearsal techniques, materials and literature, the National and State Standards, assessment, multicultural musics, technology in the music classroom, and working with the special learner.

642. Teaching of Choral Music. 3 hr.; 3 cr. Prereq.: Music 666 or undergraduate equivalent. An advanced course in current choral music pedagogy working from the philosophical to the practical, and touching base with rehearsal techniques, materials and literature, the National and State Standards, assessment, multicultural musics, technology in the music classroom, and working with the special learner.

643. Seminar in the Teaching of Music. 3 hr. of participating and observation one morning or afternoon per week for a total of 45 clock hours and 4 class hr.; 4 cr. The class hours will be divided between elementary and secondary. Prereq.: EECE 711, SEYS 552. Content will focus on curriculum and instruction, multicultural musics, technology, students with disabilities, and assessment.

644. Student Teaching in Music. 16 hr.; 6 cr. Prereq.: Music 643 with at least a B, Music 669, Music 666 (for vocal majors), and at least three of the following (for instrumental majors): Music 661, 662, 663, 667, 668. Students will be assigned the equivalent of 20 six-hour days (140 hours) at the elementary (Pre-K–6) level, and 20 six-hour days (140 hours) at the secondary (7–12) level. Students will, to the extent possible, be assigned to both urban and non-urban settings. Students are expected to prepare daily lesson plans, and will develop and maintain student teaching portfolios.

659. General Music in the Elementary Schools. 3 hr.; 3 cr. Prereq.: Music 644, Student Teaching in Music. An advanced course in current elementary classroom pedagogy working from the philosophical to the practical, and touching base with the National and State Standards, assessment, multicultural musics, technology in the music classroom, and working with the special learner.

660. General Music in the Secondary Schools. 3 hr.; 3 cr. Prereq.: Music 644, Student Teaching in Music. An advanced course in current elementary classroom music pedagogy working from the philosophical to the practical, and touching base with the National and State Standards, assessment, multicultural musics, technology in the music classroom, and

working with the special learner.

661. Group Instruction in Upper Strings. 3 hr.; 1 cr. Prereq.: Permission of the department. Meets with Music 161 with additional coursework for graduate students. For instrumental majors and Initial Certificate Track students only. Development of skill in performing and pedagogical techniques for (but not limited to) violin.

662. Group Instruction in Lower Strings. 3 hr.; 1 cr. Prereq.: Permission of the department. Meets with Music 162 with additional coursework for graduate students. For instrumental majors and Initial Certificate Track students only. Development of skill in performing and pedagogical techniques for (but not limited to) cello.

663. Group Instruction in Woodwinds. 3 hr.; 1 cr. Prereq.: Permission of the department. Meets with Music 163 with additional coursework for graduate students. For instrumental majors and Initial Certificate Track students only. Development of skill in performing and pedagogical techniques for (but not limited to) flute, oboe, and clarinet.

666. Vocal Pedagogy. 3 hr.; 2 cr. Prereq.: Permission of the department. Meets with Music 266 with additional coursework for graduate students. For Vocal/General majors and Initial Certificate Track students only. The physiology of the vocal mechanism and techniques for teaching voice production. The development of individual skill in singing is stressed. Spring

667. Group Instruction in Brass. 3 hr.; 1 cr. Prereq.: Permission of the department. Meets with Music 167 with additional coursework for graduate students. For instrumental majors and Initial Certificate Track students only. Development of skill in performing and pedagogical techniques for (but not limited to) trumpet and trombone.

668. Group Instruction in Percussion. 3 hr.; 1 cr. Prereq.: Permission of the department. Meets with Music 168 with additional coursework for graduate students. For instrumental majors and Initial Certificate Track students only. Development of skill in performing and pedagogical techniques.

669. Conducting II. 3 hr.; 2 cr. Prereq.: Permission of the department. Meets with Music 370 with additional coursework for graduate students. For Initial Certificate Track students only. Includes consideration of repertoire, problems of interpretation, organization of choral and instrumental groups.

Philosophy

670. Advanced Conducting. 3 hr.; 3 cr. Prereq.: Music 669 or undergraduate course in conducting (Music 270 or equivalent). Focus is on advanced conducting problems, techniques, and literature (both choral and instrumental).

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; within 12 months of completing graduate study. The course focuses on preparing the student to be able to read the research literature in music education with emphasis on historical, descriptive, and experimental research, and an introduction to statistics used in behavioral research.

690. Foundations of Music Education. 3 hr.; 3 cr. Prereq.: Permission of Graduate Advisor. (This course may be used in lieu of the SEYS or EECE 700-level Elective course requirement in Historical, Philosophical, or Social Foundations.) Focus is on the historical, philosophical, social, and psychological foundations of music education and the practical applications of these foundations in teaching.

Program Requirements – Professional Certification Track

The *Professional Certification Track* stresses the foundations and psychology of music and education, the teaching of elementary and/or secondary classroom music, vocal and/or instrumental music pedagogy, conducting, and research – all in relation to the National Standards for Music and the Arts. Students' programs are rounded out with music and/or education electives based on individual interests and abilities. The graduation requirement is 33 credits plus a thesis. Some credits earned in other graduate programs may be accepted for transfer.

This is a highly flexible program based on the interests and needs of the individual student. Students choose from among a group of courses in the categories of Historical, Philosophical, Social, and Psychological Foundations of Education: SEYS 701, 702, 703, 704, 705, 706, 707, 708, 720, 709, 710, 717, 718, 719, 738, 762, EECE 700, 703, 704, 705, 710, 711, 712, 713, 714. Further, the student will be allowed 9 credits of electives. These will be allowed from any area of music, music education, or education at the graduate level (600 or higher course number).

Courses – Professional Track

659. General Music in the Elementary Schools. (See graduate initial program.)

660. General Music in the Secondary

Schools. (See graduate initial program.)

688. Seminar in Research in Music Education. (See graduate initial program.)

670. Advanced Conducting. (See graduate initial program.)

641. Teaching of Instrumental Music. (See graduate initial program.)

642. Teaching of Choral Music. (See graduate initial program.)

690. Foundations of Music Education. (See graduate initial program.)

Special Program Requirement – Both Tracks:

Students in both the Initial and Professional tracks are required to take one music history/literature course. For students entering either program track or after Fall 2004, a music history qualifying examination will be administered during their first semester. Passing the exam will allow the student to take a music history course of his or her choosing. Failing the exam will mean that the student must take Music 768, Western Music History Survey (3 hr.; 2 cr.) as a prerequisite to taking a required history course (thus the two-credit variation in the graduation requirements noted above.)

Philosophy

Chair: Steven V. Hicks

Graduate Advisor: Alberto Cordero-Lecca

Dept. Office: Powdermaker Hall 350, 997-5270

Four-Year BA/MA 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 BA/MA 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 available from the Chair or Graduate Advisor.

Faculty

Hicks, Steven V., Chair, *Professor*, PhD 1990, Columbia University: Kant and Post-Kantian continental philosophy
Cordero-Lecca, Alberto, Graduate Advisor, *Professor*, PhD 1992, University of Maryland; MPhil 1978, University of Cambridge; MSci 1976, University of Oxford: philosophy of natural science, history of science
Gildin, Hilail, *Professor*, PhD 1962, University of Chicago: political philosophy, ancient philosophy
Grover, Stephen, *Associate Professor*, DPhil 1987, University of Oxford: epistemology, philosophy of religion
Jordan, James N., *Professor*, PhD 1966, University of Texas at Austin: Kant studies, ethics
Lange, John F., *Professor*, PhD 1963, Princeton University: contemporary analytic philosophy, ethics
Leites, Edmund, *Professor*, PhD 1972, Harvard University: cross-cultural studies, Chinese philosophy, history of modern philosophy
O'Connor, Patricia J., *Associate Professor*, PhD 1990, University of Exeter: philosophy of religion, ethics
Orenstein, Alex, *Professor*, PhD 1972, New York University: logic, philosophy of language
Purnell, Frederick, Jr., *Professor*, PhD 1971, Columbia University: Renaissance philosophy, Medieval philosophy
Rosenberg, Alan, *Professor*, MA 1980, Queens College: philosophy of the social sciences, philosophy and the Holocaust

PROGRAM FOR THE MASTER OF ARTS DEGREE

Requirements for the MA Degree (Offered in Conjunction with the Four-Year BA/MA 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 Advisor.

2. The student's program must in-

clude 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 coursework 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.

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, in Powdermaker 350.

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.††

760. **Business Ethics.** 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 degree thesis under faculty supervision. (Required of all candidates for the MA in Philosophy. Candidates will register for the course once; credit will not be granted until the thesis is accepted.)††

Physics

Chair: Alexander Lisiansky

Graduate Advisors: For PhD candidates: Igor Kuskovsky; for master's degree candidates: J. Marion Dickey

Dept. Office: Science Building 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 MA degree and the City University of New York PhD degree. Students may participate in research via 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

Lisiansky, Alexander, Chair, *Professor*, PhD 1977, Donetsk State University, Ukraine: condensed matter theory, phase transitions, and critical phenomena

Dickey, J. Marion, Graduate Advisor, *Professor*, PhD 1967, Cambridge University: risk assessment, reactor safety, solid state physics

Kuskovsky, Igor L., Graduate Advisor, *Assistant Professor*, PhD 1998, Applied Physics, Columbia University:

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

Physics

experimental solid state physics, optoelectronic materials

Cadiou, Fred J., *Professor*, PhD 1970, University of Chicago: experimental solid state physics, rare earth transition metal magnetic systems

Deych, Lev I., *Assistant Professor*, PhD 1991, Kirensky Institute of Physics,

Russia: condensed matter theory, optics

Genack, Azriel Z., *Distinguished Professor*, PhD 1973, Columbia University: experimental solid state physics, light scattering and nonlinear optics

Klarfeld, Joseph, *Associate Professor*, PhD 1969, Yeshiva University: general relativity, classical and quantum field theory

Menon, Vinod M., *Assistant Professor*, PhD 2001, University of Massachusetts: experimental solid state physics, photonics

Miksic, Mark G., *Associate Professor*, PhD 1962, Polytechnic Institute of New York: experimental solid state physics; X-ray and neutron diffraction of thin films, physics education

Rafanelli, Kenneth R., *Professor*, PhD 1964, Stevens Institute of Technology: theoretical elementary particle physics, relativistic rotating particles

Schwarz, Steven A., *Assistant Dean, Professor*, PhD 1980, Stanford University: secondary ion mass spectrometry polymer physics.

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 MA degree.

1. All candidates must complete the following courses or their equivalents as determined by the Graduate Physics Committee:

	<i>credits</i>
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 MA 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, magnetostatics, 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.

615. Electromagnetic Theory. 3 hr.; 3 cr. Prereq.: An undergraduate course in electromagnetism and an approved mathematics background. Electrostatic and magnetostatic boundary value problems; systematic derivation of differential form of Maxwell's equations in vector notation. Plane electromagnetic waves. Wave guides and cavity resonators. Spherical electromagnetic waves. Huyghens' principle.

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 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 constitutions 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 approximation, 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

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

Political Science

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 Com-

mittee. 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 Advisor 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.

791. Colloquium. 1 hr.; 1 cr. Prereq.: Permission of the department. Attendance at all of the physics colloquia for one semester is required. A report, discussing the topics selected by the supervisor, must be submitted. This course may be taken in 2 different semesters for credit.

798. Thesis. 3 hr.; 3 cr. Prereq.: 20 credits at the master's level. Preparation and oral defense of a thesis under the guidance of a faculty mentor.

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 MA in Physics.

Political Science

Chair: Patricia Rachal

Graduate Advisor: Irving Leonard Markovitz

Dept. Office: Powdermaker Hall 200, 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: Applications are not currently being accepted for this program.

Faculty

Rachal, Patricia, Chair, *Associate Professor*, PhD 1979, Harvard University: American government, public policy and administration

Markovitz, Irving Leonard, *Graduate Advisor, Professor*, PhD 1967, University of California at Berkeley: comparative

government, developing areas, African politics

Altenstetter, Christa, *Professor*, PhD 1967, University of Heidelberg: public policy, comparative politics, health policies

Bowman, John R., *Associate Professor*, PhD 1984, University of Chicago: American politics, political economy, computer application to political science

Cole, Alyson M., *Assistant Professor*, PhD 1998, University of California at Berkeley: political theory

Flamhaft, Ziva, *Lecturer*, PhD 1992, CUNY Graduate Center: comparative politics, Middle East politics

Gerassi, John, *Professor*, PhD 1977, London School of Economics: international relations, political theory

Hacker, Andrew, *Professor Emeritus*, PhD 1955, Princeton University: American politics, American economic system and social structure, political theory

Hevesi, Alan G., *Associate Professor Emeritus*, PhD 1971, Columbia University: American government, urban politics

Kimerling, Judith, *Associate Professor*, JD 1982, Yale University Law School: environmental law and politics

Krasner, Michael A., *Associate Professor*, PhD 1977, Columbia University: American politics, urban politics

Liberman, Peter, *Associate Professor*, PhD 1992, Massachusetts Institute of Technology: international relations

Ofuatye-Kodjoe, Wentworth, *Professor*, PhD 1970, Columbia University: international politics, international law and organization, African politics

Pierre-Louis, François, *Assistant Professor*, PhD 2001, CUNY Graduate Center: comparative politics

Priestley, George A., *Associate Professor*, PhD 1981, Columbia University: Latin America, Central America

Psomiades, Harry J., *Professor Emeritus*, PhD 1962, Columbia University: comparative politics, international politics, Middle East studies

Reichl, Alexander, *Associate Professor*, PhD 1995, New York University: American government

Resnik, Solomon E., *Associate Professor Emeritus*, PhD 1970, New School for Social Research: American government, political parties, presidency

Rollins, Joe N., *Assistant Professor*, PhD 1998, University of California at Santa Barbara: American government

Schneider, Ronald M., *Professor Emeritus*, PhD 1958, Princeton University: comparative politics, political development and modernization, Latin America

Sun, Yan, *Associate Professor*, PhD 1992, Johns Hopkins University: comparative politics, international politics, East Asia

Zwiebach, Burton, *Professor Emeritus*, PhD 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 Advisor 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 MA program. Candidates for other master's degrees may be admitted to 700-level courses with per-

mission of the Graduate Advisor in political science.

610. Western Political Thought. 3 hr.; 3 cr. The basic ideas and systems of Western political thought from Plato through Marx.††

630. Contemporary Comparative Government. 3 hr.; 3 cr. Governmental structures, ideological foundations, and the functioning of political institutions in selected European states. 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.††

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. Ofuatye-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. ††

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. ††

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.††

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.††

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

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.††

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.††

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. ††

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.††

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.††

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.††

763. International Law. 3 hr.; 3 cr. The nature, sources, and development of international law; the role and function of law in international society.††

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.††

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 sci-

ence. A candidate will register for the course once and credit will not be granted until the thesis is accepted.††

Psychology

Chair: Richard J. Bodnar

Head, Master of Arts Program and Graduate Advisor: Philip H. Ramsey

Dept. Office: Science Building E318, 997-3222

The 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: PhD Programs in Psychology, Graduate School and University Center, 365 Fifth Avenue, NY, NY 10016-4309.) Qualified master's degree students may be admitted to PhD-level courses in Learning Processes and Neuropsychology.

Faculty

Bodnar, Richard J., *Chair, Professor*, PhD 1976, City University of New York: physiological, pharmacological, neurochemical, neuroanatomical, and behavioral mechanisms of pain inhibition and ingestive behavior

Ramsey, Philip H., *Head, Master of Arts Program and Graduate Advisor, Professor*, PhD 1970, Hofstra University: multiple comparison procedures, significance testing, simulation, and test theory

Alvero, Alicia M., *Assistant Professor*, PhD 2003, Western Michigan University: applied behavior analysis of worker safety in organizational settings

Baker, A. Harvey, *Professor*, PhD 1968, Clark University: perceptual style and personality, psychotherapy

Berman, Doreen, *Associate Professor*, PhD 1971, CUNY Graduate Center: developmental neuropsychology, models of minimal brain damage, control of movement and electrophysiological correlates of somatic sensory function in monkeys

Borod, Joan, *Professor*, PhD 1975, Case Western Reserve University: clinical neuropsychology

Brown, Bruce L., *Professor*, PhD 1968, Yale University: classical conditioning, autoshaping, stimulus control of behavior, schedule interaction, two-factor theory, consummatory behavior

Brumberg, Joshua C., *Assistant Professor*, PhD 1997, University of Pittsburgh: neurophysiological analysis of rat somatosensory system and barrel receptors

Croll, Susan D., *Associate Professor*, PhD 1992, CUNY Graduate Center: neurobiology of dementia and epilepsy

Ehrlichman, Howard, *Professor*, PhD 1972, New School for Social Research: emotions, individual differences, hemispheric laterality, hypnosis

Farrell, William, *Assistant Professor*, PhD 2000, Indiana University: psychology of learning

Fields, Lanny, *Professor*, PhD 1968, Columbia University: stimulus equivalence

Fleischer, Susan F., *Associate Professor*, PhD 1973, Columbia University: behavioral consequences of infantile malnutrition, biological basis of sexual behavior and of sex differences in behavior, psychotherapy

Foldi, Nancy, *Associate Professor*, PhD 1983, Clark University: Alzheimer's disease, attention, neuropsychology, geriatric diseases

Golub, Sarit, *Assistant Professor*, PhD 2004, Harvard University: social psychology

Halperin, Jeffrey M., *Professor*, PhD 1976, CUNY Graduate Center: child clinical neuropsychology, childhood behavior disorders, and psychopathology

Hemmes, Nancy S., *Professor*, PhD 1972, University of North Carolina: learning theory, temporal control of behavior, habit control

Hollander, Melvyn A., *Assistant Professor*, PhD 1968, University of Oklahoma: treatment of psychopathology, training of mental health workers, behavioral medicine, mental retardation

Johnson, Ray E., Jr., *Professor*, PhD 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*, PhD 1968, Columbia University: experimental analysis of human and animal behavior, sensation and perception

Li, Andrea, *Assistant Professor*, PhD 1996, University of Rochester: visual psychophysics

Moreau, Tina, *Associate Professor*, PhD 1968, CUNY Graduate Center: sensory organization, habituation, lateral differentiation in human newborn, development of inter- and intrasensory integration

Perrine, Kenneth, *Professor*, PhD 1983, University of Kentucky: clinical neuropsychology, analysis of epilepsy and neurosurgery, fMRI techniques in neuropsychology

Poulson, Claire L., *Professor*, PhD 1974, University of Kansas: experimental analysis of human behavior, applied behavioral analysis, language development, infant learning, autism, and other developmental disabilities

Ranaldi, Robert, *Assistant Professor*, PhD 1994, Queens University, Canada: neurobiology of learning and motivation

Sturmey, Peter, *Associate Professor*, PhD 1983, University of Liverpool, UK: developmental disabilities, autism, mental retardation, behavior analysis

Winnick, Wilma A., *Professor*, PhD 1949, Columbia University: verbal learning and short-term memory, imagery in memory, tachistoscopic recognition, perceptual constancy

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 MA 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.

Psychology

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 Advisor 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 MA programs in Psychology.

Note that possession of the requirements listed above 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.

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 coursework 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 (Psychology 700)
- b) Advanced Experimental Psych. I (Psychology 701) or Design of Psychological Research (Psychology 703 with permission only)
- c) Statistical Methods I (Psychology 705)
- d) The remaining credits must include courses from at least three of the following 15 topic areas. At least one course must be from Group A and at least one course from Group B.

Group A	Courses
1. Cognition	738
2. Learning	730, 730.07, 731, 732, 737
3. Motivation	745
4. Perception	735
5. Behavioral Neuroscience	708.4, 710, 711
6. Basic Neuroscience	708.1, 708.2, 708.3
Group B	Courses
7. Applied Behavior Analysis	730.01, 730.02
8. Behavioral Science and Business	754
9. Developmental	720, 720.1, 720.2, 721
10. Developmental Disabilities	720.01, 720.02
11. Personality	740, 741, 743, 743.1
12. Psychometrics	760, 761, 764, 774
13. Psychopathology	755, 756
14. Sex and Gender	753

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 average is 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 coursework 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 fieldwork experience, is designed to prepare students for MA-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
- 748. Self-Awareness Training I or 749
- 705. Statistical Methods in Psychology I

2. An externship (fieldwork placement) of at least 630 hours taken during the last two semesters of study (Psychology 795, 796). This externship is offered during *daytime-weekday* hours only.

- 3. Psychology 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 MA 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 MA 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 MA 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 MA 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.

Advanced Certificate Program in Applied Behavior Analysis

The goal of the 22-credit Advanced Certificate Program is to equip post-baccalaureate students to design, deliver, and evaluate individualized behavioral interventions for children and adults with developmental or acquired disabilities. Successful students of the program will be prepared for the New York State Department of Education certification examination in applied behavior analysis. It should be noted that this is *not* a teacher certification program; advanced certificate graduates will be encouraged to pursue any interest in post-baccalaureate degrees or teacher certification programs with the appropriate department.

Requirements for Matriculation and Continuation in the Program

Applicants for admission must possess a BA or BS degree with an earned grade-point average of at least 3.0 (*B*). Maintenance of a GPA of at least 3.0 through the entire program is required. Applicants to the program will also be required to demonstrate an academic background in psychology, developmental disabili-

ties, education, or to have field-based experience. Transfer credits from other programs will not be applied to the completion of this program.

Curriculum of the Program

The curriculum for the 22-credit Advanced Certificate Program in Applied Behavior Analysis will include a set of required, core courses (13 credits) and a specialization (9 credits).

1. Core courses required (13 credits)

- 730.01 Theory and Method in Applied Behavior Analysis I
- 730.05 Practicum in Applied Behavior Analysis I
- 771 Ethical Issues in Psychology
- 730.02 Theory and Method in Applied Behavior Analysis II
- 730.06 Practicum in Applied Behavior Analysis II

2. Specializations (9 credits)

Specialization courses provide an in-depth concentration on the concepts and methods related to one specific area. Certificate candidates may elect a 9-credit specialization in any one of the following: Developmental Disabilities; Education or Special Education; or Educational Administration. The following is a sample specialization. The 9 credits toward the specialization in Developmental Disabilities may be selected from the following courses:

- 720.01 Developmental Disabilities I
- 720.02 Developmental Disabilities II
- 709 Proseminar (Behavioral Interventions in Developmental Disabilities)
- 730.03 Behavioral Interventions with Children

Selection of courses for the other specializations are to be made in consultation with the graduate advisor.

Courses in Psychology*

The general prerequisites for courses in the 700 category are matriculation for the Master of Arts in Psychology (or matriculation for the MS in Education with a major in School Psychology for Psychology 720, 721, 730, 735, 740, and 760), or permission of department.

Note: Certain MA-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.

700. History of Psychology. 2 lec. hr. plus conf.; 3 cr. Prereq.: At least 15 un-

*-MAT charges are possible.

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

††-May be offered; see Class Schedule.

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dergraduate 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. MA students will undertake an original research study to fulfill the laboratory requirement.

703. Design of Psychological Research. 2 lec. hr. plus conf.; 3 cr. Prior approval of the research project by both the Faculty Advisor and Graduate Advisor 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.

708.4. Behavioral Neuroscience. 3 hr.; 3 cr. Prereq.: An undergraduate laboratory course in experimental psychology or the equivalent. A survey dealing with the basic physiological, anatomical, and chemical functions as they relate to behavior. Topics include sensory processes, motor systems, memory, motivation, learning, emotion, sleep, and arousal.

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.)

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-intellectual 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.

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 Behavior 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 MA 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 Behavior 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 MA 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 fieldwork hours per week plus 2 hours supervision with Queens College faculty).

‡Course is open to all matriculated students enrolled in either the Clinical Behavioral Applications in Mental Health Settings MA Program or the CUNY Learning Processes PhD Sub-Program. Enrollment is limited. All other students must obtain special permission from the Head of the MA Program.

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 acknowledgment 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.

730.05. **Practicum in Applied Behavior Analysis I.** 5 hr.; 2 cr. Coreq.: 730.01 and 771, and permission of the Executive Committee of the Psychology MA Program. Introduction to field applications of basic theory and methodology of applied behavioral analysis, including: 1) the technical language; 2) operational definition; 3) assessment of reliability and generality; 4) data analysis; 5) research design in natural settings. Students will attend practicum setting 8 hours per week for 10 weeks. Group supervision will be provided in the weekly small group settings of 730.01.

730.06. **Practicum in Applied Behavior Analysis II.** 8 hr.; 3 cr. Coreq.: 730.02 and permission of the Executive Committee of the Psychology MA Program. An advanced practicum in the application of theory, methodology, and professional issues in the field of applied behavior, focusing on contemporary issues in behavior assessment strategies, single case design, data evaluation, program development, and learning processes, and carrying out applied behavior research in the field. Students will attend practicum setting 8 hours per week for 15 weeks. Group supervision will be provided in the weekly small group meetings of 730.02 on campus.

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 psychophysics.†

732. **Motivation and Reinforcement.** 2 lec., 4 lab. hr.; 4 cr. The role of motivation in behavior theory, and the experimental 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.

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.).

738. **Cognition.** 3 hr.; 3 cr. This course focuses on the study of cognition in hu-

Psychology

mans. 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.

‡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 MA 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 MA degrees in Psychology.

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.

753. Psychobiology of Sex and Gender. 2 lec. hr. plus conf.; 3 cr. Prereq. or coreq.: one graduate or undergraduate course in developmental or child psychology. This course is concerned with behavioral similarities and differences between males and females, both human and animal. Contributions of biological, psychological, social, and cultural factors are considered, and a variety of theoretical approaches to gender are explored.

754. Behavioral Science and Business. 2 lec. hr. plus conf.; 3 cr. The behavioral science principles that can be applied to employee-employer relationships are considered. Basic problems such as personnel promotion, motivation, training, measurement of job satisfaction, increasing worker efficiency, and merit ratings are reviewed from the standpoint of the psychologist in industry.

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, sociocultural, 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.

‡764. **Assessment of Personality with Standardized Objective Measures.** 1 lec., 2 lab. hr.; 2 cr. Prereq.: Psychology 755 and Psychology 760, and permission of the Head of the MA programs. An introduction to the administration, interpretation, and report preparation of commonly used objective inventories, objective standardized rating scales and standardized interview protocols, with special focus on the Minnesota Multiphasic Personality Inventory (MMPI). Examples of other objective instruments for personality assessment that may be covered include the California Psychological Inventory (CPI), and the Sixteen Personality Factor Questionnaire (16PF). This course requires each student to prepare a minimum of four test reports.

771.1, 771.2, 771.3. Ethical Issues in Psychology. 1 hr.; 1 cr., 2 hr.; 2 cr., 3 hr.; 3 cr. This course examines ethical and legal standards that apply to psychologists and others involved in the application of psychological principles. Emphasis will be placed on ethical standards recognized by and for professionals and on laws concerning professional practice.

‡774. **Assessment of Intellectual Functioning.** 2 lec., 2 lab. hr.; 3 cr. Prereq.:

‡‡Fieldwork courses are open to all matriculated MA students in the CBA Program, for whom the courses are required. Enrollment is limited. All other students, including CUNY PhD students, must obtain special permission from the Head of the MA Program.

Psychology 760 and permission of the Head of the MA programs. This course provides experience in the administration, interpretation, and written presentation of findings from a variety of measures of intellectual functioning, with particular focus on the Wechsler tests. Students will be trained to integrate clinical observations, developmental theories, theories of cognitive style, and neuropsychological research in the course of writing a minimum of four test reports. Students will also develop 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 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.

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.

¶¶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 MA 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). Pre-

req. for each course: 1) Permission of the MA 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 MA 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.

Social Sciences

Program Director and Graduate Advisor: Martin Hanlon

Dept. Office: Powdermaker Hall 250, 997-5131

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 MA in Social Sciences program 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 of the Division 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

Social Sciences

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

An additional 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 advisor 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 argu-

ment 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 Advisor. 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. **Teaching 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**.

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 and Public Policy.
 765. Urban Poverty.
 770.1-770.5. Roots of the Urban Crisis.
 775. Changing Urban Institutions.

Sociology

Chair: Dean B. Savage

Graduate Committee Director: Sophia Catsambis

Dept. Office: Powdermaker Hall 252, 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 25 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; ethnicity, race, class and gender; and Jewish culture in America. The facilities in the department include computer laboratories along with a

new multimedia lab and full Internet connections to assist graduate students in their research.

Faculty

- Savage, Dean B., *Chair, Professor*, PhD 1975, Columbia University: organization, science, work
 Catsambis, Sophia, *Graduate Committee Director, Associate Professor*, PhD 1988, New York University: education, social inequality, quantitative methods
 Beshers, James M., *Professor*, PhD 1957, University of North Carolina: urban demography
 Beveridge, Andrew A., *Professor*, PhD 1973, Yale University: social history, quantitative methods
 Browne, Basil R., *Assistant Professor*, PhD 1989, University of California at Berkeley: deviant behavior, race/ethnic/minority relations, methodology, qualitative approaches
 Clough, Patricia T., *Professor*, PhD 1978, University of Illinois, Champaign-Urbana: feminist theory, mass media, qualitative methods
 Cohen, Bernard, *Professor*, PhD 1968, University of Pennsylvania: criminology, police research, deviance
 Eisenstein, Hester, *Professor*, PhD 1967, Yale University: sociology of gender, feminist theory, globalization
 Font, Mauricio A., *Professor*, PhD 1983, University of Michigan: development and social change, comparative and historical sociology
 Gallo, Carmenza L., *Associate Professor*, PhD 1985, Boston University: comparative sociology, family
 Gorman, Thomas J., *Associate Professor*, PhD 1994, State University of New York at Stony Brook: social stratification, education, family sport
 Habtu, Alem S., *Assistant Professor*, PhD 1996, New School for Social Research: Africana studies
 Heilman, Samuel C., *Distinguished Professor*, PhD 1973, University of Pennsylvania: symbolic interaction, social theory, sociology of religion, Jewry
 Kapsis, Robert E., *Professor*, PhD 1973, University of California at Berkeley: art and culture, mass media
 Levine, Harry G., *Professor*, PhD 1978, University of California at Berkeley: American historic culture
 Mankoff, Milton L., *Associate Professor*, PhD 1969, University of Wisconsin: social stratification, social change, social deviance
 Miller, Joanne, *Professor*, PhD 1975, University of Wisconsin at Madison: work, social structure and personal-ity, applied demography

- Min, Pyong Gap, *Professor*, PhD 1983, Georgia State University: family, ethnicity, and race, Asian Americans
 Pitts, Victoria L., *Associate Professor*, PhD 1999, Brandeis University: gender, theory, sociology of the body
 Rogers-Dillon, Robin H., *Assistant Professor*, PhD 1998, University of Pennsylvania: political sociology, medical sociology, poverty and social welfare
 Seiler, Lauren H., *Professor*, PhD 1970, University of Illinois at Urbana: methods, technology
 Smith, Charles W., *Professor*, PhD 1966, Brandeis University: theory, social psychology, sociology of markets
 Tang, Joyce, *Associate Professor*, PhD 1991, University of Pennsylvania: stratification, mobility, science and technology, methodology
 Torche, Florencia, *Assistant Professor*, PhD 2003, Columbia University: social mobility, economic stratification, inequality and class formation in Latin America, comparative/historical education, sociology of consumption
 Turner, Charles F., *Professor*, PhD 1978, Columbia University: AIDS and other STDs, survey research methods, evaluation research
 Weinberg, Dana B., *Assistant Professor*, PhD 2000, Harvard University: medical sociology, organizational sociology, sociology of work and professions

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 Advisor 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:

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

Sociology

	<i>credits</i>
a. Sociological Theory: Sociology 701 or 702	3
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	9
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, includ-

ing: 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.††

791. Tutorial. 3 hr.; 3 cr. Prereq.: Permission of Director of Graduate Program in Sociology. Independent study under the guidance of a Faculty Advisor.

792. Research. 3 hr.; 3 cr. Prereq.: Permission of Director of Graduate Program in Sociology. Research conducted under the guidance of a Faculty Advisor.

793. Thesis Research. 3 hr.; 3 cr. Prereq.: Completion of requirements *a* through *d* (21 credits) in the list of departmental requirements on page 155. 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 S. Rodberg

Graduate Advisor: William A. Muraskin

Dept. Office: Powdermaker Hall 250,
997-5130

The MA 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 S., Chair, *Associate Professor*, PhD 1957, Massachusetts Institute of Technology: health policy, employment policy, urban data analysis

Muraskin, William A., Graduate Advisor, *Professor*, PhD 1970, University of California at Berkeley: social/urban history, health policy, international health

Hanlon, Martin D., *Associate Professor*, PhD 1979, Columbia University: health policy, public management, public policy evaluation, workforce issues

Hum, Tarry, *Associate Professor*, PhD 1996, UCLA: immigrant communities, economic development

Khandelwal, Madhulika S., *Associate Professor*, PhD 1992, Carnegie-Mellon University: Asian-American issues, immigrant communities

Lawson, Ronald L., *Professor*, PhD 1970, University of Queensland, Australia: housing, tenant activism, protest and religious movements, urban sociology

Maskovsky, Jeff, *Assistant Professor*, PhD 2000, Temple University: Urban ethnography, social movements, difference and inequality

Sardell, Alice, *Professor*, PhD 1980, New York University: health policy, community health planning, urban and community politics

Seley, John E., *Professor*, PhD 1973, University of Pennsylvania: urban and regional planning, public policy, geography, computer mapping

Smith, Marcia, *Associate Professor*, DSW 1990, Columbia University: health services and education, social welfare policy, immigration, social work

Steinberg, Stephen, *Professor*, PhD 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 per-

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

††-May be offered; see Class Schedule.

Urban Studies

formance 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 admissions decision. Inquiries should be addressed to: Graduate Admissions Committee, Department of Urban Studies.

Requirements for the Master of Arts Degree

Thirty credits are required for the MA degree, including four required courses (12 credits). Students not employed in an urban-related field are encouraged to take 3–6 credits of fieldwork. Where appropriate, 3–12 graduate credits may be taken in other departments, subject to the approval of the Graduate Advisor.

Students must submit and obtain approval for at least two research papers prepared in connection with two of their courses. These papers will be used to evaluate the student's ability to investigate and analyze urban issues and policies. Students also have the option of preparing a thesis or capstone paper. Completion of the course of study involves a comprehensive examination in the area of the student's course of study after at least 24 credits have been completed.

Required Courses

The following 12 credits are required of all graduate students in Urban Affairs:

620. Urban Research Writing	3 cr.
724. Introduction to Public Policy	3 cr.
725. Urban Research Methods	3 cr.
<i>and either:</i>	
727. Public Management	3 cr.
or	
745. Community Organization	3 cr.

In addition to the core sequence, students must take 18 elective credits. Students are encouraged to develop a concentration in either Urban Administration and Social Policy or Community Organization and Development. The former prepares students for work in local, state, or federal agencies concerned with urban policy. The latter prepares students for professional work in community organizations, including private agencies, poverty programs, and other community functions. A student may also choose to develop a concentration in a specific policy area such as health, housing, or welfare.

Fieldwork (3–6 credits)

Field placements will be given in areas of urban activity of interest to the student. Fieldwork shall include participation in

courses related to the field placement and in seminars where the experience will be discussed and analyzed. Students will be placed in an outside organization or will participate in a group project or workshop organized by the department. The department will assist students in finding field placements. Students should enroll in courses related to the field placement to receive maximum benefit from the experience. Fieldwork will be under the direction of a Faculty Advisor, who shall hold regular conferences with students. Papers on fieldwork are required. Fieldwork courses are 780 and 781.

Thesis or Capstone Paper (3 credits)

Students may prepare a thesis or capstone paper. A thesis generally involves primary research in which students undertake an original field project. A capstone paper typically consists of a critical review of an existing body of knowledge on a topic related to social or urban policy. Students have the option of enrolling in a 3-credit tutorial while working on the thesis/capstone paper. Each student works with a faculty advisor, and the final product is subject to the approval of both the Faculty Advisor and the Graduate Advisor.

Courses in Urban Studies

620. Urban Research Writing. 3 hr.; 3 cr. This course will assist students in developing the skills necessary for graduate level writing in Urban Affairs. The focus will be on developing writing skills in three specific areas: (i) writing in response to texts; (ii) writing across texts (comparing and contrasting); and (iii) writing a research paper on a topic in urban studies. In each instance original drafts will be revised for clarity of content. The course will review the steps in writing a research paper including choosing topic, developing a cogent thesis, using the library and Internet for research note taking, and drafting and revising the finished paper.

626. Computer Methods in Urban Policy Analysis. 3 hr.; 3 cr. This course introduces the student to various 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 compre-

hensive 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 socioeconomic 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. This course will focus on strategies and methods for evaluating policies and programs of government agencies and nonprofit social service organizations. It covers the major elements of evaluation research, including evaluation goal setting, outcome measures, research design, policy significance, and the politics of evaluation. Students will review and analyze evaluation research studies drawn from several public policy areas including education, public assistance, health services, criminal justice, housing, and employment training. 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.††

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 required; 3 cr. Includes fieldwork assignment and seminar sessions. Must be a different assignment from that of Fieldwork I. Fall, Spring

785. Tutorial. Hr. to be arranged; 3 cr. Advanced work involving specialized readings and research on a topic chosen by the student and faculty sponsor. Includes regular conferences with the sponsor and preparation of a paper. May be taken twice if the topics are different. 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

Centers & Institutes

Queens College has always believed that a great college must do more than offer its students the finest possible education: it must also be involved in the lives of all the people in its community, serving as a resource for the problems and opportunities that face our city and country. The centers and institutes sponsored by the college do all this and more. They address pressing contemporary problems such as cancer, AIDS, pollution, racism; the changing workplace and workforce; the heritages of the borough's many ethnic communities, including Asians, Greeks, Italians, and Jews. And, since we are foremost an educational institution, the centers are always searching for the best way to educate our young people. The excellence of Queens College's centers has been acknowledged by the many foundations and government agencies that are supporting them, including the Kallinikeion Foundation, National Institutes of Health, National Science Foundation, Alexander S. Onassis Public Benefit Foundation, PaineWebber, Inc., U.S. Department of Energy, U.S. Environmental Protection Agency, and many others.

Asian/American Center

Madhulika Khandelwal, Director
Kissena Hall 315; 997-3050

The Asian/American Center (A/AC) at Queens College was founded in September 1987 in response to, and in recognition of the population explosion of Asians in the Borough of Queens and the wider New York City Metropolitan area. (The total Asian population in New York City has increased from 350,000 in the late 1980s to nearly 900,000, of which more than one-half reside in Queens.) The center is committed to the development of community-oriented research to analyze the multicultural diaspora experience of Asians in global, as

well as local communities. The center's mission is to foster new scholarship; promote an interdisciplinary cultural studies approach in which anthropologists, historians, critics, community activists, and others can come together through a range of public conferences and programs; disseminate contemporary information on Asian American communities; and create an awareness of primary issues impacting Asians and Asian Americans.

The A/AC collaborates in its research efforts with Queens College faculty and staff, as well as various Asian communities to create bridges between the academic resources at the college and the local Asian populations. The center, along with the Asian and Asian American faculty at the college, provides support to Queens College students of Asian backgrounds and those interested in Asian studies through its programming.

Initiatives of the A/AC over the past several years include assisting the college with developing academic programs enrolling students from Asian countries; establishing agreements between Queens College and universities in China, Taiwan, etc.; and initiating joint intergenerational conferences and educational seminars with the Asian universities as well as the Asian government educational offices.

The A/AC is expanding its network in the communities to involve specifically Asian and American businesses in its activities. We plan to develop training programs, such as those in cultural immersion or codes of business practices, for corporations and others doing business with Asian companies or within the Asian American diaspora in the metropolitan area.

Asian American/Asian Research Institute

Thomas Tam, Executive Director
25 W. 43rd Street, New York, NY
212-869-0182

The Asian American/Asian Research Institute was approved by the City University of New York's Board of Trustees in the Fall of 2001. The institute is designed to create an organizational structure integrating the talents of individual faculty and the resources of different institutions within CUNY to create a community of scholars who will focus their energies on Asia and the Asian American experience. With timely research and analysis, the institute will offer public policy assessment to governmental, social, and educational agencies on issues affecting the Asian American communities. It will also work to stimulate the study of Asian peoples, languages, cultures, and countries, as well as of Asian immigrants and their descendants in the United States.

Center for the Biology of Natural Systems

Steven Markowitz, Director
163-03 Horace Harding Expressway,
Room 400, Flushing, NY
670-4180

The Center for the Biology of Natural Systems (CBNS) is a research organization dedicated to the analysis of "real-world" environmental and resource problems and their policy implications. Since its founding in 1966, CBNS has developed and implemented an evolving strategy to realize this goal.

CBNS is concerned with the actual environmental and resource problems that confront human society. As solutions to old problems are found – if not always implemented – and new problems emerge, our research strategy responds. When CBNS moved from Washington University in St. Louis to Queens College in 1981, we found that New York City, like most urban centers, faced a serious trash disposal problem: The current landfill system was an environmental hazard, but the proposed solution – incineration – was a major source of dioxin, a highly toxic pollutant. An ex-

tensive CBNS analysis showed that dioxin is unavoidably synthesized in trash-burning incinerators, and that intensive recycling – which, we have shown, can reach the rate of 84% – is an economically feasible, dioxin-free alternative.

With the growing evidence that dioxin is a probable human carcinogen, CBNS studies turned toward the analysis of this threat. In 1987 we showed for the first time that the body burden of dioxin in the general U.S. population signifies a lifetime cancer risk of 330–1,400 per million – well above the “acceptable” one-per-million risk. Preventing this exposure became a national issue, requiring analysis of the environmental pathways that lead from dioxin-emitting sources to the avenues of human exposure, such as water supplies and farms. For this purpose, we introduced a new computer model that traces dioxin from various identified sources through the air to other specified locations. An initial study showed that airborne dioxin entering the Great Lakes traveled as much as 2,000 miles from the sources that emitted it. The model has now been used to rank these sources with respect to their impact on the airborne dioxin that contaminates feed crops, and hence milk – a major source of human exposure – produced on dairy farms in Vermont and Wisconsin. The results showed that, of the thousands of sources, only eight to ten were responsible for two-thirds of the feed crops’ dioxin, thereby facilitating preventative measures. In similar studies we have also traced atrazine, a carcinogenic herbicide, from its numerous sites of agricultural application to drinking water reservoirs, including the New York City water supply system.

Over the years, we have demonstrated a research approach that defines the path of human exposure to airborne pollutants from their industrial and agricultural sources through the atmosphere and the ecological systems that mediate the entry of contaminated air, water, and food into the human body. It became apparent that our studies needed to be expanded to serve the ultimate aim of all such efforts: to improve human health.

Currently directing CBNS’s studies is Dr. Steven Markowitz, a widely known environmental epidemiologist and expert in occupational toxicology. His ongoing work on the health of workers in the U.S. government’s nuclear bomb plants

and a study of birth defects in populations exposed to atrazine-contaminated drinking water exemplify CBNS’s start in this new direction. Recognizing the growing importance of urban environmental health, we have also proposed to study the impact of air pollution on the severity of asthma in the South Bronx. At the same time, our work on the long-range air transport of toxic pollutants has entered into an important new area of this issue: the reciprocal flow of dioxin and other critical pollutants across the U.S. boundaries with Mexico and Canada. In sum, the CBNS, guided by its basic mission, continues to work at the cutting edge of environmental progress.

Center for Byzantine and Modern Greek Studies

Christos P. Ioannides, Director
Jefferson Hall 302; 997-4520

The mission of the Center for Byzantine and Modern Greek Studies is: to initiate, support, and coordinate the teaching of Byzantine and Modern Greek subjects at Queens College; to promote Byzantine and Neo-Hellenic scholarship and publications; and to relate academic research and teaching to the needs and interests of the Greek Community of Queens and beyond.

In support of this mission, the center sponsors visiting scholars, provides library support for the Byzantine and Modern Greek collection at Queens College, organizes conferences, special lectures, exhibits, and seminars, and offers fellowships and emergency financial assistance to students.

The center has published 13 scholarly works of immense importance toward an understanding of the problems confronting Greece and the Greek diaspora, as well as 18 volumes of the *Journal of Modern Hellenism*. All of these are ongoing activities.

John D. Calandra Italian American Institute

Peter Vellon, Acting Executive Director
25 W. 43rd Street, New York, NY
212-642-2094

In 1995 the Calandra Institute was officially designated as a university-wide research institute under the aegis of Queens College by the CUNY Board of Trustees, making it the first of its kind

and scope devoted to documenting and preserving the Italian-American experience. It is unique in that it also provides instruction, training, and counseling services to Italian-American students and the community. The overall mission of the institute is in keeping with that of CUNY: to foster higher education among Italian-Americans, the single largest ancestral group in New York City, New York State, and CUNY. The goal of the institute is to heighten the awareness of Italian-American heritage and to insure that the legacy of the Italian-American experience is documented and preserved for future generations, well into the 21st century. The institute accomplishes its ambitious mission through a range of programs sponsored by its specialized units.

Research and Education – This unit implements research on the Italian-American experience and is engaged in the ongoing development of collecting data on Italian-American educational and occupational attainment; identifying Italian-American scholars nationwide; serving as a research depository of information and support; disseminating research findings; providing research opportunities for national and international faculty and students; developing grants for research funding; joint activities with the Distinguished Professor of Italian-American Studies at Queens College; publication of *The Italian American Review, A Social Science Journal of the Italian American Experience*; and sponsoring conferences on local, national, and international levels for academic and public audiences.

Resource and Community Programs – This unit works in collaboration with diverse organizations to develop, support, and coordinate projects that promote and celebrate both Italian and Italian-American culture and heritage. The unit plays a vital role in collaborative archival projects for preservation and access; organizing public lectures, exhibits, and special events by noted authors, scholars, educators, and community leaders; producing *ITALICS: The Italian American Magazine*; a monthly video show coproduced with CUNY-TV, televised on nationwide cable stations focusing on Italian-American themes; developing and maintaining an impressive library devoted to Italian-American history, politics, literature, and culture, including dissertations, books, manuscript, and

archival materials, audio and video tapes; serving as a clearinghouse to Italian-American organizations for information, services, scholarships, and current issues concerning Italian-Americans; and publishing conference-related columns, the institute's newsletter, and annual report.

Career Counseling Programs – Specialized services sponsored by the Institute consist of counseling and outreach programs designed to address the educational and career needs of Italian-American students and the community at large. Institute counselors visit both high schools and colleges to promote interest in higher education and foster cultural activities and events sponsored by Italian-American student clubs. Services include counseling sessions for individuals presently attending CUNY and those who wish to enter the university system; and providing information regarding colleges and programs at CUNY.

Columbus CUNY/ITALY Exchange Program – This program is a student exchange between CUNY and its constituent colleges and seven Italian public universities. Participating institutions include the University of L'Aquila, University of Catania, University of Naples, University of Pavia, University of Siena, University of Trento, and University of Turin. The program is designed for highly motivated undergraduate and graduate students interested in pursuing coursework and/or research in the areas of international business, economics, law, political science, anthropology, archaeology, engineering, history, literature, and sociology. The program aims to provide participants with an individualized program of focus in their academic discipline, an understanding of the role of modern Italy and the European Economic Community, and opportunities to experience life in another culture and gain a global socio-political perspective.

Equity Studies Research Center
Penny Hammrich, Director
Powdermaker Hall 100; 997-5227

The Equity Studies Research Center (ESRC) at Queens College promotes interdisciplinary scholarship, including basic and applied research, and serves as a vehicle for community engagement facilitating the advancement and study of equity in urban education and socioeco-

nomc participation. The ESRC provides a focal point for intellectual exchange, collaboration, and coordination of resources necessary for achieving both theoretical understanding of equity processes and the effective design and implementation of practical interventions to advance equity. The ESRC brings together faculty from the Division of Education and the liberal arts and sciences divisions to achieve center initiatives and foster community partnerships with the organizations and institutions in which equity is studied and advanced. The main goal of the ESRC is the development of programs to provide equitable access to underserved children and families within the New York City area. To further its mission the center is engaged in:

- Studying the context of educational avenues that promote equity by both theoretically and practically based research. This includes conducting and performing both interdisciplinary research and practically based initiatives that span all areas of education, the political, social, aesthetic, economic, and historical contexts of what it means to succeed in an academically challenging environment.
- Developing innovative programs and studying their implementation in urban settings
- Implementing and conducting research-based professional development opportunities for teachers, parents, and members of the community.
- Disseminating the efforts of the ESRC on a local, regional, and national level by sponsoring conferences and seminars and publishing and presenting research results and refereed and non-refereed articles.

Michael Harrington Center
Mark W. Rosenblum, Director
Kissena Hall 207; 997-3070

The Michael Harrington Center for Democratic Values and Social Change exists to promote public discourse about social issues, to advocate for social change and to work in partnerships with others to build a more just society. To accomplish these goals, the center:

- Identifies individuals and organizations engaged in positive social change in public education, safety,

health, welfare reform, economic development and criminal justice, and supports pragmatic community coalitions to ameliorate urban problems;

- Acts as a bridge between Queens College and metropolitan communities to address common concerns and share resources;
- Publishes an annual journal, *ANOTHER SIDE*, *Working Papers*, quarterly *Action Briefs*, and other resources;
- Conducts and disseminates research relevant to public health, educational equity, drug policy, conflict resolution, and poverty;
- Sponsors community dialogues, conferences, colloquia, and workshops.

The center's partners include Queens College faculty, educational institutions, public policymakers, racially and ethnically diverse community organizations, religious organizations, media, and public scholars.

Center for the Improvement of Education

Michelle E. Myers, Director
Powdermaker Hall 100 , 997-5226

The main goal for the Center for the Improvement of Education is to forge linkages between public schools and Queens College that will allow staff from each to perform their primary functions more effectively. The traditional role of Queens College in this regard has been the training of new teachers, while the public schools have assumed responsibility for ongoing supervision and staff developmental activities. The center's staff believes that a more fruitful partnership can evolve if these traditional roles are challenged and ways are found to wed pre-service and in-service efforts in order to make them a constructive force for change in the schools. Thus, we seek to create "porous boundaries" between the institutions, ways in which staff can cooperatively address issues of common interest and concern:

- Recruitment and training of teachers – We believe that pre-service preparation programs would benefit greatly from being more closely tied to the daily realities of life in the schools and the practical experience school staff are able to provide.

- Staff development – Queens College has much to offer in the continuing training of teachers. University staff have the additional time, content knowledge, and a familiarity with research that can be useful. The new state mandate of 175 hours of professional training for in-service teachers to be completed every 5 years makes such a partnership even more promising.
- Combining Pre-service/In-service Teacher Preparation – Efforts to reform or restructure schools are often limited by the lack of additional resources. School staff are already assigned full-time functions. Colleges have a large pool of available resources in their pre-service trainees, particularly the mature, change-of-career people who bring a strong background of experience with them. Carefully planned and made part of an integrated overall design, these resources can become an important source of support for school reform aimed at improving instruction.

Center for Jewish Studies

Benny Kraut, *Director*
Jefferson Hall 311, 997-5730

The Center for Jewish Studies is an outreach and research agent that serves as a bridge between the academic Jewish Studies program and the community. Its fourfold mission is:

- To engage the general community in the enterprise of Jewish education and culture by organizing attractive educational and spirited cultural programs on campus, such as lectures, symposia, conferences, film festivals, and artistic performances, all of which are open to the public. The center aims to be the premier community resource for Jewish intellectual endeavors in the Queens-Long Island region.
- To foster academic Jewish learning in the community, by having the Jewish Studies faculty from Queens College and elsewhere share their expertise in community educational and cultural frameworks.
- To publish and disseminate widely substantive lectures and conference proceedings of significance to scholars and laymen alike.
- To support, promote, and sustain the pedagogical and scholarly activities of

the Jewish Studies program, its faculty, and students.

The center supports the ongoing health and vitality of the Jewish Studies Program by raising supplementary funds from private and public sources to make feasible essential program initiatives. The center fulfills its outreach and mediating role to the community by undertaking programmatic initiatives on campus that are open to the public. Annually, it sponsors thirteen events in its evening Jewish Lecture Series, attended by thousands. It sponsors day-time colloquia and symposia, featuring newly published authors, dramatists, public officials, and illustrious academicians. It arranges public conferences on such themes as “Holocaust Revisionism,” “Gender and Religion,” and “Jews and the 1960s.” The center works both independently and in collaboration with other Queens College centers and departments, as well as with national institutions and local agencies off campus, to spur thoughtful reflection about scholarly and contemporary issues within as wide a public forum as possible.

In addition to campus-based activities, the center actively invites Queens College Jewish Studies faculty to lecture off campus to community organizations and institutions. It also coordinates Jewish Studies programs and cultural soirees in the more intimate setting of private homes in order to furnish a more leisurely and personal ambiance for Jewish learning.

Labor Resource Center

Gregory Mantsios, *Director*
Kissena 217, 997-3060

25 W. 43rd Street, New York, NY
212-827 0200

The Labor Resource Center provides labor-related educational services to academia, the public, and the labor community. The center conducts research, develops educational material, organizes local forums and national conferences, and produces and distributes a variety of publications, such as *New Labor Forum: A Journal of Ideas, Analysis, and Debate*. The center’s main purpose is to promote dialogue and discussion on issues of particular concern to working people and organized labor.

Toward this end, the center is concerned with such worker-related issues as

the transformation of the domestic economy and changing labor demographics; the impact of globalization on domestic and international working conditions and human rights; disparities in income and wealth; employment discrimination and pay equity; the social impact of technological innovation; worker education and training; public policy as it relates to workers and working-class and poor communities.

It is also concerned with issues directly impacting the labor movement: union organizing; collective bargaining; alternative forms of worker representation; global labor solidarity; union democracy; leadership models and leadership development; the relationship of women and people of color to organized labor; and challenges to and strategic options for rebuilding labor’s political power.

The center encourages a diversity of opinions on a wide range of socio-economic questions among scholars, union leaders, labor activists, journalists, and community leaders. It promotes collaboration among these groups and provides an environment where conflicting opinions can be aired, new approaches to problems can be generated, and new ideas can be conceived and nurtured.

Neuroscience Research Center

Richard J. Bodnar, *Director*
Razran Hall 270, 997-3543

The Neuroscience Research Center at Queens College was approved by the CUNY Board of Trustees in November of 2004. The center’s fourfold mission is: (1) to encourage a collaborative educational and research experience within the field of neuroscience for faculty and students at Queens College; (2) to conduct research using a multidisciplinary approach that addresses questions by means of a synthesis of molecular, cellular, systems, computational, and behavioral techniques, drawing from a variety of academic departments; (3) to enhance the research education of students at Queens College through the establishment of undergraduate and graduate neuroscience programs, seminar series, symposia, and research-related clubs; and (4) to work to enhance our existing facilities and fund additional cutting-edge core facilities to support the research goals of the individual faculty members and of the Center.

Science in general, and neuroscience in particular, has greatly benefited from interdisciplinary interactions. For example, the discovery of the double helix of DNA involved a biologist and a physicist. In neuroscience, the workings of the brain have been studied by people from such diverse academic disciplines as philosophy, physics, physiology, biochemistry, mathematics, computer science, and psychology. Through the collaboration of specialists from varying disciplines, different perspectives may be brought to bear on problems: physiologists are interested in the mechanisms of action of drugs on the nervous system; behaviorists are concerned with the resultant behaviors; biochemists and chemists focus on the individual structural components (proteins, mRNA, etc.) that determine the physiology; computational neuroscientists focus on understanding the algorithms that are used to process information and make decisions. It is not possible to be an expert in all of these fields, but by working within a research center, persons with individual expertise can interact with each other and get a better understanding of the system than they could do alone. A "Neuroscience Research Day" during the Spring semester of each year will allow faculty and students to present to the general community their efforts relating to research in the general area of neuroscience, conducted at Queens College or

in associated venues, and bring in distinguished speakers in the field of neuroscience. In addition, a biweekly seminar series will be instituted to allow investigations of an individual research group at Queens College to be presented to the general community.

Members of the center have already been successful in securing funding for augmented research training and student support, including the establishment of a five-year NIH MARC program at Queens College for underrepresented minorities in the biomedical research sciences, and a four-year Howard Hughes Undergraduate Science Education Program grant. The original 16 members of the center are: Drs. Michael Barry, Robert Bittman, Richard J. Bodnar, Joan Borod, Joshua Brumberg, Susan D. Croll, Robert Engel, Nancy S. Foldi, Jeffrey M. Halperin, Ray Johnson, Pokay Ma, Kenneth Perrine, Robert Ranaldi, Susan A. Rotenberg, Larissa Swedell and Zahra Zakeri. They have produced nearly eight hundred peer-reviewed publications over the past 15 years, nearly 300 in the past five years alone. Since 1990, the center faculty has received funding for 51 external and 54 internal grants. It is anticipated that the collaborations fostered by the Neuroscience Research Center will increase and diversify the levels of external funding received for neuroscience research at the college.

Institute to Nurture New York's Nature

The new Institute to Nurture New York's Nature at Queens College is an integral component of the Flagship Initiative in the Urban Environment at CUNY. Funded by a major private donation and with strong university support, this is a new multidisciplinary institute that draws upon the combined resources of CUNY, the nation's largest urban university. The institute is devoted to the protection of the natural landscape and habitability of New York City, and the promotion of environmentally sound management of the city's natural resources. It will work to enhance public awareness of the need for continually improving the natural environment and quality-of-life values through education and public outreach, while simultaneously conducting and facilitating research on environmental, ecological, and public policy issues directed toward preserving and enhancing natural environmental elements in and around New York. It is expected that the institute will stimulate new collaborations among faculty across the CUNY campuses.

Further information about the centers and institutes at Queens College is available online at www.qc.cuny.edu.

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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, 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 Gar-

dens (IND station), along Vleigh 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.



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Affirmative Action Razran Hall, 3rd flr.

Bursar Jefferson 200

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Dean of Arts & Humanities Kiely 904

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